



San Jose Academy

PAASCU Accredited (Level II)
M. Naval St., San Jose, Navotas City
SCHOOL YEAR 2023- 2024

RESEARCH FESTIVAL 2024 SULONG SALIKSIK

A COMPILATION OF RESEARCH ARTICLES

**“HARMONY IN SUSTAINABILITY: NURTURING OUR
PLANET, EMERGING OUR COMMUNITY”**

MARCH 2024

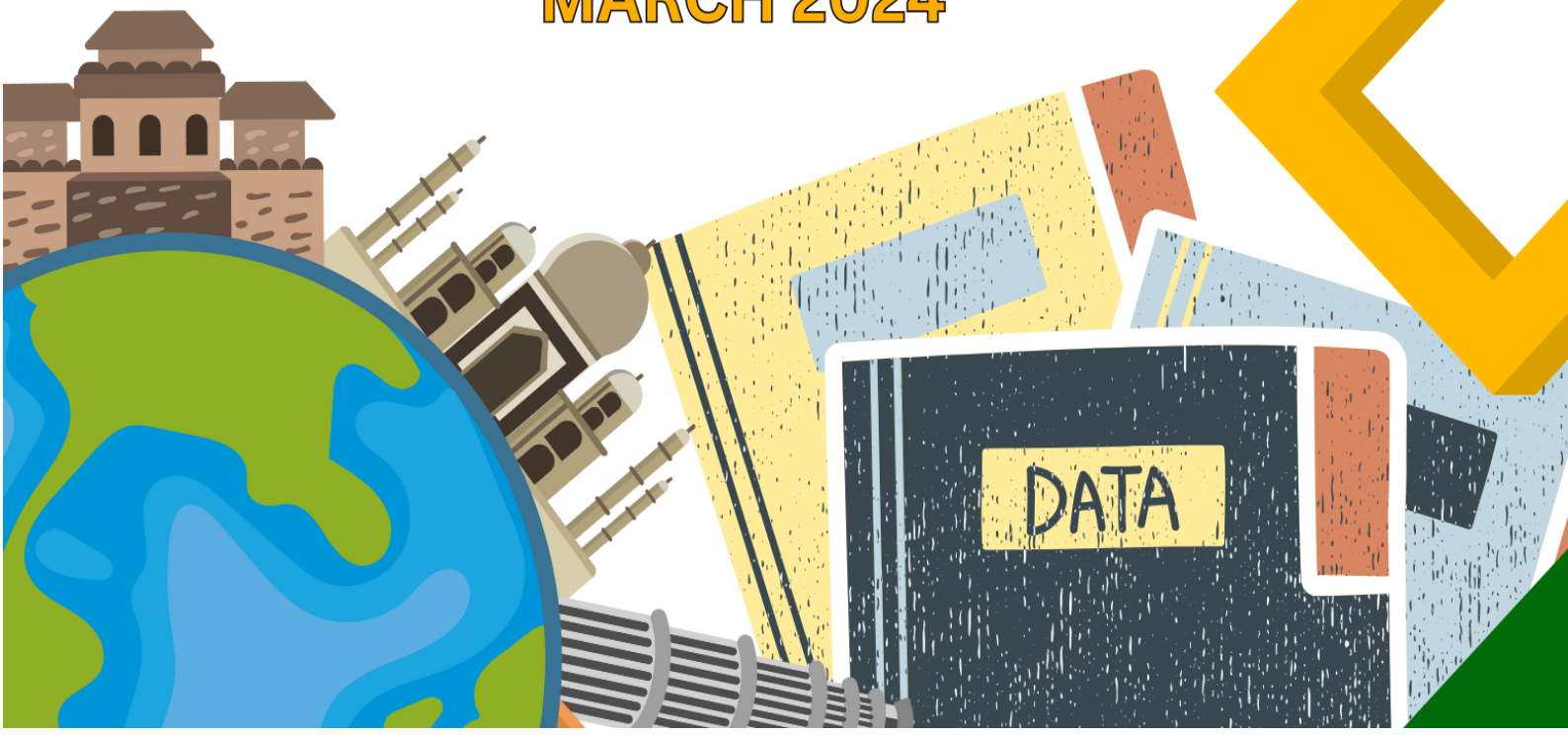


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“Using the Oxalic Acid in Spinach (*Spinacia Olerecea*) and the Citric Acid in Lemon (*Citrus Limon*) As a Substitute Rust Remover”

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Abstract: This study addresses the challenge of rust formation near water bodies and the associated risks posed by conventional rust removers containing harmful substances. By investigating the properties of naturally occurring acids like oxalic acid in fruits and vegetables, and citric acid in citrus fruits, the research seeks safer alternatives for rust removal. The study aims to assess the efficacy and environmental friendliness of a rust removal solution comprising spinach, lemon, and commercial rust remover. Through thorough testing on rusted metal objects, the research evaluates the solution's effectiveness. The results reveal that the rust remover is a good substitute for commercial rust remover, exhibiting visible effects on rusted objects and demonstrating faster reaction times compared to commercial alternatives, underscoring the importance of duration in rust removal formulations and suggesting potential advantages over conventional methods.

This study contributes insights for future research in the field of rust removal, emphasizing the importance of environmentally friendly and effective solutions. Furthermore, the study sheds light on the potential benefits of utilizing naturally occurring acids in rust removal, highlighting their effectiveness and safety compared to conventional chemical-based alternatives. The findings underscore the importance of sustainable approaches in addressing environmental and health concerns associated with rust removal practices. This research provides a foundation for further exploration and development of eco-friendly rust removal solutions, offering potential advancements in both industry and environmental preservation efforts.

Key Words: Oxalic acid; Citric acid; and Corroded

1. INTRODUCTION

1.1 Background of the Study

The researchers observe that areas near bodies of water are the ones commonly affected by rust, unlike other areas that are far from water. We live near bodies of water; thus, saltwater corrodes metal five times faster than freshwater does and the salty, humid ocean air causes metal to corrode 10 times faster than air with normal humidity. Bacteria in ocean water also consume iron and their excretions turn to rust. Rust will form when iron or steel is left exposed to both water and oxygen for a certain amount of time, it's called the process of oxidation, but the formation of rust can also happen even if water is not present. A rust remover is an easy solution to this problem. However, it is dangerous to use them because of anti-rust agents that contain different

poisonous substances and different acids, which can severely damage the skin, irritate the lungs, and cause other health problems without proper safety precautions.

Through previous research, Augustyn found out that oxalic acid, also known as ethanedioic acid, is a poisonous, colorless chemical molecule that belongs to the carboxylic acid family. Since it transforms the majority of insoluble iron compounds into a soluble complex ion, oxalic acid is frequently used as an acid rinse in laundries where it helps eliminate rust and ink stains. Oxalic acid is a type of dicarboxylic acid that is a naturally occurring substance in many fruits, vegetables, and plants. It is flavorless and colorless when it is solid, but after being purified, it takes the shape of a white crystal substance. As was already mentioned, oxalic acid is primarily used

for the dirtiest cleaning tasks. The acid has bleach-like properties and can be used to clean metals and objects of rust and stains. A small amount of this acid can be found in a variety of detergents, bleaches, and cleaning products. Numerous common foods contain oxalic acid, with spinach family members having the highest concentration. It is a dicarboxylic acid, oxalic acid. It is a transparent crystalline solid that disintegrates in water to produce transparent, acidic liquids. It is substantially stronger than acetic acid in terms of acidity. Due to its di-acid structure, oxalic acid may also function as a chelating agent for metal cations.

Citric acid is a naturally occurring acid. It is present in a variety of fruits and vegetables. Lemon is the citrus fruit with the most citric acid. Citric acid is one of the several metabolites generated by *Aspergillus* species. Citric acid contains sweet and sour sensory overtones, whereas succinic acid has a salty-bitter taste. The quantity of citric acid in vegetables and fruits varies depending on the soil and climate conditions. (*Common Uses of Citric Acid In Food, Cleaning & Cosmetics. 2022, August 2*)

Lemon juice and lime juice are high in citric acid, with 1.44 and 1.38 grams per ounce, respectively. Lemon and lime juice concentrates comprise 1.10 and 1.06 grams per ounce, respectively. The citric acid concentration in commercially available lemonade and other juice products ranges from 0.03 to 0.22 grams per ounce. (*Penniston, Kristina L, et al., 2008*)

The researchers decided to conduct this study due to the observation that areas near bodies of water are the ones commonly affected by rust, unlike other areas that are far from water. Furthermore, this study aims to uncover further knowledge about oxalic acid and citric acid in plants, which could potentially be used as a rust remover.

2. METHODOLOGY

In this chapter, the researchers will show the process of how the acid in both spinach and lemon can be an alternative to commercial rust remover.

2.1 RESEARCH DESIGN

Qualitative research was carried out in this study. The researchers decided to use this method to determine how the rust remover would affect the rusted coating, and which time duration is suitable to achieve the fullest effect. This determines what components make it a rust remover and to know its effects, based on the conducted experiment.

Spinach and Lemon are essential in conducting this experiment. The researchers attempted to prove that the components are suitable for removing rust. The test provided clear results that determined the suitable duration in which the rust remover is most effective. The researchers observed both variables in terms of how it reacted when the experimentation was done.

LIST OF MATERIALS	QUANTITY
Spinach (<i>Spinacia oleracea</i>)	3 bundles
Lemon (<i>Citrus Limon</i>)	1-piece
Baking soda	1 box
Mortar Pestle	1 set
Tissue	1 pack
Strainer	1-piece
Commercial Rust Remover	1 Rust Remover
Rusted Metal Objects	6 Corroded Metals

2.2 Experimental Procedure

Gathering of the materials

The main materials that will be used in the study is Spinach (*Spinacia oleracea*), Lemon (*Citrus Limon*),

The researchers will gather the materials beforehand to proceed to the following parts of the procedure, the materials may be found in markets, hardware stores, and at home. Leftover spinach and lemon that are

near its expiration can also be used to ensure that no materials are wasted.

Preparation of Substance

In preparation for making the rust remover the spinach is washed to remove any dirt or mess on the plant before chopping, blending, or mashing as much as possible. Then extract the lemon using either a juicer, squeezer or just by hand, then mix the spinach and lemon juice. Use a disposable container to ensure that no contamination will happen after usage.

Filtration Process

Prepare a container, strainer, and the mixture before proceeding with filtering out the remaining pieces of leaves and seeds. Make sure that the container is big enough to submerge the corroded metal during the testing phase of the experiment.

Testing on Rusted Metal Objects

During this process both rust removers must be tested on the rusted metal objects, in experimenting one should practice caution especially when handling fragile or harmful materials.

The substance must be applied on the object to ensure that it will work or have an effect on the tested object, let the object sit in the mixture before taking it out and covering it with a layer of baking soda before dipping it back into the mixture, this process may be repeated for a few times for the rust to disappear.

Gathering of data based on experiments

The experiment should be documented for research purposes, the data must be based on the process that was done earlier, and all necessary data should be listed to ensure that the details are complete and present.

3. RESULTS AND DISCUSSION

Table 1. Duration of both rust removers with each test object (In minutes).

Test Objects	Alternative Rust Remover	Commercial Rust Remover
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Rusted Nail	5 mins	15 mins
Rusted Key	3 mins	15 mins
Rusted Spring	2.5 mins	15 mins

To test whether the product had any effect on the test participant within a short period. During this time, researchers experimented with it. If no impacts are observed in the initial investigation, the researchers extend the time restriction.

The researchers will use the Weighted Mean method to determine which approach is more effective at removing the rusty covering from the metal shell. The weighted mean computes the average or sum of these two variables.

Table 2. Using Alternative Rust Remover

The substitute rust remover shows promising results in fighting against corroded metals, as presented in the table. Despite the difference in result and effectiveness on the three objects, the substitute rust remover did its job well in removing rust in a short time.

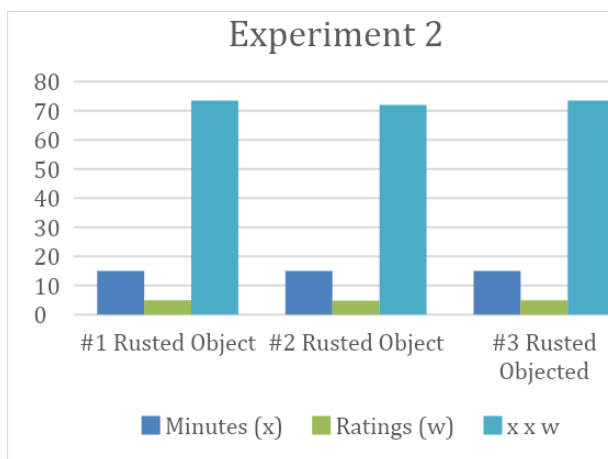
Table 3. Using Commercial Rust Remover

The commercial rust remover shows high ratings and consistent results in fighting against the corroded metal, even though it was only applied once and each had the same time duration it is safe to say that it is efficient in removing rust.

Fig 1.1 Statistical Data from Experiment 1

In this chart where the researchers used the substitute rust remover, the results differ from one another, it doesn't show consistency due to the size, shape, and corrosion on the metal.

Fig 1.2 Statistical Data from Experiment 2



In this chart where the researchers used the commercial rust remover, the ratings, and results were all relatively close. One thing we can see in this figure is that all ratings and results were consistent, while Figure 1 shows different results.

4. CONCLUSION AND RECOMMENDATIONS

4.1 Conclusion

Based on the results of the weighted means, as reported by the Researchers, it was found that in the first experiment where the substitute rust remover made from oxalic acid and citric acid showed results that weren't far from the second experiment where the commercial rust remover was used.

The researchers noted that two out of the three items had the rust partially removed, revealing the original color of the object. However, one of the objects still had some rust remaining, indicating that the rust removal formula struggled, possibly due to the severity of the rust and its larger size compared to the other objects.

Overall, the experimentation showed visible effects when applied to the test objects. Additionally, compared to a commercial rust remover, the reaction time of the rust remover with the rusted coating was much faster and consumed less time to penetrate the corroded metal.

Based on the findings, the researchers have concluded:

1. The results of the experimentation indicate that the Spinacia Olerecea and Citrus Limon rust remover is a great substitute for regular rust remover, considering that it wasn't far behind when put up against the corroded metals.
2. Based on the experimentation, the oxalic and citric acid solution was able to remove the corroded layer of the metal in only a matter of minutes, leaving only a few patches of rust left over. Compared to commercial rust removers the results don't differ as much, proving that the spinach and lemon solution can be used as a rust remover

4.2 Recommendation

The study revealed that Spinacia Olerecea and Citrus Limon rust remover is effective. Thus, the following recommendation is presented:

1. There are a lot of things to consider in going through this research paper, the process has its challenges as the researchers reach the final chapters of the paper. Nevertheless, research provides a way to collaborate and utilize the creativity of each person, understanding the subject and what it is about. In addition, it provides a way to analyze whether the topic is worth researching.
2. For the researchers the most difficult process in making this investigatory project was the experimentation and testing phase because during these parts one must be observant and attentive, especially in determining how the rust remover penetrates through the corroded metal, and how it differs. The group must also collaborate in experimenting, as well as the research paper.

5. ACKNOWLEDGMENTS

In making this Science Investigatory Project (SIP), the researchers would like to thank Ms. Stella Ledesma Gabales, Advisor and Basic Research Teacher, for assisting and teaching the basics of research to create this paper. With their support, motivation, and advice, the researchers were able to accomplish the final parts of the research paper.

The researcher would also like to thank the sources for bestowing their knowledge and sharing their insights regarding that topic, for the information was vital for the researchers to further analyze and fully understand the investigatory project.

Comparing the effectiveness of the various ripeness of a Lakatan banana (*Musa acuminata*) peels as an alternative essential oil in a diffuser

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Abstract: This study examines the effectiveness of the various types of ripeness of Lakatan banana peels (*Musa acuminata*) as an alternative essential oil in a diffuser. The purpose of this research is to think of an alternative essential oil to a regular one. The reason why the researchers conducted this research is because when the pandemic arose, a lot of people were experiencing stress and fatigue. By making an essential oil, it will lessen stress and fatigue through aromatherapy. The outcome should consist of the effectiveness of the Lakatan banana peels as an alternative essential oil for reducing stress and to make sure it will not irritate the nose of those who have a sensitive nose. To produce an essential oil, using a mortar and pestle with coconut oil, it has the ability to release the aroma and vitamins that can be useful in the essential oil. The researchers surveyed to know if the product is effective or not.

The results of the experiments and surveys revealed that both types of ripeness of a Lakatan banana peel have properties that can be used to produce an alternative essential oil. It also shows that it is effective in lessening the stress of both workers and students, and it does not irritate the nose of those people with nasal sensitivity. However, most people find the Lakatan banana peels essential oil using ripe banana peels is much preferred. It releases a natural scent which brings more scent of the Lakatan banana. Also, Ripe Lakatan banana peels essential oil helped people to sleep longer and more comfortably.

Key Words: Lakatan banana peels; essential oil; stress people

1. INTRODUCTION

Many people have had mental health issues since the beginning of the pandemic. Most mental health issues affect people who are under stress, such as students and workers. Some of their attempts to overcome it were successful, while some weren't. As the virus spread, things grew worse since no one could predict how it would affect them or how awful things would get. Moreover, it is all too easy to become caught up in a downward cycle of dread as a result.

However, even in the face of this unique catastrophe, there are numerous things people can do to manage anxieties and fears.

Stress can be aided by using a diffuser in a living area. Keeping one on the nightstand is also good for relaxing the mind and muscles. A diffuser with essential oil in it has benefits, both physical and mental. If suffering from headaches, painful joints, or overworked

muscles, utilizing essential oils in a diffuser has been shown to help with pain relief. Essential oil can enhance your mood, help you to focus, and to be more productive by boosting the brain cells. (Cronkleton, 2019)

Aromatherapy is also a convenient alternative because aromatherapy items are widely available. Aromatherapy is used with oil as a good stress reliever because it has few known effects like anxiety relief and reducing aches. It can be easily combined with other stress relievers for increased stress relief. Aromatherapy can be helpful, especially for busy people. It also improves our physical and mental well-being. (*Aromatherapy: Do Essential Oils Really Work?*, 2021)

Lakatan Banana Peel (*Musa acuminata*) is a common type of banana, it's sweet, aromatic, and advantageous to one's health. Lakatan Banana Peel (*Musa acuminata*) is one of the most widely grown plants on the planet. It can aid nerves since it is high in

vitamins that aid in the nervous system's relaxation. Vitamin B6 in the banana can help improve our mood and relieve depression. Lakatan Banana (*Musa acuminata*) also has tryptophan, antifungal, and antibiotic properties that can be used to boost our mood and aid aches. Potassium-rich fruits can help people learn by making them more alert. (Dadang, 2014)

Banana oil, also known as Isoamyl acetate, is an organic substance found in high concentrations in banana peels. The banana oil can be diffused because of the fragrance of banana oil. The aroma of banana oil is a sweet strong single note of ripe banana. This oil is synthesized in factories and then subjected to extensive processing. On the other hand, many others choose to make their own banana using an oil extraction method. This is banana oil in its purest form and has great potency. The oil from the banana has Vitamin C and antioxidants that can help you strengthen your immune system. (Singh, 2021)

The researchers considered conducting this study because stress is a major problem for most people, and aromatherapy is one of the most popular stress relievers. Also, the peels of a banana are considered as scraps and just an extra trash. Bananas, particularly Lakatan Banana (*Musa acuminata*), are very common in every part of the world, so it is very easy to make and a lot cheaper.

This study will focus on comparing the two types of ripeness of Lakatan banana peels (*Musa acuminata*) based on their effectiveness. The researchers will examine if Lakatan banana peel (*Musa acuminata*) can be an essential oil and its benefits. This is also to find out if the Lakatan banana peel (*Musa acuminata*) can work as a stress reliever since many people, primarily students and workers, are stressed due to this pandemic.

2. METHODOLOGY

2.1 Research Design

Qualitative quantitative research was carried out in the study. The researchers decided to use it to determine how a specific type of ripeness of the Lakatan banana (*Musa*

acuminata) peel is more suitable and convenient for the production of essential oils. This is for the researchers to discover what component makes it an essential oil and to know its effects, both positive and negative, based on the experimentation.

Ripened and unripened Lakatan banana (*Musa acuminata*) peels are essential in conducting this research. The researchers attempted to prove that the components are suitable for producing an essential oil. During the testing of the product on different test subjects, the essential oil was observed. The researchers observed both variables in terms of their effects on the different test subjects, the aroma, and the durability of the scent

Material Lists	Certain Amount Required
Unripe Lakatan banana peels	8 pieces
Ripe Lakatan banana peels	8 pieces
Coconut oil	35 ml and 3/6 teaspoon
Strainer	1 piece
Beaker	3 pieces
Funnel	1 piece
Alcohol lamp	1 piece
Wire gauze	1 piece
Sealed container	2 pieces
Container with dropper	2 pieces
Mortar and pestle	3 pieces

The weighted mean will be used by the researchers to better understand the results of the tested product on the test subjects. With this, the researchers can distinguish which type of ripeness is best suitable for making a Lakatan banana (*Musa acuminata*) essential oil.

$$\bar{x} = \frac{\sum(x \cdot w)}{\sum w} \quad x = \text{data set} \quad w = \text{weight}$$

2.2 Procedure

Gathering of the materials

The materials that will be used throughout the study are Lakatan banana peels (*Musa acuminata*), a mortar and pestle, coconut oil, a strainer, and a sealed container. The researchers will also use a different ripeness of the Lakatan banana (*Musa acuminata*).

Researchers will collect these materials by purchasing Lakatan bananas (*Musa acuminata*) in local shops or by keeping the peels of Lakatan bananas (*Musa acuminata*) that we consume.

Grinding process

In grinding the raw material, the researchers will use a mortar & pestle. The researchers will first cut the peels into small pieces to make grinding easier. While grinding, the researchers will add 10 ml of coconut oil. This allows the aroma and oil from the Lakatan banana (*Musa acuminata*) peels to be released.

Boiling process

The ground-ripened Lakatan banana (*Musa acuminata*) peels will be boiled first by the researchers using an Alcohol Lamp, wire gauze, and a beaker. After boiling the ripened banana peels, the researchers will now boil the unripened peels. While boiling, the researchers added 3/6 teaspoons of coconut oil. By boiling the banana peels the researchers ground, it can help release the oil in the banana peels.

Mixing process

The researchers will put the ground Lakatan banana peels (*Musa acuminata*) into a container along with 25 ml of coconut oil and let it sit for 1-2 days at room temperature.

Filtration process

In filtration, by using a strainer, will make the outcome fully liquid or oil-based. Filtration is important because this is used to separate particles and fluid in a suspension. This is also essential for research purposes because it can give a definition and the final outcome.

Gathering of data based on experiments

Researchers will gather data about the outcome of the essential oil. The thing to be observed is the aroma and how fast the essential oil will take effect on our test subjects. The researchers need to see how various test subjects react to the essential oil.

Testing of products

The product will be tested on stressed students and workers. The researchers will

provide some samples of the given Lakatan banana peel (*Musa acuminata*) essential oil for them to use while studying or working. The researchers will also test the product on people with nasal sensitivity to see if it can lessen the sensitivity of their nose.

3. RESULTS AND DISCUSSION

Table 1. The amount of Lakatan banana peels (*Musa acuminata*) and coconut oil used in each experiment.

	Amount of Lakatan banana peels (Unripe)	Amount of Lakatan banana peels (Ripe)	Amount of Coconut oil
Experiment 1	4	4	35 mL
Experiment 2	4	4	25 mL

Fig 1.1 On the experimentation, the chart below shows the certain amount needed.

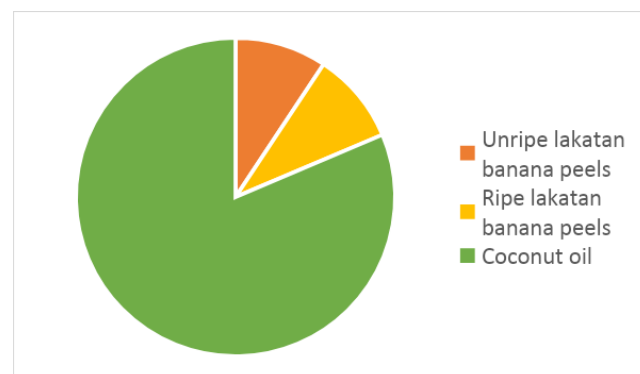


Table 2. The amount of Lakatan banana peels (*Musa acuminata*) essential oil produced.

	Lakatan banana peels essential oil (Unripe)	Amount of Lakatan banana peels essential oil (Ripe)

Experiment 1	35mL	28mL
Experiment 2	25mL	20mL

The unripened banana peels from Lakatan were found to have produced the same amount of coconut oil put in them, based on experiments. On the other hand, ripened Lakatan banana peels absorb a small amount of coconut oil and it produces a smaller amount of coconut oil.

Fig. 2.1 The chart below displays the different amounts of essential oil produced in the experimentation

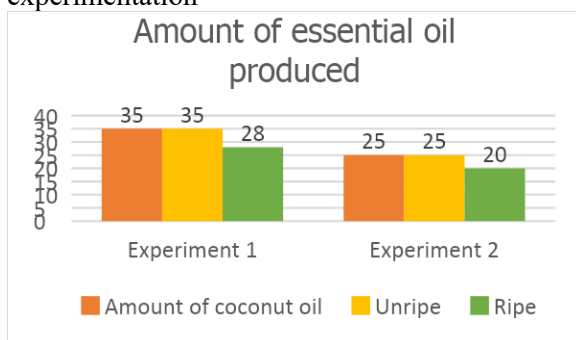


Table 3. Duration of the essential oil usage by each test subject (In hours).

Test Subjects	Trial 1	Trial 2
Stressed Students	3 hours	6 hours
Stress Workers	3 hours	6 hours
People with nasal sensitivity	3 hours	3 hours

In order to check whether the product had any effect on the test subject within a short period, researchers carried out an experiment with it. If there are no effects in the initial study, the researchers increase the time limit. The reduction in the duration of treatment for people with nasal sensitivity will allow them to experience no serious adverse reactions at once.

Table 4. The duration of the Lakatan Banana essential oil scent after being used.

	Duration
Lakatan Banana essential oil (Ripe)	5 to 10 minutes

Lakatan Banana essential oil (Unripe)	5 to 10 minutes
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Based on the experimentation, the scent of both of the Lakatan banana peels essential oil, ripe and unripe, lasts at least five minutes and a maximum of ten minutes. The Ripe Lakatan banana peels essential oil scent is not so strong, it has a natural scent that is soothing and relaxing. However, the Unripe Lakatan banana peels essential oil has a faint scent which is why it did not irritate the nose of those with nasal sensitivity.

For the results of the conducted experiment, the researchers will be using Weighted Mean to differentiate what was the better type of ripeness of Lakatan banana (*Musa acuminata*) in making essential oil based on the ratings on the survey the researchers had given after they used the essential oil at a specific duration. The weighted mean determines the average or total of these two variables.

Formula:

$$\bar{x} = \frac{\sum(x \cdot w)}{\sum w} \quad x = \text{data set} \quad w = \text{weight}$$

Table 5. Unripe Lakatan banana peels (*Musa acuminata*) essential oil.

	Subject	Dr op s	H ou rs (x)	Rat ing s (w)	x · w
Exper iment 1	Wor kers	10	6	4	24
	Stu dent s	10	6	2	12
	Peopl e with nasal sensit ivity	5	3	3	9

$$\bar{x} = \frac{45}{9} = 5$$

	Sub ject	Dr op s	H ou	Rat ing	x · w
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			rs (x)	s (w)	
Experiment 1	Workers	10	6	4	24
	Students	10	6	2	12
	People with nasal sensitivity	5	3	3	9

	Subject	Drops	Hours (x)	Rating (w)	x · w
Experiment 1	Workers	10	6	4	24
	Students	10	6	5	30
	People with nasal sensitivity	5	3	4	12

Table 6. Ripe Lakatan banana peels (*Musa acuminata*) essential oil.

$$\bar{x} = \frac{66}{13} = 5.1$$

The results of the experimentation of whether the Lakatan banana peels can be used in making an effective essential oil imply that both types of ripeness of the Lakatan banana peel essential oil can be used to lessen the stress of people and people's nasal sensitivity.

Based on the results of the weighted means, it shows that Lakatan banana (*Musa acuminata*) peels essential oil using ripe Lakatan banana (*Musa acuminata*) is much preferred. It has a lot of effects on the people who use essential oils. According to the survey, both essential oils are effective, it did not irritate their nose, it made them feel relaxed, and helped them sleep comfortably. Although

both essential oil is proven to be effective, they much prefer the Lakatan banana (*Musa acuminata*) essential oil using Ripe banana peels. Ripe banana peels bring more of the scent of the banana than the unripe banana peels.

If you want to make an essential oil to lessen your stress and feel relaxed but does not irritate your nose, the researchers recommend using Ripe Lakatan banana peels.

4. CONCLUSION AND RECOMMENDATION

4.1 Conclusion

The purpose of this research is to produce an essential oil with the use of Lakatan banana peels. Stress is a primary problem that causes various serious mental health problems. Mainly, students and workers are affected by stress. Essential oil is one of the solutions that can help in coping with stress and lessening nasal allergies. Vitamin B6, Potassium, and Serotonin are present in Lakatan Banana peels which can be useful in alleviating mental problems.

Based on the findings, the researchers have concluded:

1. The results of the experimentation of whether the Lakatan banana peels can be used in making an effective essential oil imply that both types of ripeness of the Lakatan banana peel essential oil can be used to lessen the stress of people and people's nasal sensitivity.
2. Based on the experimentation, the scent of both of the Lakatan banana peels essential oil, ripe and unripe, lasts at least five minutes and a maximum of ten minutes. The Ripe Lakatan banana peels essential oil scent is not so strong, it has a natural scent that is soothing and relaxing. However, the Unripe Lakatan banana peels essential oil has a faint scent which is why it did not irritate the nose of those with nasal sensitivity.
3. Even though both ripeness of the Lakatan banana peel essential oil is proven to be used in reducing stress and showed effective results, the Lakatan banana peel essential oil using ripe banana peels is much preferred for relaxation and help in nasal sensitivity. If you want to make an essential oil to lessen your stress and

feel relaxed but does not irritate your nose, the researchers recommend using Ripe Lakatan banana peels.

4.2 Recommendations

The study revealed that the Lakatan banana peel essential oil is effective. Thus, the following recommendation is presented:

1. The fact that there was a lot to consider and go through made the research process somewhat challenging. Research is good because it helps you to understand the subject thoroughly and make important decisions. In addition, it allows you to remain here and consider whether it's worth it or not. Research yields good results after a great deal of work.

2. Experimentation and testing of the product is difficult for the researchers to do. This process requires accurate data which means the measurements and consistency of the essential oil must be accurate for the product to be effective. Having a respondent answering a survey as evidence, the researchers can make sure that the data given in the paper is accurate and it can benefit the future researchers.

5. ACKNOWLEDGEMENT

In making this Science Investigatory Project (SIP), the researchers would like to thank our Adviser and Basic Research teacher, Ms. Stella Gabales, for teaching and helping us in making this paper. With their advice and motivation, the researchers were able to complete their science investigatory project. The researchers would also like to thank the sources for helping them with their useful information to finish their science investigatory project.

Comparative Study Between Lakatan Banana (*Musa acuminata*) Peel and Cloth as Rust Remover After Using a Vinegar, Lemon (*Citrus limon*), and Salt Mixture.

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Abstract: The study compared the effectiveness of Lakatan Banana peel and cloth as scrubbers for removing rust when used in conjunction with a mixture of white vinegar, lemon, and coarse salt. While these ingredients are commonly known for their acidic properties, the combination alone proved insufficient for rust removal. By introducing Lakatan Banana peel, native to the Philippines, researchers found a composition conducive to rust removal. The experiment involved submerging metal pieces in the solution for 30 seconds, followed by wiping with either Lakatan Banana peel or cloth. Results showed that the banana peel was more effective, not only removing rust but also polishing the metal due to compounds like tannin and phytic acid. Over 163 days of observation, it was evident that Lakatan Banana peel contributed to cleaner, less corrosion-prone metal surfaces, fulfilling the research goal of sustainability, affordability, and safety in rust eradication methods.

Key Words: Rust, iron, steel, lakatan banana peel, cloth

1. INTRODUCTION

In our daily lives, we encounter a phenomenon that, though often overlooked, plays a significant role in shaping the durability of materials and even affecting human safety. Rust, a result of metal corrosion, has captured researchers' interest across disciplines due to its varied impact on materials and potential effects on human safety. It corrodes metal and other objects which may potentially put structures and human lives at risk. This study aims to comprehensively explore rust's effects and compare the efficiency of removal.

Various natural substances like lemon, vinegar, salt solutions, and banana peels have been explored for their effects on rust removal and their potential impact on human well-being. Lemons (*Citrus limon*), rich in citric acid, have shown rust-dissolving capabilities due to its acidic nature (Hewitt, 2021; Ossola, 2022). Similarly, vinegar, containing acetic acid, has demonstrated potential for rust removal. Salt solutions' effects on rust are mixed; some sources suggest salt's contribution to rust formation (NCBI, 2021), others propose

its use as an abrasive (The Spruce, n.d). Lakatan Banana (*Musa acuminata*) peels, surprisingly, have been considered for rust removal due to their compounds and wavy texture (Burro Sabio, n.d). While these natural remedies offer potential rust removal options, these methods, as alternatives to products, require further investigation and research.

The development of rust and its implications have been extensively studied in the field of materials. Rust formation's complex chemical processes have been widely investigated in order to understand the mechanisms that cause metal surfaces to deteriorate. According to research, rust weakens the structural integrity and extends the life of equipment, infrastructure, and numerous other components (Physics at Illinois, 2023; ResearchGate, 2023; NCH Europe, 2023). By collecting data from numerous sources and employing an integrative methodology, this study intends to contribute to a deeper understanding of the intricate relationships between rust, materials, and human safety.

This study's subsequent sections will examine the mechanisms underlying rust

production, examine how it affects various materials, examine any potential health problems associated with exposure to rust, and offer workable preventive strategies. The researchers hope to get a deeper comprehension of rust's extensive consequences through this comprehensive inquiry, providing knowledge that can promote both science and public awareness.

2. METHODOLOGY

This chapter includes the procedural diagram of the study that utilizes the I-P-O Model. It shows the process of comparing Lakatan Banana peel and cloth to remove rust after using vinegar, lemon, and salt mixture.

2.1 MATERIALS AND EXPERIMENTAL PROCEDURES

In keeping with the tradition of using vinegar, lemon, and salt as components of rust removal mixtures, this inquiry also included lakatan banana peel and fabric for comparison.

2.1.1 PHASE 1: GATHERING OF THE MATERIALS

First, the researchers gathered the materials needed for the experiment. The Lakatan Bananas can be bought at local markets or supermarkets, and the peels can be taken after consuming the banana. White vinegar, lemons, coarse salt, and cloth can also be purchased at markets or shops. While the 900 milliliter empty bottle, iron with rust, and steel with rust can be found at local houses or junk shops. To process the ingredients together, the researchers will also need gloves, beakers, funnels, strainers, measuring cups, measuring spoons, and stirring rods. Due to the availability of the materials, the researchers will not waste any food or items.

2.1.2 PHASE 2: MEASURING OF THE SUBSTANCES

After gathering, researchers will use safety gloves in order to avoid direct contact with the materials. The researchers will need 4 Lakatan banana peels, 2 cloths, 2 iron surfaces, 2 steel surfaces, and a 900 milliliter empty bottle. For the mixture, the researchers will need 250 milliliters of white vinegar, 30-

45 milliliters of lemon juice (1 lemon), and $\frac{1}{4}$ cup or 4 spoons of coarse salt.

2.1.3 PHASE 3: CREATING THE LEMON, VINEGAR, AND SALT MIXTURE

Next, the researchers will mix the 250 milliliters of white vinegar, 60 milliliters of lemon juice, and $\frac{1}{4}$ cup or 4 spoons of coarse salt into a clean and empty beaker. Afterwards, the researchers will use a stirring rod to blend the mixture properly for at least 1 minute or 60 seconds in order to ensure the proper mix. Then, the substance will be poured into an empty bottle using a funnel.

2.1.4 PHASE 4: APPLYING ON RUST STAIN AND WIPING

The researchers will then soak the metal in 150 milliliters of the mixture for 3 minutes to sit and be absorbed into the rust stain. Afterwards, the researchers will use the wipe in a moderate manner in order to remove the rust stain while still observing it for 5 minutes. The researchers will wipe and dip the rust stain into the mixture every 30 seconds. Once 5 minutes is up, the researchers will stop to observe the state of the rust stain. The process will be repeated for each metal piece and Lakatan banana peel or cloth wipe. After, the researchers may rinse the metal with water for 1 minute to remove the excess mixture.

2.1.5 PHASE 5: COMPARISON OF RESULTS

Lastly, this is the phase where the researchers will start to record the results of the experiment. The researchers will note down the amount of mixture, time, strength, and quantity of wipes needed in order to remove the rust stain. It will also check if the rust stain was removed properly or cleanly, or if it did not have any effects on it. The metals will also be observed for a day to see their states after some time.

2.2 Statistical Treatment

The researchers utilized a Likert scale from Rohman et al. (2021) to establish the efficiency of each of the variables considered to use a qualitative-descriptive technique for data analysis. For the values to be calculated,

averaged, and compared using the mean formula, each researcher evaluated the variables' performance for each trial.

Percentage (%)	Score Scale	Interpretation
0 – 20	1	Extremely Poor
21 – 40	2	Very Poor
41 – 60	3	Moderate
61 – 80	4	Good
81 – 100	5	Excellent

3. RESULTS AND DISCUSSIONS

The data collected for this research project is presented, examined, and interpreted in this chapter. The ensuing tables showcased the diverse outcomes, along with relevant analyses and justifications. Answers to the questions posed in the Statement of the Problem will also be included in this section.

This study aims to answer the following questions:

1. The difference of the state of the metals removing rust using the vinegar, lemon, and salt mixture and wiping using the lakatan banana peel compared to the cloth.

1.1 (30 seconds of soaking, 5 Minutes of scrubbing)

1.1.1 – Lakatan Banana Peel

	Score	Average	Percentage
Iron	4, 4, 3, 4	3.75	75%
Steel	4, 4, 4, 5	4.25	85%

The average state of the iron after the trial using the lakatan banana peel is 75% or good.

The average state of the steel after the trial using the lakatan banana peel is 85% or excellent.

1.1.2 – Cloth

	Score	Average	Percentage
Iron	2, 3, 3, 3	2.75	55%

Steel	3, 4, 3, 4	3.5	70%
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The average state of the iron after the trial using the cloth is 2.75 or 55% or moderate

The average state of the steel after the trial using the cloth is 3.5 70% or good

2. The difference of how little rust came back to the metals that had rust removed using the vinegar, lemon, and salt mixture and wiped using the lakatan banana peel and cloth after 163 days.

	Lakatan Banana Peel	Cloth
Iron	4	3
Steel	5	3
Average	4.5	3

The average little amount of rust removed from the metals that used a lakatan banana peel wipe is 4.5 or 90% or excellent.

The average little amount of rust removed from the metals that used a cloth wipe is 3 or 60% or moderate.

3. The comparison between the effectiveness of the lakatan banana peel compared to a cloth to wipe off rust stains after using a vinegar, lemon, and salt mixture.

3.1 — Iron

The average effectiveness of the lakatan banana peel on iron is 3.875 or 77.5% or good.

	Score	Average	Percentage
Lakatan Banana Peel	3.75, 4	3.875	77.5%
Cloth	2.75, 3	2.875	57.5%

The average effectiveness of the cloth on iron is 2.875 or 57.5% or moderate.

3.2 – Steel

	Score	Average	Percentage
Lakatan Banana Peel	4.25, 5	4.625	92.5%
Cloth	3.5, 3	3.25	65%

The average effectiveness of the lakatan banana peel on steel is 4.625 or 92.5% or excellent.

The average effectiveness of the cloth on steel is 3.25 or 65% or good.

4. The difference between the results of the iron and steel metals after using a vinegar, lemon, and salt mixture to wipe off rust stains using a lakatan banana peel and cloth.

The average effectiveness of the mixture, lakatan banana peel, and cloth on iron is 3.375 or 67.5% or good.

	Score	Average	Percentage
Iron	3.75, 2.75, 4, 3	3.375	67.5%
Steel	4.25, 3.5, 5, 3	3.9375	78.75%

The average effectiveness of the mixture, lakatan banana peel, and cloth on steel is 3.9375 or 78.75% or good.

Based on their qualitative observations, the researchers carefully considered several factors before assigning a numerical rating to the Lakatan Banana Peel and vinegar, lemon, and salt mixture's ability to remove rust.

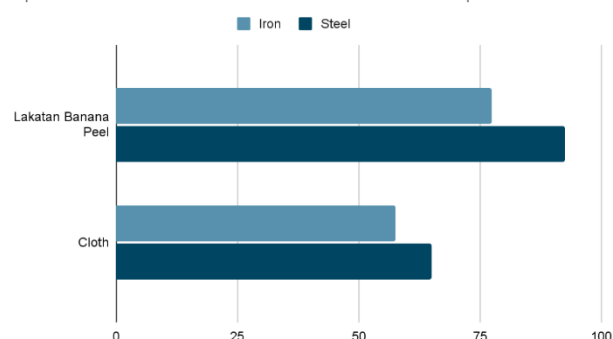
The most significant factor in helping the researchers determine the corresponding numerical ratings that would be used to compute for the efficiency of the two variables for rust removal was thought to be the amount of rust that remained and disappeared on the steel and iron after applying the Lakatan banana peel and using the vinegar, lemon, and salt mixture.

The researchers also took into account how long the lakatan banana peel and mixture were steeped in the iron and steel. The degree of rust on the steel and iron was also looked at and taken into consideration.

Though the rust removal ability in the variables are prioritized, other factor were also taken note of, which is why Lakatan banana peel stood out among the the rest of the variables because aside of the tannic acid that made it capable of removing rust, it also contains phytic acid which has antioxidants that makes the object more resistant to rust.

It is evident that the Lakatan Banana Peel is the variable that has the best efficiency based on the performance it showed during the experimentation which had an overall average of 92.5% or excellent for steel and 77.5% or good for iron. Therefore, Lakatan Banana peel is the most efficient rust remover.

Comparison Between Lakatan Banana Peel and Cloth to Wipe off Rust



4. CONCLUSION AND RECOMMENDATION

This chapter included the study's summary, data, conclusions drawn from the research, and suggestions made in relation to the study "Comparative Study Between Lakatan Banana (*Musa acuminata*) Peel and Cloth as Rust Remover Wipe After Using a Vinegar, Lemon (*Citrus limon*), and Salt Mixture."

4.1 Conclusion

The research's purpose was to compare the lakatan banana peel and cloth as a rust remover wipe on which removes the corrosion better in order to determine which variable is more efficient and sustainable. Based on the results of the experimentation, the lakatan banana peel is found to be quicker and more effective in eradicating corrosion from metals. It was 92.5% (Excellent) efficient on steel and only 77.5% (Good) on iron. Therefore making the lakatan banana peel wipe more effective on the steel surface, a man-made metal. These outcomes then prove that the hypotheses stating that lakatan banana peel's components will not speed up and increase the effectiveness of the rust remover when in use; after using the rust remover mixture on the metals, the rust will come back after some time; and the difference between the components of iron and steel will not affect the outcome of the rust remover mixture to be wrong. To sum it all up, the lakatan banana peel that contains multiple acidic

properties was proved to be an effective rust remover wipe.

4.2 Recommendation

For future studies, the researchers strongly advise carrying out the experimentation process in the laboratory using the complete and appropriate laboratory apparatuses. In the comparison of using white cloth and lakatan banana peel to remove rust stains with a lemon, vinegar, and salt mixture, the researchers recommend setting up a timer for the dipping and wiping process of each product in the mixture. Time how long it took for each material to remove rust to easily identify the differences between the two in their efficiency in removing rust stains and for greater accuracy with the results and observations. Furthermore, the researchers advise using the same metals and observing them in one area to determine what will happen to the rust stain, how it will affect things, and how long it will take for the rust to return.

5. ACKNOWLEDGEMENTS

We would like to express our sincere gratitude to Ms. Stella Gabales, our outstanding

research adviser, for her unyielding support, insightful advice, and unshakable guidance during this research journey. Your guidance has been incredibly motivating and has influenced both our academic and personal development.

We extend our sincere gratitude to our families, whose unending love, support, and comprehension have helped us through the highs and lows of research. Our success has been fueled by your efforts and faith in our abilities.

We are so appreciative to our friends and coworkers for their support, companionship, and intellectual discussion. Your zeal and insightful criticism have enhanced our study and increased the sense of fulfillment from the experience.

Lastly, we give thanks to God for his divine presence and grace, which have led us every step of the road. His wisdom has lit our path, and His strength has been our haven in times of uncertainty and doubt.

Together, you have been our pillars of support, and for that, we are profoundly thankful.

Motorcycle Exhaust Filter made from Recycled Cans, Cotton Shirts, Filter Paper, and Mesh Wires

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Abstract: This research paper aims to improve the experience of motorcycle riders by a prototype that instills a cheaper and more convenient way for both riders and business owners. The prototype correlates into helping in lessening the greenhouse gas emissions coming from purely toxic gas releases. It is simply made of recyclable materials that are put on together as one prototype then tested on a motorcycle to be used efficiently. The estimated use of this exhaust filter is within an hour or two, wherein the riders can change or replace the filter every now and then for a more effective use. We aim to use this product not only for the sake of the environment but also for the sake of transportation and the economy. This will help our economy through healthcare, productivity, innovations and many more. This product will be a great tool for a clean and successful future for all of us. Key Words: Emissions; Exhaust; Filter; Exhaust Filter; Hazard; Hazardous

1. INTRODUCTION In the modern world today, people tend to use on-road vehicles more than before. These on-road vehicles also include motorcycles in which 7.8 million are registered only here in the Philippines for the year 2020 – 2022 (Statista Research Department, March 2, 2022). With the uprising numbers of these motorcycle vehicles comes along with their smoke emissions. Smoke emissions coming from any vehicle is very harmful to the environment and just as to its people. According to the Department of Environmental Conservation, 2022, the reason for why smoke emissions are produced in motorcycles is due to the mixture of carbon monoxide, nitrogen oxide, and hydrocarbons when the fuel resting on a vehicle's gas tank processes through its engine. The only thing to combat these harmful smoke emissions is to either provide motorcycle owners with electric counterparts of their vehicles or make an exhaust filter for their current ones. This study aims to make an exhaust filter for motorcycle vehicles which in return will be beneficial to our environment and to the riders / motorcycle users as well. The filter will process the smoke emissions of the motorcycles and convert it to refined ones to lessen its harmful effects. This

study aims to use eco-friendly materials in creating these filters, therefore the exhaust filter can be recycled after use.

This will also lessen the production cost of the exhaust filter which will make it more cheaper and affordable. Additionally, this exhaust filter attempts to be easy to use and attach. It also attempts to be aesthetically pleasing. The main goal of the filter is to process the nasty and destructive chemicals that are coming out of the motorcycle exhausts. The destructive chemicals are causing air pollution and many more harmful things to our community and environment. Thus attempting to do everything to end it by harming oneself and this filter will also lessen the gas which causes air pollution.

2. METHODOLOGY

2.1 Research Design A qualitative research strategy approach was used in the study. The researchers used the said strategy to figure out the necessary data needed to figure out the best way to build and improve the prototype that was built as a result of their prior research. The use of recycled materials is essential in the succession of this study. The researchers aim to

produce a more eco-friendly yet sustainable solution to a worldwide problem that is yet to be given one; motorcycle smoke emissions. The data gathered in the experimentation process were purely untampered with and all variables are accounted for before proceeding with the accomplishment of this research paper.

2.2

Procedure Gathering of materials

The materials that the researchers will be needing are recyclable materials that are environmentally friendly. Examples of the materials that the researchers will be needing are tin cans, mesh wires, cotton shirts, and filter paper. Assembling Process First the researchers need to cut the necessary parts of the cans with the pliers that they have. Next step is to put the mesh wire in the bottom of the can. Then put the pieces of cotton shirts and filter paper in the bottom of the inside of the can. Then the researchers can finish it off by putting another layer of mesh wire on the top of the can.

Experimenting This product will undergo multiple testing and experiments. These experiments and testing will show how effective and efficient the product is. These will also showcase the researchers products durability and reliability. Testing of the products The products will be tested in a motorcycle provided and used by the researchers . The researchers will provide 2 different prototypes, One is larger than the other. They will test the effectiveness of the product. They will also check the temperature of the exhaust to test the durability of the product.

In order to check whether the product will sustain any damage after hours or few rides of usage, the researchers carried out an experiment using the prototype in which no damage occurred to the prototype itself before and after using it. The modified version is seen to be the leading product for the possibility of a much sufficient and efficient exhaust pipe filter.

3. RESULTS AND DISCUSSION Table 1. The amount and sizes of Materials used in the said experiments.

	Cans	Layers of Cotton Shirt	Filter Paper	Mesh Wires
Experiment 1	1	5	2	3.5 inch of an 8x8 mesh wire
Experiment 2	1	15	2	4 inch of an 8x8 mesh wire

Figure 1.1

On the experimentation, below is the ratio of the materials used.

Table 2. The amount of final motorcycle pipe exhaust filters produced.

Experiment 1	One 4 inch small sized can
Experiment 2	One 5 ½ inch regular sized can

As the materials are being assembled into one prototype, the trial produced one final product each experimentation period.

Table 3. Duration of use of the motorcycle riders

Test subjects	Trial 1 (version 1)	Trial 2 (version 2)
Motorcycle 1	one (1) time use	possible for 24 hours of usage

Table 4. The internal and external status of the prototype (exhaust pipe filter) after use.

Table 4. The internal and external status of the prototype (exhaust pipe filter) after use.

Prototype	Duration	Prototype's status
Version 1	seven (7) minutes	• Burned the first layer of the filter paper. • 2nd layer moderately damaged. • 5 layers of cotton shirt pieces – turned black.
Version 2	seven (7) minutes	• 2 layers of filter paper has visibly lesser damage. • 15 layers of cotton — smoke passed only up until the 9th layer.

4. CONCLUSION This study reveals that the population of vehicles around the world, especially motorcycles causes significant rise in smoke emissions. Recognizing the effects and severity of this issue, This study suggests creating an eco-friendly exhaust filter for motorcycles. This research aims to achieve affordability, quality, environmentally friendly, and user-friendly exhaust filter. The goal of the

researchers is to contribute to helping clean the environment, Not just to be cleaner but also to be more healthier. The proposed exhaust filter not only strives to be a solution for air but to also be a solution to sustainable transportation. Through revolutionary solutions like this filter, we can strive to have a more sustainable future while protecting both our well-being and the planet's health.

Flood Prevention: A Comparison of the Soil Types' Absorbing Capacity

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Abstract: This study examines the ability of sand, loam, and clay soils to drain and absorb water in different percentage compositions and will discover which of the mentioned types and percentages of soils is most useful in absorbing water to prevent floods. It will also discuss the differences in the absorption capability of the soil as well as its properties. In order to determine which of the types of soil and mixtures are most efficient in absorbing water, three trials were carried out, with various amounts of water poured into each soil for each trial. The soil was given 30 minutes to absorb and drain the poured water. The findings of the variables tested were shown in tabular form, which included the amount of water drained in each experiment, and in graphs, which used percentages to highlight the soil's absorption and draining efficiency. The results of the experiments revealed that as the amount of water poured into the soils increased, so did the average amount of water drained by them. This suggests that the amount of water poured on the soil has a significant impact on how much water it drains and absorbs. It is also discovered that the average percentage of absorption capacity of the three soils increases from 28% to 40%, while draining efficiency increases from 17% to 44%. In summary, the soil with the greatest absorption capacity, which aids in flood prevention, will be determined using data collected by the researchers through repeated trials. The significance of this study is that it will help numerous locations, particularly those prone to floods, and will reduce the dangers of flooding and the harm it causes, such as loss of life, damage to infrastructure and properties, landslides, and more. This study will also benefit people of various socioeconomic backgrounds, particularly those who live in poverty since they do not have enough resources to replace the items they lost during the flood, such as their homes, belongings, furniture, and so on.

Key Words: loam, clay, sand, flooding, soil, absorption

1. INTRODUCTION

A flood is a natural disaster that occurs all over the world, and though it is very important, it carries negative effects with it. It causes large amounts of water to surge onto the land. This is most probably due to extreme weather patterns triggered by long term global warming, with climate change increasing the frequency and intensity of floods as global temperatures rise. Rising global temperatures cause higher ocean and air temperatures, resulting in the Presented at the SnJA Research Festival 2023 San Jose Academy, Navotas City

March 13-17, 2023

release of more water (evaporation) as a result of increasing temperatures. Floods can cause soil erosion on their own due to the accumulation and vigorous flow of water, which erodes the top layer of the soil.

Hard rains or heavy rainfall are the most common cause of flooding. Since the rain is falling rapidly, it does not infiltrate the ground; the soil is also not given enough time to absorb the raindrops that fall on it, which might result in flash floods. The

action of falling rain on the soil surface can also create separation of soil particles. Flowing or streaming water pulls up loose soil or soil particles created by soil detachment triggered by rainfall. The rushing water will then carry soil particles down the hill, causing soil erosion. Soil erosion is a concern for us and our environment; it increases pollution, clogs waterways, can harm species on earth, and many more. This reduces the ability of the soil to store nutrients and even water. If the soil does not have the ability to store nutrients and water, it can result in a lower number of crops, which can also affect the income or profits of farmers. As said, soil erosion can cause many harmful and severe effects on our environment. Thus, soil erosion occurs primarily when dirt is left exposed to strong winds, hard rains, and flowing water (floods).

Flooding has a significant impact on both the environment and living things. In addition to the initial effect mentioned previously, these are some of the consequences of floods. Landslides occur when all of the soils in the mountains tumble down onto the houses, eventually covering them. The trees are designed to hold the soil together. One of the main reasons for landslides is that loggers are taking down the trees till the mountains are bald. We must avoid cutting those trees since they will serve as our guide for holding the soils together. Another reason is the quick flow of flood waters, which frequently undercuts slopes or abutments. Landslides frequently occur when support at the base of saturated slopes is eliminated.

Poverty, this happens because of the destruction of property, dwellings,

infrastructure, livelihoods and productive capital which can leave some people in communities in a state of being poor. While those who are already poor can have their conditions worsened by a flood disaster, compared to those who are non-poor or wealthy.

1.1 Statement of the Problem

This study aims to determine which of the types of soil can drain and absorb water efficiently enough to be used to drain floods faster.

Specifically, this sought answers to the following questions:

1. What is the initial and final amount of water before and after the process for:
 - 1.1. Sand soil
 - 1.2. Clay soil
 - 1.3. Loam soil
2. In which proportion and mixture of the types of soil is more efficient in draining and absorbing water?
 - 2.1. Sand soil and Clay soil (50/50)
 - 2.1. Clay soil and Loam soil (50/50)
 - 2.3. Loam soil and Sand soil (50/50)
 - 2.4. Sand soil and Loam soil (75/25)
 - 2.5. Clay soil and Sand soil (75/25)
 - 2.6. Loam soil and Clay soil (75/25)

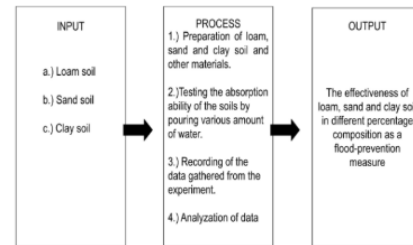
1.2 Hypothesis of the Study

If one of the soils tested is effective in preventing flooding, then this research will be successful given the fact that good quality soil can hold and absorb a large amount of water, thereby reducing the negative effects of flooding such as loss of life, infrastructure and property damage, landslide risks, and soil erosion.

2. METHODOLOGY

2.1 Conceptual Framework

The framework shall serve as this paper's guide throughout the study.



2.2 Materials List

1. 9 pieces of empty 1.5 Soda bottles
2. Large plastic cups (9 pieces)
3. Tap Water
4. Twine rope
5. Scissors and cutter
6. Loam soil
7. Sandy soil
8. Clay soil
9. Masking tape
10. Measuring cup
11. Timer

2.3 Research Procedure

1. Prepare the materials you need.
2. Start by cutting a rectangular opening with the measurements 2.7 inches x 7cm in the middle of the soda bottle.
3. Take a plastic cup and cut a little hole on both sides of the top part of the cup and cut a piece of string/rope (10 inches long) Insert each end of the wire in both of the holes.
4. Make a knot in the end of the wire that is in the inside part of the bottle to make sure it won't move out of place, if you can't make a knot make sure to twist the end of the wire a couple of times.
5. Place the top wire in the head of the bottle (the plastic cup will now be hanging and will look like a bucket) and fill the bottles with the soil, separate them by their type.
6. Slowly pour equal amounts of water into each of the bottles. Make sure that you pour the water at the end of the bottle.

7. Wait for 30 mins and check the amount of water in the plastic cups.

2.3 Statistical Treatment

After the researchers collected the data, it had been categorized, arranged, and tabulated. In order to respond to the questions presented in the study, they underwent statistical analysis. The statistical methods used by the researchers are the percentage and mean.

The researchers utilized the statistical treatment mean formula ($\bar{x} = \sum fx / N$) to calculate the average amount and ($\% = (F/N) \times 100$) for the percentage of the data.

where:

$\%$ = Percentage $\bar{x}$ = Mean F = Total amount (mean average)

$\sum fx$ = Sum of the data N = Total of values

N = No. of data

3. RESULTS AND DISCUSSION

1. What is the initial and final amount of water before and after the process for:

1.1 Trial Results

Table 1.1.1. - Amount of water drained Trial 1

200 ml	E1	E2	E3	MEAN AVERAGE	STANDARD DEVIATION
SAND	83 ml	48 ml	90 ml	73.7 ml	22.50
LOAM	22 ml	37 ml	17 ml	25.3 ml	10.41
CLAY	50 ml	26 ml	105 ml	60.3 ml	40.50

Table 1.1.2. - Amount of water drained Trial 2

250 ml	E1	E2	E3	MEAN AVERAGE	STANDARD DEVIATION
SAND	114 ml	74.5 ml	126 ml	103.8 ml	26.95
LOAM	73 ml	65 ml	3 ml	47 ml	38.31
CLAY	46 ml	105 ml	130 ml	93.6 ml	43.13

Table 1.1.3. - Amount of water drained Trial 3

300 ml	E1	E2	E3	MEAN AVERAGE	STANDARD DEVIATION
SAND	116 ml	149 ml	155 ml	140 ml	21
LOAM	36 ml	82.5 ml	45 ml	54.5 ml	24.66
CLAY	99 ml	125 ml	130 ml	118 ml	16.64

The results shown from the data presented shows how much these types of soil have drained and absorbed water in under 30 minutes.

In Trial 1 (200 ml), it was observed that the sand soil drained an average amount of 73.6 ml (22.50), which means that it absorbed an amount of 126.3 ml; the loam soil drained 25.3 ml (10.41) and absorbed 174.7 ml; and the clay soil drained 60.3 ml (40.50) and absorbed 139.7 ml.

In Trial 2 (250 ml), the sand soil drained an average of 103 ml (26.95) and absorbed 147 ml; the loam soil drained 47 ml (38.31) and absorbed an amount of 203 ml; and the clay soil drained 93.6 ml (43.13) and absorbed 156.4 ml.

1.2 Initial and final amount per variable

Table 1.2.1. - Initial and final amount for Sand Soil

	INITIAL AMOUNT	FINAL AVERAGE AMOUNT
TRIAL 1	200 ml	73.6 ml
TRIAL 2	250 ml	103.8 ml
TRIAL 3	300 ml	140 ml
TOTAL AVERAGE		105.8 ml

Table 1.2.2. - Initial and final amount for Clay Soil

	INITIAL AMOUNT	FINAL AVERAGE AMOUNT
TRIAL 1	200 ml	60.3 ml
TRIAL 2	250 ml	93.6 ml
TRIAL 3	300 ml	118 ml
TOTAL AVERAGE		90.6 ml

Table 1.2.3. - Initial and final amount for Loam Soil

	INITIAL AMOUNT	FINAL AVERAGE AMOUNT
TRIAL 1	200 ml	25.3 ml
TRIAL 2	250 ml	47 ml
TRIAL 3	300 ml	54.5 ml
TOTAL AVERAGE		42.2 ml

According to the overall average of the studied soils, it is evident that loam soil is significantly less effective at draining water than clay and sand soil, which are both similarly effective at draining water but less effective at absorbing it. In contrast, loam soil absorbs water more effectively, with an average capacity of 40.6% across all trials. This suggests that loam soil is the best soil for flood prevention.

Fig. 1.1 Based on the data collected, the chart below displays each soil's capacity for absorption.

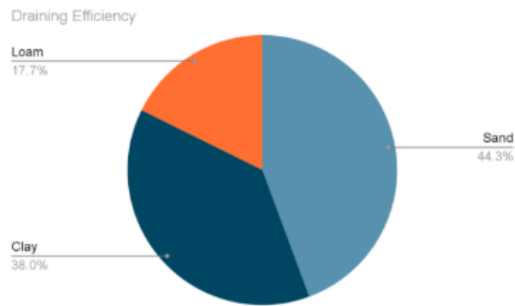
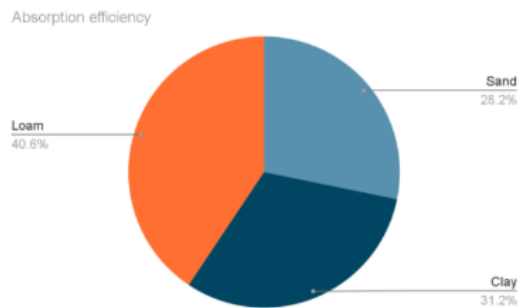


Fig. 1.2 Based on the data collected, the chart below displays each soil's ability to drain effectively.



In which proportion and mixture of the types of soil is more efficient in draining and absorbing water?

2.1 Trial Results

500 ml	E1	E2	E3	MEAN AVERAGE	STANDARD DEVIATION
Sand soil and Clay soil (50/50)	80 ml	73 ml	75 ml	76 ml	3.61
Clay soil and Loam soil (50/50)	23.7 ml	103.3 ml	34.5 ml	53.8 ml	43.18
Loam soil and Sand soil (50/50)	6 ml	19.8 ml	16 ml	13.9 ml	7.13
Clay soil and Sand soil (75/25)	200 ml	225 ml	197 ml	207.3 ml	15.38
Loam soil and Clay soil (75/25)	153 ml	146 ml	135 ml	144.7 ml	9.08
Sand soil and Loam soil (75/25)	138 ml	122.5 ml	140 ml	133.5 ml	9.58

In Trial 1 (500 ml), the results of the 50/50 percentage composition of soil were shown: sand soil and clay soil drained an average amount of 76 ml (3.61) and absorbed an amount of 424 ml; clay soil and loam soil drained an average amount of 53.8 ml (43.18) and absorbed an amount of 446.2 ml; and loam soil and sand soil

drained an average amount of 13.9 ml (7.13) and absorbed an amount of 486.1 ml.

In terms of the soils' 75/25 percentage composition, the clay soil and sand soil drained an average of 207.3 ml (15.38) and absorbed 292.7 ml; the loam soil and clay soil drained an average of 144.7 ml (9.08) and absorbed 355.3 ml; and the sand soil and loam soil drained an average of 133.5 ml (9.58) and absorbed 366.5 ml.

1 Liter	E1	E2	E3	MEAN AVERAGE	STANDARD DEVIATION
Sand soil and Clay soil (50/50)	526.5 ml	580 ml	575.3 ml	560.6 ml	29.63
Clay soil and Loam soil (50/50)	548 ml	507 ml	544 ml	533 ml	22.61
Loam soil and Sand soil (50/50)	497 ml	533 ml	515.5 ml	515.2 ml	18.01

In Trial 2 (1 liter), the sand soil and clay soil drained

an average amount of 560.6 ml (29.63) and absorbed an amount of 439.4 ml; the clay soil and loam soil drained an average amount of 533 ml (22.61) and absorbed an amount of 467 ml; and the loam soil and sand soil drained an average amount of 515.2 ml (18.01) and absorbed an amount of 484.8 ml.

2.2. Initial and final amount per variable

	INITIAL AMOUNT	FINAL AVERAGE AMOUNT (Drained)	FINAL AVERAGE AMOUNT (Absorbed)
TRIAL 1	500 ml	76 ml	424 ml
TRIAL 2	1L	560.6 ml	439.4 ml
TOTAL AVERAGE		318.3 ml	431.7 ml

	INITIAL AMOUNT	FINAL AVERAGE AMOUNT (Drained)	FINAL AVERAGE AMOUNT (Absorbed)
TRIAL 1	500 ml	53.8 ml	446.2 ml
TRIAL 2	1L	533 ml	467 ml
TOTAL AVERAGE		293.4 ml	456.6 ml

Table 2.2.3. - Initial and final amount for Loam soil and Sand soil (50/50)

	INITIAL AMOUNT	FINAL AVERAGE AMOUNT (Drained)	FINAL AVERAGE AMOUNT (Absorbed)
TRIAL 1	500 ml	13.9 ml	486.1 ml
TRIAL 2	1L	515.2 ml	484.8 ml
TOTAL AVERAGE		264.6 ml	485.5 ml

Table 2.2.3. - Initial and final amount for all variables (75/25)

	INITIAL AMOUNT	FINAL AVERAGE AMOUNT (Drained)	FINAL AVERAGE AMOUNT (Absorbed)
Clay soil (75) and Sand soil (25)	500 ml	207.3 ml	292.7 ml
Loam soil (75) and Clay soil (25)	500 ml	144.7 ml	355.3 ml
Sand soil (75) and Loam soil (25)	500 ml	133.5 ml	366.5 ml

According to the overall average of the studied soils in different percentage compositions, the sand and clay soil mixture is the most efficient in draining in both 50/50 (38.7%) and 75/25 (42.7%). It is also clear that the loam and sand mixture in 50/50 proportion absorbs the most water among the three mixtures tested, with an overall percentage of 35.3% and an average amount of 485.5 ml.

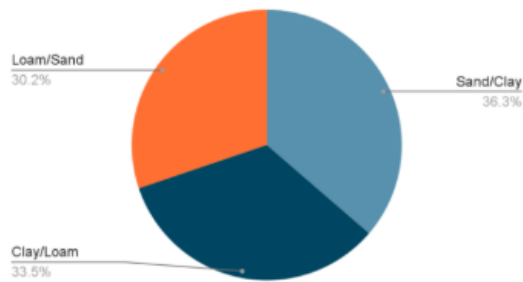
The results of the mixture of loam and clay soil and the sand and loam soil in 75/25

percent composition were similar, with only 11.2 ml difference in the amount absorbed.

There is also just a 1.1% difference in overall absorption efficiency between these two mixtures, with loam and clay soil having 35% and sand and loam having 36.1%. To summarize, the 50/50 and 75/25 percentage compositions of sand and loam absorb water more effectively, with 35.3% (50/50) and 36.1% (75/25), respectively.

Figure 2.1. Based on the collected data, the chart below displays the ability of the 50/50 percentage composition of soil to drain effectively.

Draining Efficiency



Absorption Efficiency

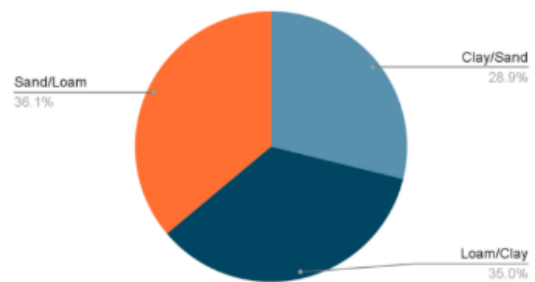


Figure 2.2. Based on the collected data, the chart below displays the absorption efficiency of the 50/50 percentage composition of soils.

Absorption Efficiency

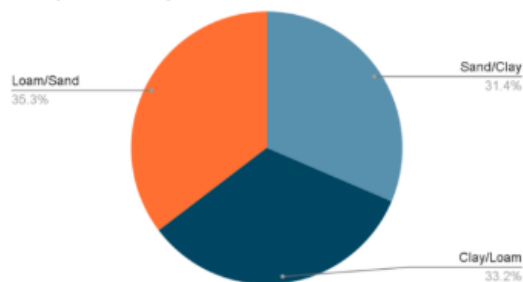


Figure 2.4. Based on the collected data, the chart below displays the absorption

Figure 2.3. Based on the collected data, the chart below displays the ability of the 75/25 percentage composition of soil to drain effectively.

Draining Efficiency

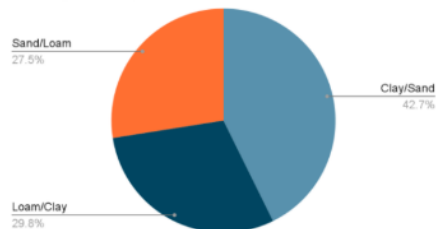


Figure 2.4. Based on the collected data, the chart below displays the absorption efficiency of the 75/25 percentage composition of soils.

efficiency of the 75/25 percentage composition of soils.

The goal of this study was met throughout the experimentation which is to identify which type is the most efficient in absorbing water and preventing flood. Although there are two types in which showed close results the findings in this study showed that these three soils (loam, sand and clay) have different qualities that makes their absorbing and draining abilities different from each other.

Loam and clay soils are more intact than sand soils, which means they have small gaps that do not allow water to pass through immediately but rather store it. Sand soil has wide gaps between its particles, which allows water to move through it more easily.

4. CONCLUSIONS

The results from all the trials in the first question in the statement of the problem were consistent. In trial 1, it was observed that the loam soil absorbed the most water on average (174.7 ml), while the sand soil drained the most water (73.6 ml on average). In trial 2, the loam soil absorbed the most water on average (203 ml), while the sand soil drained the most water on average (103.8 ml). As for trial 3, the loam soil absorbed the most water on average (223 ml), while the sand soil drained the most water on average (140 ml). The absorption capacity of loam soil is significantly greater than that of the other two soils.

Loam soil is inefficient at draining because it absorbs the water poured into it, making it the soil that has the most absorbing capacity among the three soils studied with 40.6% efficiency. Sand soil on the other hand is more efficient in draining than absorbing water with 44.3% efficiency, the gaps between its particles allows water to flow through, making it ideal for draining water. Contrary to expectations, clay soil did not absorb as much water as loam soil. Unlike the other two soils, which are solely efficient in either absorbing or draining, clay soil can be efficient in both draining and absorbing since it stores water for a longer period of time, but it takes longer to absorb water.

The amount and variety of soil types displayed

consistent results in trials 1-2. The loam and sand soil mixture absorbed the most water in both 50/50 (485.5 ml) and 75/25 (366.5 ml) percentage compositions, with an absorption efficiency of 35.3% to 36.1%. The sand and clay soil mixture, on the other hand, was the most efficient in draining water in both the 50/50 and 75/25 proportions, with an average of 318.3 ml (36.3%) drained for the 50/50 proportion and 207.3 ml (42.7%) for the 75/25 proportion. The absorbing capacity of 1L of 50/50 proportion of all the soil mixtures tested

ranges from 400 ml to 500 ml, and the soil mixtures cannot hold the same amount of water (1 liter) or an amount greater than 500, with the exception of example 1 of the sand and loam mixture, which absorbed 503 ml of water.

According to the findings of the researchers' investigation, loam soil absorbs and holds the most water compared to the other two soils examined and the 50/50 and 75/25 percentage composition of sand soil and loam soil has the most absorbing capacity.

This indicates that loam soil is the soil with the greatest absorption capacity and the sand soil and loam soil in 50/50 and 75/25 percentage composition is the mixture with the greatest absorption capacity among the other two mixtures, these are the most effective soil and percentage compositions for preventing flooding in various areas.

Spinach and Potato Solution: Effectiveness in Killing Ticks

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² Basic Research

Abstract: The goal of this study is to compare the different effectiveness of spinach and potato in killing ticks. The researchers found out that both spinach and potato contain a similar component which is potassium, they both contain a lot of potassium than any other vegetables. Potassium is one of the components used to kill the ticks because it has an effect on these ticks which makes them to get weak and eventually die. Potassium has a negative impact on the growth and development of pests and parasites and this can prevent ticks from increasing and growing in pets fur, this can eliminate ticks, Additionally It is useful for tick-bites since it quickly repair or eliminate scars and blemishes on the surface of the skin which help to remove bite marks. That's why the researchers decided to conduct an experiment using spinach and potatoes as a way to kill ticks. By boiling the potatoes and spinach the researchers may obtain a solution that contains potassium. This solution would be tested on ticks and compare the two in how effective and efficient it is in terms of killing the ticks. After the procedure was done the researchers found that though the potato was a lot more efficient both spinach and potato solution was effective. This will significantly help in preventing the infestation of ticks in your pets that are susceptible to tick infestation. This idea helps to prevent the owners from getting in trouble and spending money. It is also a cheaper and more accessible way for pet owners to treat their pets when they have ticks. The experiment can assure you that it is safe for dog skin and will not cause any allergies to your pets.

Key Words: Spinach; Potato; Solution; Ticks.

1. INTRODUCTION

1.1 Background of the Study

Ticks require blood to survive; it can be from us humans or animals. That can be very harmful because ticks carry diseases which can be passed on to the host it bites. Most people buy products that contain lots of chemicals. Doing this can not only affect the people but also its environment. There are animals that get ticks and there are also a lot of products that can be

harmful to sensitive animals. But owners have no choice but to use and buy these.

We thought of a way where people can get rid of this pest in a cheaper and less harmful way. Potassium can kill lots of pests and one of those pests are ticks. We can get potassium in a lot of vegetables including spinach. Spinach is a vegetable that us

Filipinos may see in sinigang and adobong kangkong. Spinach has a lot of health benefits but not only that with just one raw cup there's 167 mg of potassium. That means if we use 100

grams of spinach we would have 558 mg of potassium.

Another vegetable that has a lot of potassium are potatoes. We all know that potatoes are best cooked as mashed and as fries but did you know that in 100g of potatoes there's 421 mg of potassium. You may be wondering how we get these potassium from these vegetables. We researchers hypothesize that by using people's way of reducing potassium from their diet. By boiling both spinach and potato in water it is said that the potassium will leach from the vegetables then go to the water. Then we would obtain potassium to be used to kill fleas. In the end we would be comparing the results to find which one would be the best to use in killing ticks. Ticks

Ticks can spread disease or be completely harmless. It preys on us humans though mostly pets and animals. Ticks must obtain blood from their host to survive; otherwise, they will perish.

Potassium

Potassium is an electrolyte that carries an electric charge throughout the body when consumed. Potassium is not only important for us to consume but a lot of insects or pests are also highly sensitive to potassium that's why a lot of products contain potassium.

Spinach

Spinach contains many minerals and vitamins that may help with health problems. You can also find potassium in spinach. One cup of spinach (180 grams) contains 839 mg.

Potato

Potatoes grow underground in hot weather. It's plant-based, fat-free and gluten free. Potatoes are an excellent

source of potassium. Potatoes rank highest for potassium. One medium potato (5.3 ounces) with the skin contains 620 mg of potassium.

1.2 Statement of the Problem

The study aims to determine which of the spinach or potato solution is a better alternative in killing ticks.

Specifically, this sought to answer the following questions:

1. How effective is the spinach and potato solution in terms of the number of ticks killed?
2. Amount of spinach and potato solution it will take to kill the ticks.
3. How long does it take for the potato and spinach to kill all the ticks?

1.3 Hypothesis

1. Both spinach and potato solution is effective and both would be able to kill the ticks.
2. The amount does not affect the effectiveness of the spinach and potato solution.
3. The spinach and potato solution will take a long time to kill the ticks.

1.4 Scope and Limitations

We researchers will only test the experiment using ticks that have been collected from the animals. For obvious health and safety reasons we will not conduct any on contact experimentation. By that I mean we will not test these on animals nor humans for our safety and for others. The researchers are also limited with ticks and were not able to compare the results with a lot more ticks. For both potatoes and spinach we would only be

using the ones you can easily buy at the local market.

1.5 Significance of the Study

Ticks are harmful especially for our beloved pets. This research aims to identify which of the two can provide a more

This study is a quantitative study that focuses on comparing the effectiveness of

$$\bar{x} = \frac{\sum x}{n}$$

where in:

$\bar{x}$ - symbol for mean

Σ - sum of all data

x - gathered data

n - total number of data

2.1 Conceptual Framework

The framework, which is shown below, should help you understand the study.



2.2 Material List

Four (4) pieces of potatoes, three (3) packs of spinach, thirty six (36) Ticks, twelve (12) containers, measuring cup, knife, and a container that will be used later for the chopped potatoes and the spinach.

2.3 Procedure

Prepare the potatoes and cut them into thin slices. Then put all the cut potatoes in one container. After that get a pot then place it on the stove. Put

efficient and effective way of killing ticks. In this way we can all have access to a cheap, safe, and reliable option in killing ticks.

2. METHODOLOGY

spinach and potato in killing ticks. The researchers used mean as their equation of measure of tendency.

800ml water on the pot and boil it. Once the water boils, place the potatoes in the boiling water and wait for 20 minutes. After 20 minutes, put the potato solution in a container. Next is the spinach, separate the spinach leaves from the stem. After you have separated them, get a pot and place the pot on the stove. Put 800ml water on the pot and boil it. Place the spinach leaves in the boiling water and wait for 20 minutes. After 20 minutes, put the spinach solution leaves in a container. After the potato and spinach have been boiled, you can make use of them to kill the ticks.

3. RESULTS AND DISCUSSION

As a result of our experiment seen in table 1.1 and table 1.2, we can conclude that both the potato and spinach solutions are successful at killing ticks; the only difference between the two is that the potato treatment kills significantly more quickly than the solution was still able to kill all the ticks without the amount of solution affecting it.

Table 1.1 - The Amount of Ticks Killed Using Spinach Solution

Table 1.1 - The Amount of Ticks Killed Using Spinach Solution

Amount of Solution (Tsp)	Amount of Ticks Killed		
	Trial 1	Trial 2	Trial 3
1/2	3	3	3
1	3	3	3

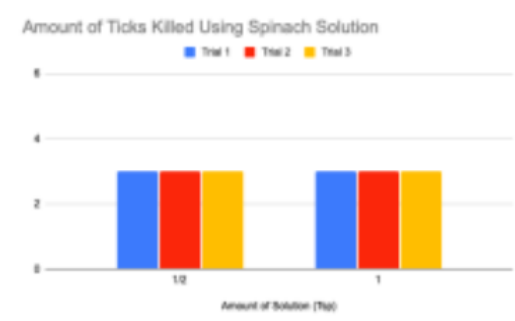
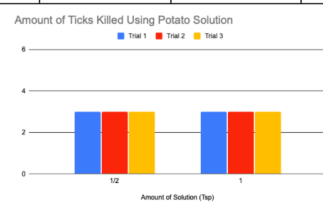


Table 1.2 - The Amount of Ticks Killed Using Potato Solution

Amount of Solution (Tsp)	Amount of Ticks Killed		
	Trial 1	Trial 2	Trial 3
1/2	3	3	3
1	3	3	3



3. How long does it take for the potato and spinach to kill all the ticks? Comparing the

results from table 2.1 and table 2.2 the spinach takes more time to kill the fleas while the potato on the other hand is faster at killing the ticks. In table 2.1 it shows that it takes an average of 544.67 for 1/2 tsp of solution and 535.33 seconds for the 1 tsp. While on the other hand if you look at table 2.2 the 1/2 tsp of potato solution only took an average of

153.67 seconds and the 1 tsp took 291 seconds. You can clearly see the big difference that the solution had when it comes with the amount of time it took to kill all the ticks.

(The researchers decided to use the mean formula to see the average time it took for the ticks to be killed by the solution.)

Table 2.1 - Amount of Time That it Took the Spinach Solution to Kill the Ticks (measured in seconds)

Amount of Solution (Tsp)	Amount of Ticks Killed			Mean
	Trial 1	Trial 2	Trial 3	
1/2	680	550	404	544.67
1	876	574	156	535.33

Table 2.2 - Amount of Time That it Took the Potato Solution to Kill the Ticks (measured in seconds)

Amount of Solution (Tsp)	Amount of Ticks Killed			Mean
	Trial 1	Trial 2	Trial 3	
1/2	53	153	255	153.67
1	89	417	367	291

Summary, Conclusion and Recommendation

Conclusion

Ticks are harmful not only for our pets but also for all of us humans. Ticks may seem harmless but they also can be carrying once bitten by the pest. Potassium is one of the elements used to kill ticks. It's a common compound that we may see in foods we eat. Spinach and potato are one of the foods that contain large amounts of potassium.

The researchers conducted this study

to find if they can obtain potassium on can
in the spinach and potato that later

be used to kill the ticks. The researchers boiled both spinach and potato separately and used the solution made to kill the ticks. The result of the experiment showed interesting results. After the researchers have observed the results. They concluded that both spinach and potato are effective in killing ticks. And it is proven that potassium can kill pests. Both have shown great results by killing all the ticks. But potato took an average time of 153.67 and 291 seconds in killing the ticks compared to spinach that took 544.67 and 535.33 seconds which shows that the potato solution was more efficient in killing the ticks.

Even though the spinach works well in killing ticks and showed effective results. The potato ranks high and has proven that it has a lot more potassium than other vegetables. That is why the researchers recommend that if you want to kill the ticks as efficiently as possible you should use the potato solution.

Effectiveness of Basil (*Ocimum basilicum*), Vinegar (Acetic Acid) and Lemon (*Citrus limon*) as an Candle Insecticide

Abstract: The purpose of this study is to determine the Effectiveness of basil (*Ocimum basilicum*), vinegar (acetic acid), and lemon (*Citrus limon*) as candle insecticides. So therefore, We conducted a research study and experimentation of all-natural, and eco-friendly candle Insecticide. In this project, we'll make an organic or natural Insecticide to maintain the environment a "safe place" & free from dangerous insects and to prevent any harmful effects to those people nearby. Also, we'll provide the best and most useful tool to lessen the effect of harmful insects on the local population.

Introduction

Chemicals called insecticides are used to kill insects or stop them from acting in an unwanted or destructive way. Their structure and mechanism of operation are used to categorize them. Insecticides are both chemical and biological in nature, and they are used in agriculture, forestry, gardens, homes, and offices. They are also used to control vectors such as mosquitoes, flies and ants, which are involved in the spread of human and animal diseases.

The economic impact of insects is determined by the amount of money and resources used for pest outbreak prevention and control. Economists generally concur that insects consume or destroy about 10% of gross national product in large, industrialized countries and up to 25% of gross national product in some developing countries, despite the fact that estimating dollar values for these losses is nearly impossible, especially when they affect human health and welfare.

However, in this project, we'll make an organic or natural insecticide to prevent a pleasant and healthy friendly environment and avoid the damage or impact of it to the people around or near the insecticide. We also provide a best and effective tool to buffer the insect on the people's surrounding.

In this investigation and experiment, will provide three (3) ingredients to know the best economical natural insecticide that will

benefit the economy and help the community. Basil has certain aromatic oils which are known to repel creepy crawlies, such as ants, basil is an effective organic plant that can kill ants. basil leaves have a very pungent smell which kills ants and other insects. Lemon goes well in teas, beverages, fish dishes, and other foods. It can, however, be used to repel a variety of insects in a variety of ways and it gives a nice and pleasant smell. The acidity of vinegar is strong enough to kill many insects, making it one of the ideal ingredients for making a pest control spray. The researcher will be focusing on a particular insect which is black ant.

Statement of the problem

This study aims to create natural candle insecticide with the use of Basil, Vinegar and lemon. Specifically, this seeks to answer the following questions:

1. What is the average duration of the BaViLem candle?
2. Quality of BaViLem Candle insecticide.
 - a. Number of ants that went away from the BaViLem candle insecticide.
 - b. Scent of the Bavilem candle insecticide.

Methodology

This chapter focused on the procedure of the candle insecticide and the materials

needed to create this candle. Specifically, this chapter explains and provides the experimentation of the average duration of the candle, the observation of the people nearby the candle during the experiment, and the difference between the candle insecticide with basil, vinegar and lemon and the normal candle to the ants.

This study is quantitative research. It is the study of basil, vinegar, and lemon as an effective candle insecticide. To begin, prepare the one hundred ten (110) grams of paraffin wax, six (6) teaspoons of vinegar, six (6) teaspoons lemon juice, fifteen (15) pcs of Basil Leaves, six (6) 7inch candle wick, one (1) glue gun, one (1) piece glue stick, six (6) shot glass, one hundred ten (110) grams of plain wax candles and six (6) packs of cookies. To start the procedure, first, melt the wax in a double boiler and stir occasionally. When the wax is almost melted, add fifteen (15) pieces of crushed basil leaves, six (6) teaspoons of vinegar, and six (6) teaspoons of lemon juice. Third, dip the candle wick to the melted wax to straighten it. Fourth step, using a glue gun and glue stick, stick the candle wick to the bottom of the shot glass. Fifth, pour the melted wax into three (3) shot glasses. Sixth, place the candle wick to the middle gently, and wait for it to set.

Cut thirty-five grams of ordinary wax candle into smaller pieces and put it on a double boiler.

When the wax is fully melted, pour it into a shot glass with a candle wick. Then, wait for both candles to set. For the first experimentation, light three BaViLem candle insecticides and three ordinary wax candle to measure the average duration.

For the second experiment, cut the folders and form a rectangle. Then, place a tape in the middle to separate the sides. Put the ordinary wax candle on the right side and BaViLem candle insecticide on the left side. Then, crush a newly opened cookie

and put the same amount of cookie crumbs on both sides before the candles, light both candles and put five ants in the middle, wait for two hours and check which side attracted more ants and measure the duration of BaViLem candle insecticide and the ordinary wax candle.

For the third experiment, the researchers distributed questionnaires to twenty (20) people near the lighted BaViLem candle insecticide to determine if the candle has a nice scent. The respondents will rate five (5) as fragrant, four (4) as moderately fragrant, three (3) as slightly fragrant, two (2) as neutral, and one (1) as completely scent free.

Results and Discussion

In the first experiment where the researchers test which of the two last long. In the first trial, the ordinary wax candle lasted for two hundred fifty-two (252) mins while the candle insecticide lasted for two hundred thirty (230) mins. In the second trial, the ordinary wax candle has a duration of two hundred ten (210) mins while the BaViLem candle insecticide has a duration of two hundred seventy (270) mins. In the third trial, the ordinary wax candle has a duration of three hundred twenty-eight (328) mins while the candle insecticide has two hundred fifty (250) mins duration. The mean of the duration of the BaViLem candle insecticide and the ordinary wax candle was identified to get the average duration of both candles. The average duration of BaViLem candle insecticide is two hundred fifty (250) mins while the average duration of the ordinary wax candle is two hundred sixty-three point thirty-three (263.33) mins.

Therefore, the ordinary wax candle has a higher duration than the BaViLem candle insecticide.

In the second experimentation, the researchers test the number of ants that

went towards the two candles. Five (5) ants were placed in the middle. On the first trial, after lighting both candles for two hours, one (1) ant was found on the side where BaViLem candle insecticide was placed and four (4) ants were found on the side where an ordinary wax candle was placed.

On the second and third trial, no ants were found on the side where BaViLem was placed and five (5) ants were found on the side where an ordinary wax candle was placed. Hence, the cookie

crumbs placed before the ordinary wax candle attracted more ants than the cookie crumbs placed before BaViLem candle insecticide. The researchers found that the BaViLem candle insecticide prevented the ants from coming near the candle.

In the third experiment, results show that 80% of the respondents rated the scent of the BaViLem candle insecticide five (5), 10% rated four (4), and the other 10% rated three (3).

Therefore, the majority of the respondents found the BaViLem candle insecticide fragrant.

ABSTRACT: Given the negative consequences of plastic pollution on both the environment and humans, there is a growing demand for an effective approach to prevent it from getting worse. Developing bioplastic is one of the solutions developed by scientists. A bioplastic is an effective alternative for plastic since it is made of renewable resources such as starch. Hence, the purpose of this investigation is to investigate and compare two forms of bioplastic manufactured from starch: potato bioplastic and corn bioplastic. This investigation will determine which of the two variables is preferable for use as a plastic alternative for humanity. The physical and chemical properties of the two bioplastics, such as degradation, volume, solubility, and qualities, will be compared in order to reach a conclusion at the end of the investigation. It was hypothesized that the physical and chemical components of corn-based bioplastic and potato-based bioplastic would have been no difference from one another. The researchers created the two bioplastics in order to evaluate the qualitative observations from the bioplastics. The potato-based bioplastic was shown to be easier and faster to manufacture than the corn-based bioplastic, while the corn-based bioplastic was discovered to be more flexible than the potato. The researchers also conducted three different trials to analyze the biodegradability, volume, and solubility of both bioplastics. At the conclusion of the experiment, the researcher discovered that the potato-based bioplastic took longer to decompose, had a larger volume, and was more soluble than the corn-based bioplastic.

In order to produce more definite future research, the researchers suggested adding more physical and chemical testing to the bioplastic in the lab. Researchers also suggested examining if the brand of starch that was utilized may have an impact on the experiment's result. Lastly, it is advised that future studies take into account additional factors such soil type that may affect the biodegradation test.

1. Introduction

Plastics are widely used by humans due to the numerous benefits they provide, such as being it for transportation due to its lighter weight than competing materials, which reduces fuel consumption, and it is also commonly used for food packaging material since it protects products from deterioration and increases storability. Plastics are utilized in a wide range of goods and have replaced other materials like wood, steel, and glass that were formerly used for purposes that plastics now dominate (Tiseo, 2020).

As a response, regardless of the fact that plastic is a non-biodegradable material that has negative effects on the environment and living organisms in it, world-wide plastic production has created a vast number of plastics each and every year. Plastic production was estimated to total 367

million metric tons in the year 2020, however owing to the consequences of COVID-19 on each country's industry, production in 2022 declined by around 0.3 percent compared to previous years (Tiseo, 2020). About a third of all plastics used by people were intended to be 'throwaway', meaning they are only anticipated to be used for a year or less. This unsustainable strategy to resource usage is supported by the plastic industrial economy, plastic is cheap, resilient, and usually produced without any intention of reusing it due to the material's low production cost (Oakes, 2010)

While the planet revolves, so does the human population, resulting in more waste being accumulated in the planet. The amount of plastic pollution in the environment is growing as a result of this cause. Plastic production utilizes a range of harmful compounds threatening economies, ecosystem and human health

(Rinkesh). Plastics of all sizes is considered a global danger since it is irreversible on a global scale and is likely to disturb earth processes, by either adversely affecting ecosystems or modifying the environment's physicochemical aspects (Feorilin, 2019)

Plastic pollution has become a significant threat worldwide so humanity established strategies and solutions to effectively control and reduce the consequences of plastic pollution on the planet. Making a bioplastic material from renewable resources is one of the approaches that the society has created as it minimizes plastic pollution and the dependence on fossil fuels, both of which are environmentally damaging. Bioplastic is a term that combines the terms 2 biodegradable plastic and bio-derived plastic (BIO-FED). A bioplastic has qualities and characteristics that are similar to the conventional plastic that people are familiar with, and it can be made in a similar manner and processed on regular plastic machinery.

Conventional plastics contain toxic substances; bioplastics on the other hand, are made from natural resources such as wood, maize, sugar cane and ect. Bio-derived plastics have the possibility to substantially reduce the carbon emissions involved with typical plastic manufacturing (Bioplastic offer hope in the battle against plastic pollution, 2021).

Large variety of renewable biomass sources, such as various types of starches and vegetables , are being utilized to

Potato starch has also been used successfully in the past to manufacture bioplastic. Numerous research studies have demonstrated that potato starch contains a polymer that indicates its potential for application as an alternative bioplastic towards the conventional plastic currently

develop bioplastics since they possess properties which can be used to produce biodegradable plastics that can be utilized for all the purposes which a conventional plastics is used for. Considering starch is an abundant, naturally produced raw material with a low cost and has been used to manufacture biodegradable packaging, it is being studied as a potential petroleum alternative due to its being renewable, biodegradable, toxic-free, and enables for food applications (Fakhouri, 2009). Starch compositions made up 11.3% of the bioplastics created in 2011, but this percentage may expand as more research is conducted on the topic (Priendniece, Spalvins, Ivanovs, Pubule & Blumberga, 2017).

One of the major constituents in the manufacturing of bioplastics is cornstarch. Polylactic acid is now the bio-plastic that is most often used worldwide. In order to generate PLA (polylactic acid), maize starch, cassava, and sugarcane are often used. It is edible, biodegradable, carbon-neutral, and environmentally friendly. Polylactic acid (PLA) is a plastic substitute made from fermented plant starches, generally corn, that has achieved popularity as a replacement for conventional plastics. PLA is suggested by proponents as another approach to reduce greenhouse gas emissions because it is theoretically made from renewable, carbon-absorbing plants. Furthermore, The PLA does not emit hazardous gasses when incinerated since the corn starch plastic requires just 65 percent less energy to manufacture than conventional plastics.

causing environmental harm. A potato starch is made from two carbohydrate 3 polymers, amylose and amylopectin. The amylopectin needs to be broken down in order for starch to be plasticised (Kundu & Payal, 2021)

The purpose of this research is to contrast

corn-based and potato-based bioplastic in terms of their chemical and physical properties in order to determine which is more beneficial and effective as a bioplastic. At the end of the investigation, it will be determined which of the two bioplastics is the better non-biodegradable plastic alternative.

The researchers conducted various tests and analyzed the two variables involved in the study to determine which of the two bioplastic is the better non-biodegradable plastic alternative in terms of chemical and physical properties.

1.1 Statement of the Problem

The goal of the study is to compare the properties and characteristics of corn-based bioplastic and potato-based bioplastics in order to determine which is more effective as an alternative plastic.

Specifically, It aims to answer the following objectives:

1. Determine the qualitative variables that are observed during and after the

experiment that helped in the determination of the most efficient bioplastic among the two.

a. Corn-starch

b. Potato-starch

2. Identify the difference between the corn-based bioplastic and potato-based bioplastic in terms of:

2.1. Degradation

2.2. Volume

2.3. Solubility

1.3 Scope and Limitation

This study focused on comparing the two bioplastic deprived from starch which is corn starch and potato starch and identify the factors that determined which is the preferable choice between the two.

The study's limitation is that the bioplastic investigated in the experiment is only limited to corn starch and potato starch; the study excludes any other form of starch bioplastic.

1.4 Significance of the Study

The study was conducted to compare the two variables and determine which is the more preferable choice for alternative. The investigation's findings is highly significant in deciding which is more environmentally friendly that can save the environment. Furthermore, the findings of this investigation can greatly help the DENR in seeking solutions for ending the plastic pollution problem on the planet.

1.5 Hypothesis of the Study

Null Hypothesis

There would be no difference in the physical and chemical components of the

corn-based bioplastic and potato-based bioplastic that been used to determine which is the more preferable bioplastic for an alternative non-biodegradable plastic.

2. Methodology

2.1 Conceptual Framework

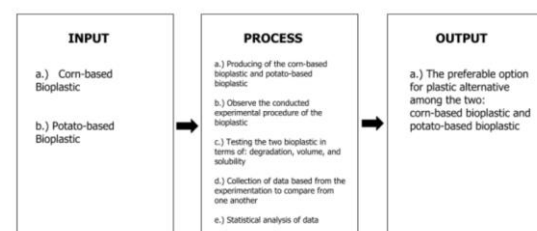


Figure 1. Conceptual Framework

Figure 1. Conceptual Framework

The researchers applied the input-process-output (IPO) model, depicted in Figure 1, as a guiding tool throughout the study. The conceptual framework above displays the general draft of how the investigation occur. The input stated the two variables that are tested in the study, and the process displayed the study's procedure. The output of the framework shows the preferable alternative among the two variables.

2.2 Materials and Experimental Procedures

This investigation utilized potato starch and cornstarch to manufacture bioplastic seeing as starch has come to be known as an alternative component for bioplastic.

2.2.1 Formulation of the product

First and above all else, you must gather and ensure that all of the necessary materials are present for the experiment to occur. potato/corn starch, glycerin, 5mL white vinegar, hotplate, stirring rod, beaker, bunsen burner, clamp/holder, wire gauze are all needed. The first step is to combine all of the materials in a beaker. Stir it thoroughly, making sure to get rid of

any lumps, until the mixture is a milky white color and quite watery. Place the beaker containing

the mixture on a prepared bunsen burner. As you can see, the mixture is translucent and will begin to thicken as the beaker heats up. Following that, after ensuring that it has been heated for at least 10-15 minutes. If you notice the mixture becoming clear and thick, remove it from the heat immediately using the clamp. The heated mixture should

then be spread onto a piece of foil or parchment paper to cool. If you notice any small bubbles in the plastic, poke them with a toothpick. Lastly, allow the plastic at least two days to dry.

As it cools, it will start to dry out. Depending on the thickness of the plastic, drying time may be prolonged. Keep the plastic in a cool, dry area for this procedure. After two days, the bioplastic is ready.

2.2.2 Testing of the Product

Degradation Test

After producing the bioplastic, the researchers covered each of them in a loam soil to see how long it would take for them to decompose. There are three trials that are conducted with different amount of sunlight being received by where the bioplastic has been placed. The researcher make sure to kept tabs to the variable every week to observe the progress.

Volume Test

After producing the bioplastics, the researcher examined the density of the bioplastics using a measuring cylinder containing a 40 mL amount of water.

There are three trials that are conducted with different grams of bioplastic. A piece of bioplastic was immersed into the measuring cylinder to measure how much the water had risen. The scientific formula $\text{Density} = \text{Mass} / \text{Volume}$ was used to calculate the mass of the bioplastic per unit volume.

Solubility Test

After producing the bioplastic, the researchers examined its solubility in water at a specific temperature to identify how much it needed for the bioplastic to dissolve. A beaker containing water with different temperatures each trial was used,

and both pieces of the bioplastic were immersed in it while the researcher measured how long it took to dissolve.

2.3 Statistical Treatment

In this investigation, the researchers utilized the statistical treatment mean formula after gathering and thoroughly examining the data. The formula that the researchers that been used

is $\bar{X} = \Sigma X / N$.

Formula:

$$\bar{X} = \frac{\sum X}{N}$$

Wherein:

$\bar{X}$ = symbol for mean

Σ = the summation of the data

X = given data

N = total number of data

3. Results and Discussion

1. The variables that emerged during and after the experiment that helped in the determination of the most efficient bioplastic among the two.

Table 1.1 - Qualitative Observation during and after the trials

	Corn-based Bioplastic	Potato-based Bioplastic
Easily dissolved in water	✗ ✗ ✗	✓ ✗ ✓
Slow thickening of the mixture	✓ ✓ ✓	✗ ✗ ✓
The concentration of vinegar remains in the bioplastic	✗ ✗ ✓	✓ ✓ ✓
The mixture have a thick texture	✗ ✓ ✗	✓ ✓ ✓

The three experimenters from the group of researcher conducted a survey to identify the qualitative observations on the bioplastic that was produced.

Table 1.2 - Qualitative Observations during and after the procedure

	During the procedure	After the procedure
Corn-based Bioplastic	- The starch is hard to solute with the water - The mixture hardens in an hour	- The foul smell of vinegar is not present - The mixture is less thick and easily spread out in baking paper

	During the procedure	After the procedure
Potato-based Bioplastic	- The starch is easily mixed with water - The mixture hardens in a matter of minutes.	- The foul smell of vinegar is still very much present - The mixture is thick and hard to spread out in the baking paper

The researchers took note of the following qualitative qualities that can be observed in both variables which are potato starch and corn starch bioplastic during and after the experiment conducted. The qualities obtained during and after the experimental procedure contributed in determining and evaluating which bioplastic is the most effective among the two.

Specifically, the researchers examine both variables using physical properties such as texture, color, smell and etc that are observed in the procedures.

Based on the findings, the researchers discovered that the potato-based bioplastic was easier and faster to make due to its fast absorption with water and easy hardening abilities.

Even so, the corn-based bioplastic is more flexible than the potato-based bioplastic as it was easier to shape and mold after the experiment.

2. The difference between the corn-based bioplastic and potato-based bioplastic

a. Degradability

Table 2.1 - Degradability test in bioplastic

	Potato-based bioplastic	Corn-based bioplastic
Trial 1 (w/ 9 hrs of sunlight per day)	15 days	18 days
Trial 2 (w/ 6 hrs of sunlight per day)	21 days	23 days
Trial 3 (w/ 3 hrs of sunlight per day)	25 days	27 days
MEAN	20.3	22.6
STANDARD DEVIATION	5.03	4.51

According to table 2.1 above, the average amount of time for the decomposition of bioplastics made from potato starch is 20 days (SD: 5.03), which is significantly shorter than the average time for bioplastics made from corn starch, which is 23 days (SD:4.51).

a. Volume

Table 2.2 - Measured Volume of Corn-based bioplastic

Mass of the bioplastic	Initial Water Level (V _{water})	Volume of Water (V _{total})	Final Volume (V _{total} - V _{water} = V _{object})
Trial 1 (10 gram)	40 mL	60 mL	20
Trial 2 (15 gram)	40 mL	66 mL	26
Trial 3 (20 gram)	40 mL	72 mL	32
MEAN			26
STANDARD DEVIATION			6.02

Table 2.3- Measured Volume of Potato-based bioplastic

Mass of the bioplastic	Initial Water Level (V _{water})	Volume of Water (V _{total})	Final Volume (V _{total} - V _{water} = V _{object})
Trial 1 (10 gram)	40 mL	62 mL	22
Trial 2 (15 gram)	40 mL	69 mL	29
Trial 3 (20 gram)	40 mL	74 mL	34
MEAN			28.3
STANDARD DEVIATION			5.80

Based on the data above, the corn-based bioplastic has a calculated average of 26 (SD: 6.02) from the final volume of three trials, whereas the potato-based bioplastic has a computed average of 28.3 (SD: 5.80) from all three trials.

The analysis of data revealed that the bioplastic created from potato starch had a larger volume than the bioplastic made from corn starch.

a. Solubility

Table 2.4 - Testing the Solubility of bioplastic

	Corn-based bioplastic	Potato-based bioplastic
Trial 1 (40 celcius of water)	29 hrs	27 hrs
Trial 2 (60 celcius of water)	22 hrs	20 hrs
Trial 3 (80 celcius of water)	17 hrs	16 hrs
MEAN	22 hrs	21 hrs
STANDARD DEVIATION	6.03	5.56

As shown in the data given, the computed average of the corn starch bioplastic from testing its solubility is 23 hrs (SD: 6.03), meanwhile the computed average of the potato starch bioplastic is 21 hrs (SD: 5.56).

According to the data, the potato-based bioplastic performed considerably better than the corn-based bioplastic in every trial. It's been proven that the bioplastic made from potato dissolves in water more quickly than the bioplastic made from corn at different

temperature.

3.1 Conclusion

Based on the gathered experimental data and results, subsequent conclusions about comparing the corn-based bioplastic and potato-based bioplastic were drawn.

The results show that there are substantial differences between the two bioplastics that indicate that the potato-based bioplastic is a significantly better alternative for a plastic due to its long decomposition, greater volume and high solubility than the corn-based bioplastic. Also, it has been established that making potato-based bioplastic is easier and more quickly than making corn-based bioplastic.

3.2 Recommendations

In the course of conducting the research, the researchers encountered limitations and difficulties as the investigation progressed. The researchers highly suggested future researcher to incorporate lab tests in the bioplastic regarding its chemical and physical properties in order to further enhance future studies in the future. Regarding the variables, the researchers

recommended that future studies also include brand of starch that is to be utilized and analyze it as well since it could have a great influence on the findings.

In terms of evaluating the variables in the study, the researchers also propose that

future studies should take into account other factors that have the potential to

influence the results, such as the type of soil used in testing in the degradability test. The researchers also advise that in future studies, the common plastic should also serve as a variable in order to be used to assess the effectiveness of potato and corn-based bioplastics to fuel-based bioplastics.

A Comparative Study Between Dried Leaves And Banana Peel (*Musa acuminata* × *M. balbisiana*) As A Component to Meliorate The Properties Of A Paper

Damaso Kyle Pauleen, De Dios Clyden Sara, Martin Kelsey, Padree Reynaldo, Tan Charles Andrei

Abstract: This study has shown that both can meliorate the properties of paper, but both have

given different types of improvement on the paper. Making the researcher conclude that such banana peels can be a good writing surface though not a good source for mass production, while dried leaves can be used for mass production, but a brittle surface to write on. In terms of overall properties, such as the quantity of paper produced; dried leaves produced more pieces of paper than dried leaves, the experiment's findings showed that dried leaves were the better paper component. When weight and pressure are applied to the paper, dried leaves withstand the pressure for a longer period than banana peels do in terms of durability. While writing with a pen, pencil, or marker, the paper's banana peel ballpoint smoothness was better and easier to read than the dried leaves.

1. INTRODUCTION

1.1 Background of the Study

For the longest time, paper has been one of the most important things people use in their daily lives; researchers use it to write things needed, to compute, and to do other things that require writing. It is claimed that paper products have been recycled for a long time, with the idea providing numerous environmental benefits. It made more room for landfills, which collect tons of trash yearly.

Recycling paper saves space in landfills that have become popular. This freed up space in landfills for other waste, reducing the need to build more of such which takes up a large amount of space in the environment. This research is being conducted for people to use other reliable resources that must lessen the waste and create an additional component to it like a banana peel or dried leaves increasing its strength and flexibility. The researchers used the concept of recycling as the foundation for our banana peel and dried leaves, which will be more eco- friendly than the current paper.

Banana peels and dried leaves are both potential candidates for materials that were always present but were underutilized due to their potential because they are environmentally friendly and

biodegradable. Banana peels, also known as *Musa acuminata* × *M. balbisiana*, are the peels of the banana fruit. Banana peels contain fibers that we need as researchers to make paper. Paper is made from wood pulps obtained from trees, which have a significant environmental impact. This idea is also feasible because the peels contain a high concentration of cellulose, which gives the banana peel a strong cell wall. Dried leaves became the option, as it came from trees and has a relation to it.

Having this idea prompted us to expand our investigation to see if it is feasible. Leaves can also be turned into paper, implying that dried leaves can be used because they contain fibers that can be converted into pulps. This study will serve as an example for other researchers to find something nearby and use it as a substitute or improved version of commonly available products on the market. The study focuses on comparing such material content to determine which is better for all of us to use in terms of durability, writing,

economically viable and a better surface to write in.

This study identifies which product will be better for us to make use of and identifies its environmental benefits. The researchers will determine the most preferable component that can meliorate the properties of paper by comparing these two variables. As of now, it requires something far more sustainable to the commercial paper people currently use, which is typically made from

wood pulp. Having something that will not harm the forests or trees can be extremely beneficial for everyone because it will provide a much better and healthier environment. These issues are just the beginning of what this investigatory project has to offer. There will be more issues and problems that will be faced as this project goes through, some of which may be life-changing and serve a significant purpose soon, as the whole world progresses.

This research project intends to provide a better component to support the properties of paper, which is commonly made from wood pulp and to provide better understanding of what dried leaves and Banana peel may offer the environment.

Specifically, in how it can lessen the use of commercial paper that is affecting the whole world in a way of deforestation and to help fellow researchers to improve this project in the future ahead.

2. METHODOLOGY

2.2 Research Design

The study conducted was qualitative-quantitative research. The researchers used this method because it was needed to determine how banana peels and dried leaves would be better and more sustainable than commercial paper. It was said to discover what both variables offered as a component to improve the paper and know it's positive and negative effects they had on the environment.

Banana peels and dried leaves served as the primary variables in this study. The researchers relied on the null hypothesis and attempted to prove that both variables could be a good component to improve the paper during the experimentation.

Using the two variables as components for paper, the researchers differentiated both variables in terms of durability, ball point

smoothness, water resistance, and finally its environmental sustainability as a sufficient and better component to improve the paper.

Material Lists	Certain Amount Required
Banana Peels	750 grams
Dried leaves	750 grams
Recyclable paper	50 pieces/ 250 grams
Blender	1 piece
Sponge	5 pieces
Towel	4 pieces
Big /Small Plastic Container	2 pieces
Hot water	As much as possible
Deckle	1 piece
Iron	3 pieces
Blower	1 piece
Beaker	1 piece
Water	As much as possible

The researchers found out the mean and Standard deviation of the given variables with their corresponding constant values, so that it was possible to differentiate what was the better component to improve paper that had been made. It was said that the mean would identify the average of both variables, while the standard deviation will indicate how much the data is scattered in which the researchers would be able to find the higher average from banana peels and dried leaves.

$$S = \sqrt{\frac{\sum (x - \bar{x})^2}{n-1}}$$

N = Number of data
 $\bar{x}$ = Mean
 x_i = Value of the sample
 Σx = Sum of all the data

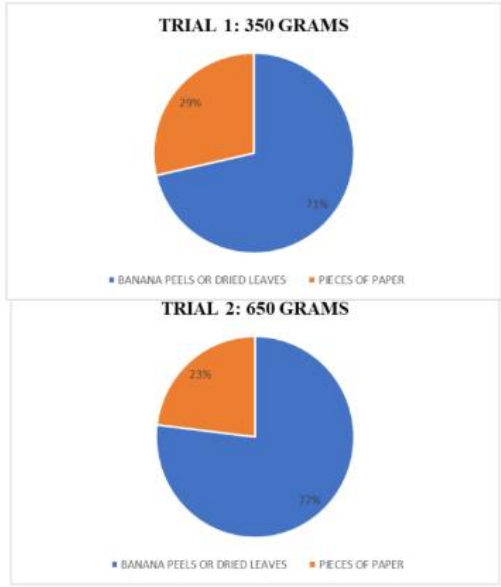
3. RESULTS AND DISCUSSION

Table 1 shows the measures of each unit conducted by the researchers to compare the amount of banana peels and dried leaves used to make an efficient piece of paper.

Table 1 Initial amount of banana peel or dried leaves paper

INITIAL AMOUNT	TRIAL 1	TRIAL 2
BANANA PEELS OR DRIED LEAVES	250 GRAMS	500 GRAMS
PIECES OF PAPER	100 GRAMS	150 GRAMS
TOTAL AMOUNT	350 GRAMS	650 GRAMS

The image following the table represents the graphical representation of the data obtained from table 1 Which is the initial amount of both trials.



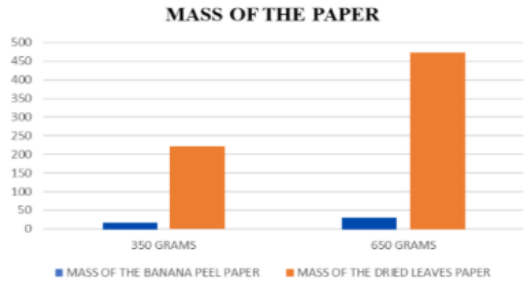
Trial 1 uses 20 pieces of paper and measures 250 grams of banana peels or dried leaves. Trial 2 used 500 grams of banana peels or dried leaves and 30 pieces of paper. The data also shows that the total amount of trial 1 is 350 grams, while trial 2 is 650 grams. That states less than 29 percent of paper are used in the study to make sure of the utilization of both variables.

With the same initial amount, table 2 shows the difference of both variables in terms of mass production with the use of how many pieces the variables can create per piece.

Table 2 Difference between mass of both variables

TRIAL	MASS OF THE BANANA PEEL PAPER	MASS OF THE DRIED LEAVES PAPER
350 GRAMS	20 GRAMS	221 GRAMS
650 GRAMS	30 GRAMS	470 GRAMS
TOTAL	50 GRAMS	691 GRAMS

The image shows the differences between the mass of dried leaves paper and banana peel paper that came from table 2.



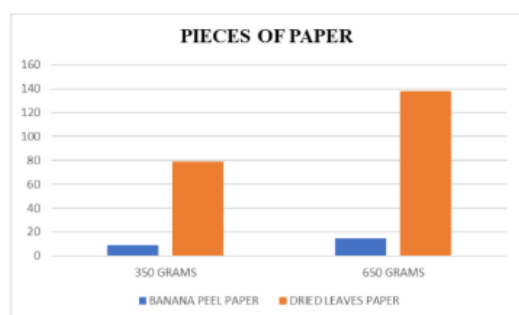
The graph shows the mass difference between banana peel paper and dried leaves paper. In the first trial, 350 grams of banana peels and dried leaves were converted into paper. The initial mass of 350 grams had been converted into 20 grams of banana peel paper and 221 grams of dried leaves paper. On trial 2, the Initial mass of the banana peel and dried leaves paper was 650 grams.

Furthermore, after being turned into paper, the banana peel paper weighed 30 grams, whereas the dried leaves paper weighed 470 grams.

Table 2. 1 Pieces of Paper

	BANANA PEEL PAPER	DRIED LEAVES PAPER
350 GRAMS	9 PIECES	79 PIECES
650 GRAMS	15 PIECES	138 PIECES
TOTAL	24 PIECES	217 PIECES

The graph illustrates the number of pieces of paper made of dried leaves and banana peels from table 2.1.



The banana peel produced nine pieces of paper with 350 grams and fifteen pieces with 650 grams. Then, the dried leaves weighing 350 grams produced 79

pieces of paper, while the dried leaves weighing 650 grams produced 138 pieces of paper. This means that banana peels produced less than dried leaves, despite having the same initial weight before being converted into paper.

Table 2.2 Weight of a piece of paper

	BANANA PEEL PAPER	DRIED LEAVES PAPER
TOTAL MASS	50 GRAMS	691 GRAMS
TOTAL PIECES	24 PIECES	217 PIECES
MASS OF A PIECE OF PAPER	2.08 GRAMS	3.18 GRAMS

This table 2.2 shows how much weight a piece of paper has, which was determined by dividing the total mass of the variable by the number of pieces it produced. A banana peel contains 50 grams of paper, which is divided into 24 pieces yielding a mass of 2.08 grams, which is estimated to be the mass of a piece of paper. Dried leaves had

651 grams of paper, which made 217 pieces, for a total of 3.18 grams per piece.

Table 3 shows the comparison of the two variables conducted by the researchers to compare which is better in water resistance and between banana peel paper and dried leaves paper.

Table 3 Water Resistance Time/Duration

VARIABLES	TRIAL 1	TRIAL 2	TRIAL 3	MEAN	SD
BANANA PEEL PAPER	44.86 SECONDS	64 SECONDS	48.07 SECONDS	52.31	8.3
DRIED LEAVES PAPER	60.03 SECONDS	69.12 SECONDS	61.29 SECONDS	63.48	4.02

The table shows how long a piece of paper can withstand a teaspoon of water. Before the water passed through the Banana peel paper, Trial 1 took 44.86 seconds, Trial 2 took 64 seconds, and Trial 3 took 48.07 seconds. We were able to obtain a (M=53.31, SD=8.3) with these trials. Furthermore, with a (M=63.48, SD=4.02) The dried leaves paper could withstand 60.03 seconds in trial 1, 69.12 seconds in trial 2, and 61.29 seconds in trial 3.

Table 4 and 4.1 shows the durability of each variable under pressure. The time determines how long the paper takes to break as well as the amount of weight required to break it.

Table 4 Banana Peel Durability

	TRIAL 1	TRIAL 2	TRIAL 3	MEAN	SD
Mass of rocks	50g	140g	120g	103.33	38.58

Table 4.1 Dried Leaves Durability

	TRIAL 1	TRIAL 2	TRIAL 3	MEAN	SD
Mass of rocks	240g	220g	160g	206.67	33.99

The image below shows the durability of the paper using grams of rocks before it breaks that can be found from table 4 and 4.1.

The image below shows the durability of the paper using grams of rocks before it breaks that can be found from table 4 and 4.1.

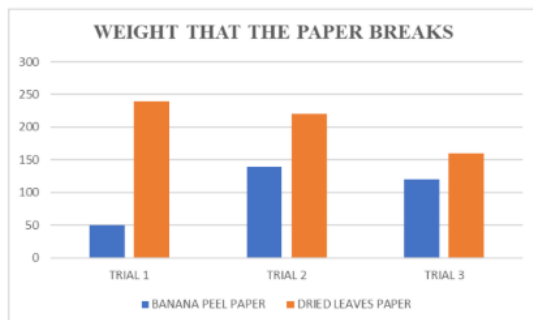


Table 4 shows that trial one can only withstand less than 50 grams of weight, trial two can only withstand 140g, trial three can only withstand 120g, with a (M=103.33, SD= 38.58).

Table 4.1 shows that in trial 1, it took 240g of the rocks, table 4 and 4.1 followed by 220g in trial 2 and 160 grams in trial 3, showed a (M=206.67, SD= 33.99).

Table 5 and 5.1 tests how the ballpoint smoothness is shown in terms of how readable the ink is, its consistency, and the smoothness when writing in the banana peel paper.

LIKERT SCALE

- 1 - Needs improvement
- 2 – Good
- 3 - Very Good
- 4 - Best

MEAN SCALE

- 1 - 1.74 - Needs improvement
- 1.25 - 2.49 – Good
- 2.50 - 3.24 - Very Good
- 3.25 - 4 - Best

Table 5 Testing the properties for ball point smoothness (Banana peel paper)

Table 5 Testing the properties for ball point smoothness (Banana peel paper)

	MEAN	INTERPRETATION OF DATA
TEXTURE	2.6	GOOD
ABSORBENCY	3.6	VERY GOOD
DURABILITY WHEN WRITING ON PAPER	2.4	GOOD
TOTAL MEAN	2.86	VERY GOOD
STANDARD DEVIATION	0.52	

Table 5 presented the outcomes of the evaluation demonstrating that, although the banana peel paper demonstrated satisfactory absorbency, it was lacking in terms of texture, as the roughness hindered smooth writing with a writing instrument. Moreover, the longevity of the paper was insufficient, falling short of expectations. These results indicate that further refinements are imperative to effectively employ the paper for writing applications. The data have shown that (M=2.36, SD=0.52) that indicates the total average and how scattered the data is.

LIKERT SCALE

- 1 - Needs improvement
- 2 - Good
- 3 - Very Good
- 4 - Best

MEAN SCALE

- 1 - 1.74 - Needs improvement
- 1.25 - 2.49 - Good
- 2.50 - 3.24 - Very Good
- 3.25 - 4 - Best

Table 5.1 Testing the properties for ball point smoothness (Dried leaves paper)

	MEAN	INTERPRETATION OF DATA
TEXTURE	2.4	GOOD
ABSORBENCY	1.6	NEEDS IMPROVEMENT
DURABILITY WHEN WRITING ON PAPER	3.6	VERY GOOD
TOTAL MEAN	2.53	VERY GOOD
STANDARD DEVIATION	0.82	

Table 5.1 shows that all the observers have given the dried leaves paper a rate of ($M=2.53$, $SD= 0.82$) This means that 68% of the values are within 0.82 units of the mean, or between 1.71 and 3.35.

This indicates that the data is relatively consistent and not very spread out. for the texture, absorbency, and durability. The texture of the paper is deemed to be good; the absorbency is identified as a significant area for improvement.

On the other hand, the durability of the paper when writing on it is perceived as very good and robust. These findings indicate that while the texture provides a satisfactory writing experience, the low absorbency of the paper poses a challenge, requiring improvement to enhance its overall functionality. On the positive side, the strong durability of the paper suggests that it could withstand heavy writing use

without degradation.

These insights suggest that while the texture is a strength, the paper could be further refined to address the absorbency and improve its overall performance for writing purposes.

4. CONCLUSIONS

The goal of this study is for the researchers to determine from the variables can be a better component meliorate the properties of the paper.

The data demonstrated that banana peels and dried leaves can both be good components to improve commercial paper. It demonstrated that such waste materials can be transformed into something useful for everyone.

The researchers conducted two trials with initial amounts of 650 grams and 350 grams of banana peels and dried leaves, to determine whether such mass can change after being converted into paper. Table 2 shows that the banana peel yielded fewer grams than usual from the initial amount, whereas dried leaves yielded the same amount but way closer to the initial mass. This demonstrates that the initial mass will not be the same after converting these variables to paper. That agrees with the study of Agustina, Widiastuti and Susanti (2018) that if you exceed that 100 celsius in boiling the pulp will degrade causing the lack of pulp to improve the properties of paper.

Knowing how the mass of the newly made paper will differ from the initial amount. It also demonstrated that the pieces of paper created for both variables are very different from one another.

Using the second trial of 650 grams, the banana peels were only able to make 15 pieces of paper, whereas the dried leaves were able to make 138 pieces of paper,

demonstrating that such constant mass is not dependent on how many pieces of paper can be produced.

The researchers wanted to know which of the components of the paper is more sustainable and better in terms of water resistance, strength, and ballpoint smoothness. According to table 3, the researchers discovered that dried leaves paper does have greater durability, having a mean of 63.48 seconds with 3 trials of water poured on it, while banana peel paper only takes 52.31 seconds before the water takes over the paper, proving that dried leaves is far superior in terms of water resistance.

Table 4 and 4.1 shows how much weight the paper can withstand and how long it can withstand before breaking. Dried leaves demonstrated that it could hold with a mean of 206.67 for outperforming banana peel paper, which can only hold 103.33 mean.

Both variables are said to have paper attributes, but table 5 and 5.1 show that banana peel is superior in that it has a smoother surface that you can write on. Though it is brittle and difficult to see when using dark inks, the darker color of the paper made it challenging to write on. Dried leaves have a rougher surface that is less smooth but acceptable to write on, and it has a light color that makes it easier to use any pen, but it also has a soft surface that affects when writing.

The study of De Leon (2019) and Quillen Kristi (2022) agrees that the water, blending time, and boiling time of the banana peels and driedleaves can affect the texture of the product. Using different kinds of leaves made it hard for the researchers to get the best pulp since not all types of leaves can suffice the pulp needed, which made the texture of the dried leaves paper very soft and hard to write on.

The study concluded that both components can meliorate the properties of paper and

are environmentally friendly than using commercial paper, Therefore the null hypothesis is rejected whereas Alternative hypothesis is accepted. In which states that such Dried leaves improve the durability, water resistance and ball points smoothness of the paper.

The study found that banana peels and dried leaves can improve the properties of paper, and when it comes to writing, both are very good, but

banana peel is a bit better with 2.87 average mean while dried leaves have 2.53, indicating that, while they are both very good components to improve paper, banana peel is a bit better.

It also demonstrated that when making paper, volume is more important than mass, that can be seen from the product of banana peels and dried leaves having the same mass but producing significantly more than banana peels due to volume differences. When it comes to mass production, dried leaves are better, but when it comes to quality over quantity, banana peels are a great choice if you want a good writing surface.

Overall, the research wants to say that dried leaves are a better component to meliorate the properties of paper even with different masses of 250 and 500. It showed that despite its cons, on ball point smoothness. The overall data says that dried leaves are a better component to improve a piece of paper.

Future researchers who want to improve the study should look for a better way to dry the paper after it has been made or try to make use of the sun as the source of heat. Because using an iron to dry it is unhealthy because the smoke it emits is toxic and can cause illness. If not, find an open space where the smoke will not be inhaled. To lighten both papers that have been made, try to find a chemical that will change the color of the

paper itself so that it will be much easier to write on. It is also suggested to find other factors that can differentiate both variables to be tried, in order to determine which is a better component to improve the paper. Due to lack of laboratory apparatuses and financial support the researchers recommend trying to make use of the dried leaves and banana peel without the use of paper, since it has good structure that is supported by the data throughout the study.

5. ACKNOWLEDGEMENTS

Foremost, the researchers would like to express their gratitude for the ones who made this

basic research possible. The completion of this study could not have been possible without the expertise and authority of the following: The researchers' research teacher, Ms. Marielle Balayo, validated the entire process of the paper. Mr. Eliazar Luciano, the research teacher for statistical treatment, and Ms. Joan Oledan, who looked after the language and writing style and made suggestions to improve the research.

Lastly, the researchers are grateful for San Jose Academy for giving them the knowledge, trust, and support they needed throughout this study. This research was conducted with great humility and the utmost regard.

Pineapples (*Ananas Comosus*), Apples (*Malus Domestica*), and Oranges (*Citrus X Sinensis*) as an Alternative for Ethyl Alcohol

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ABSTRACT: This study aims to determine whether the following fruits—oranges (*Citrus X Sinensis*), apples (*Malus Domestica*), and pineapples (*Ananas comosus*)—can serve as an alternative to ethyl alcohol. Fruit fermentation methods were employed to obtain bioethanol using the yeast *Saccharomyces cerevisiae*. This research also focuses on targeting the fruit waste issue in the country. At the height of the worldwide pandemic, there was a shortage of ethyl alcohol. Also, a more economical and environmentally friendly method of alcohol production can be developed to provide a minor solution to the alcohol shortage. The research findings will show whether fruits contain significant amounts of ethanol and, if so, whether they can serve as a replacement ingredient for rubbing alcohol. All the puréed fruits were allowed to ferment for seven days with *Saccharomyces cerevisiae*, a type of yeast. The liquid was then extracted from the fermented fruits by straining them through cheesecloth. The liquid needs to be measured, and the highest volume was orange in hot temperature (35 - 40 degrees Celsius) which averaged 82 mL. The pH level of the extracted liquid of all fruits was also assessed using pH strips. The extracted liquid was subjected to high boiling temperatures instead of the distillation process, which generated condensation and accumulation of vapor. The same liquid will then be subjected to a flame test to determine whether ethanol is present. According to the flame test results, all fruits did contain small amounts of ethanol. Since all fruits contain amounts of ethanol, it is possible for them to be a substitute for ethyl alcohol.

Key Words: Bioethanol; Ethyl Alcohol; Fruit waste; Fruit fermentation; *Saccharomyces cerevisiae*.

1. INTRODUCTION

The Philippines is a country with an abundant amount of food

waste. According to the Department of Science and Technology - Food and Nutrition Research Institute, 1,707 metric tons of food are wasted daily in

the country (IPOPIL, n.d.). With that number, around 1 million tons of fruit waste are produced yearly, specifically and solely on Dole's plantation, a company known for its fruit drinks (Ochave, 2021).

With this amount, seeking ways to lessen the waste is essential. Mainly apples, pineapples, and oranges were chosen to conduct this experiment. Peels, skins, and pulp combined into one substance will extract the ethanol.

The process of extracting ethanol is through puréed fruits fermented, with the process called Anaerobic fermentation, with yeast, specifically *Saccharomyces Cerevisiae*. These fruits do contain alcohol in the form of ethanol as a result of natural fermentation (Gunduz et al., 2013). Since all fruits contain sugar (Butler, 2019), the yeast directly ferments the sugar, which is then converted into ethanol (Azhar et al., 2017).

Ethanol is produced through microbial fermentation, mainly acquired from carbohydrates produced in sugar (Chakraborty & Mukhopadhyay, 2020). Ethanol as an alcohol is medically used as an antiseptic and disinfectant (Yetman, 2021). The properties of ethanol are that it is colorless with a pleasant odor. These properties will be observed in this research, and the extracted substance will also be tested for its flammability (DCCEW, 2022).

The use of this waste can contribute a long way toward reducing agricultural waste. As this study shows how fruits, mainly apples, pineapples, and oranges, can help combat the global food waste issue, companies may invest in this type of ethanol production. Opting for a nature-friendly way of producing ethanol is still a better alternative. Due to ethanol production also dropping for the last months, the need for ethanol also heightened.

Although this study aims to find alternatives to ethyl alcohol, it may not be as effective as other alcohol brands in killing microorganisms. However, with the advancements in machinery, entirely usable ethanol can be produced. By adding a few adjustments and substances, reaching the specific percentage for ethyl is a standard to be able to produce a sterilizer.

This study aims to determine which, among the fruits, pineapples, apples, and oranges, is the best substitute for ethyl alcohol and which of them has the highest ethanol content. Since the pandemic outbreak began, ethyl alcohol has become a need for everyone, and it has reached a stage where nearly all of it is out of stock (Ang, 2020).

2. METHODOLOGY

MATERIALS LIST:

1. One (1) big Pineapple
2. Seven (7) regular-sized Apples
3. Seven (7) regular-sized Oranges

4. One (1) pack of Brewer's yeast (*Saccharomyces cerevisiae*)
5. Eighteen (18) Polybags
6. Eighteen (18) Glass Bottles
7. Eighteen (18) pieces of 10-inch circle balloon
8. Three (3) pieces of Cheesecloth
9. Three (3) Funnels
10. Three (3) Beakers
11. One (1) Kitchen lighter
12. Measuring cups and spoons
13. pH test strips
6. All the glass bottles were covered and sealed with 10-inch balloons that prevented carbon dioxide from entering the mixture.
7. Fruits were separated into three temperatures - hot, normal, and cold. All the mixtures were fermented for exactly seven days.
8. After fermenting, the researchers strained the fermented liquid. A cheesecloth and a funnel were used.
9. For the ethanol contest to be tested, the researchers conducted a flame test. The pH level was also tested to match the appropriate properties of bioethanol.

EXPERIMENTAL PROCEDURE:

1. The researchers gathered all the materials needed for the experiment.
2. The pineapple slices were puréed using a blender. The other fruits followed in the same manner. It was ensured that the fruits were not mixed up and that the blender was cleaned between uses.
3. The three fruits were put into separate Ziploc bags and were sealed properly. The containers were made sure to be labeled correctly to avoid confusion.
4. After this, the pureed fruits were transferred into individual glass bottle containers. The bottles were also labeled.
5. Two trials were conducted for each temperature - hot, normal, and cold temperature. For each fruit, the first bottle was mixed with one tablespoon of yeast for the first trial; and two tablespoons of yeast for the second trial.

3. RESULTS AND DISCUSSION

This chapter shall present the data gathered from this research and its statistical analysis and interpretation.

The statistical treatment used in the results, which is the mean, shows the average liquid extracted from each fruit, at different temperatures.

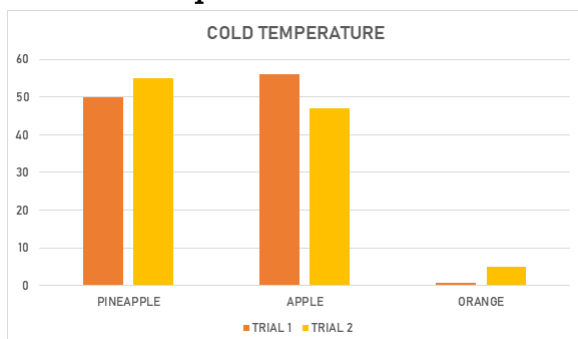
1. How much is the produced liquid after the fermentation process?

After fermenting at a cold temperature, around 2 - 4 degrees Celsius, Pineapple produced the most liquid among the fruits and averaged 52.5 mL between the two trials.

Table 1.1 - Cold Temperature – Total Produced Liquid

	Trial 1	Trial 2	Mean
Pineapple	50 mL	55 mL	52.5 mL
Apple	56 mL	47 mL	51.5 mL
Orange	0.7 mL	5 mL	2.85 mL

Graph 1 - Cold Temperature – Total Produced Liquid

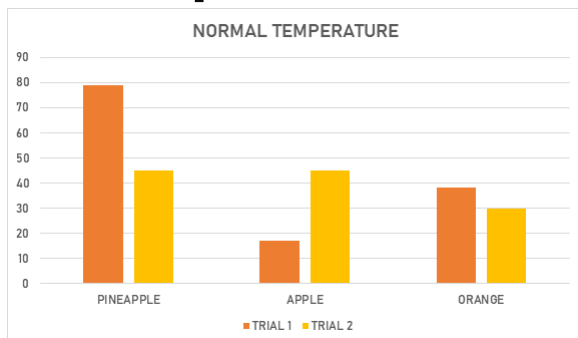


While in the results of the fermentation at a normal temperature (25.5 - 32 degrees Celsius), Pineapple produced the most liquid among the three fruits that were successfully fermented. The fruit has an average of 62 mL between the two trials.

Table 1.2 - Normal Temperature – Total Produced Liquid

	Trial 1	Trial 2	Mean
Pineapple	79 mL	45 mL	62 mL
Apple	17 mL	45 mL	31 mL
Orange	38 mL	30 mL	34 mL

Graph 2 - Normal Temperature – Total Produced Liquid

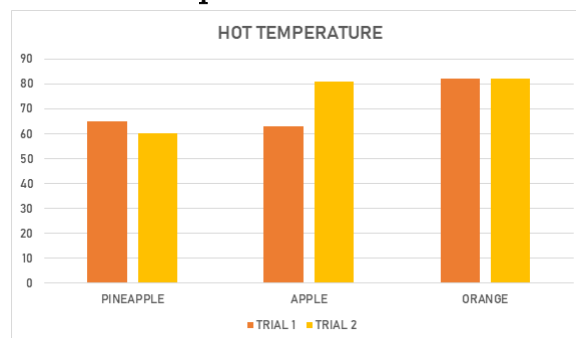


Lastly, in the results of fermentation in a hot temperature (35 - 40 degrees Celsius), Orange produced the most fermented liquid. The fruit has an average of 82 mL between the two trials conducted.

Table 1.3 - Hot Temperature – Total Produced Liquid

	Trial 1	Trial 2	Mean
Pineapple	65 mL	60 mL	62.5 mL
Apple	63 mL	81 mL	72 mL
Orange	82 mL	82 mL	82 mL

Graph 3 - Hot Temperature – Total Produced Liquid



2. Did the fruits catch fire during the flame test?

Table 2.1 - Cold Temperature – Flame Test

	Trial 1	Trial 2
Pineapple	✓	✓
Apple	✓	✓
Orange	✓	✓

Table 2.2 - Normal Temperature – Flame Test

	Trial 1	Trial 2
Pineapple	✓	✓
Apple	✓	✓
Orange	✓	✓

Table 2.3 - Hot Temperature – Flame Test

	Trial 1	Trial 2
Pineapple	✓	✓
Apple	✓	×
Orange	×	✓

3. Which of the fruits passed the appropriate pH level for bioethanol?

The extracted liquid after fruit fermentation was tested for pH level. Results show a consistent pH level of 5. According to studies, the produced bioethanol from fruit fermentation should contain a pH level ranging from 4.7 to 5.2 (Chitranshi et al., 2021).

Table 3.1 - Cold Temperature – pH level

	Trial 1	Trial 2
Pineapple	5	5
Apple	5	5
Orange	5	5

Table 3.2 - Normal Temperature – pH level

	Trial 1	Trial 2
Pineapple	5	5
Apple	5	5
Orange	5	5

Table 3.3 - Hot Temperature – pH level

	Trial 1	Trial 2
Pineapple	5	5
Apple	5	5
Orange	5	5

4. CONCLUSIONS

In conclusion, all the fruits, pineapple, apples, and oranges, can be an alternative for ethyl alcohol. The results have shown that all three fruits have shown the properties of ethanol. Despite a few inconsistencies, all fruits embodied flammability, which is a significant property of ethanol. The

produced liquid of all fruits also had a pH level of 5, which is appropriate for the production of bioethanol. In terms of quantity, oranges produced the highest milliliters of liquid after fruit fermentation at a hot temperature.

5. ACKNOWLEDGEMENTS

Overall, the researchers would like to thank and acknowledge Miss Marielle Balayo, the Basic Research Teacher of Grade 10 – St. Augustine, for the exceptional amounts of help and guidance given in this research.

Also, acknowledgement is to be given to Miss Joan Oledan, Research Adviser and School Librarian, for a great deal of informative comments and suggestions.

Lastly, appreciation also to Sir Eliazar Luciano, Introduction to Statistics Teacher of Grade 10, for the additional guidance in the making of this research.

The efficiency of Garlic (*Allium Sativum*) and Chitosan (Beta-1, 4-Poly-Glucosamine) Solution in Prolonging the Shelf Life of Fruits and Vegetables

Basa, Loreyn, Ferrer, Yvory, Arucan, Giean, Cabigao, Sam, Carolino, Kurt, Cruz, Lanz, and Monje, John

ABSTRACT

This report centers on the experiment formulated to study which among Garlic and Chitosan Solution is highly preferable in prolonging the shelf life of fruits and vegetables because of the predicament that Chitosan is an expensive product which is useful in the field of agriculture, however it is inaccessible to the average consumers. The predicament of buying produce which are not ripe yet in order for it to have a longer shelf life is abundant to the study's purpose. With this research, the researchers will be able to prove which between Chitosan Solution and Garlic Solution is more efficient in delaying the rotting process of produce that can benefit not only the consumers, but the farmers who work in the agriculture sector as well. Nevertheless, the use of Chitosan Solution has been widely criticized because of its inaccessibility because it is more commonly found overseas that is why the use of Garlic Solution is proposed to have a better performance rather than Chitosan and it is always readily available in the nearest grocery stores while still having the same antimicrobial property by which creates the semipermeable film that protects fruits and vegetables from parasitic pathogens. Although, a comparison between fruits and vegetables with thicker peels also come along because produce with thinner peels may perform better because the solution will be more accessible to the fruit or vegetable rather than the ones with thicker peelings that may prevent the solutions from entering into the produce to work. After multiple experimentations, it was found out by the researchers

Chitosan Solution reached a fermentation longer than 30 days, the solution became more intoxicated, although Garlic Solution only became stronger with flavor with time that even more protects fruits and vegetables from harmful pathogens.

INTRODUCTION

Produce such as fruits and vegetables provides the nutrients we need as human beings. However, the difficulty of purchasing fruits and vegetables is keeping them fresh enough to be consumed because they can only last up to a week or more from the moment it's harvested. The factors that affect the shelf life of products are the temperature, storage, and handling of the product, so the researchers studied the context behind this predicament in order to assess the field of agriculture and consumers in prolonging the shelf life of fruits and vegetables to save money. (DeltaTrak., (n.d).) Browning, Off-flavor development and texture breakdown are the most observable signs of spoiled food,

therefore an agent like Chitosan is a key component to preserve fruits and vegetables which is the top priority in the food and agriculture industry. Chitosan is also a safe option in preservation, although various scientists debate on the use of it because it is costly and inadequate. (Huq, T. Vu K.D. et al., 2015) Chitosan is a biopolymer derived from the outer skeletons of shellfish known for its antimicrobial property that can be utilised medically or in prolonging the shelf life of fruits and vegetables. An experiment performed on Tomatoes (*Solanum Lycopersicum*), Strawberries (*Fragaria Ananassa*), Bananas (*Musa Paradisiaca* Linn), and Oranges (*Citrus Sinensis*) proved that chitosan solution can maintain the freshness of fruits longer than usual, however Tomatoes (*Solanum*

Lycopersicum) were the slowest to show signs of decay. (Dobriansky, A. Islam, T. et al., 2016) “Chitosan is a sugar that comes from the outer skeleton of shellfish, including crab, lobster, and shrimp widely used for medical drug manufacturing...” (WebMD, 2011) “Chitosan is a semisynthetic material obtained by the deacetylation of Chitin and is comprised of Glucosamine (Deacetylated Monomer) and N-acetyl-glucosamine (Acetylated Monomer) monomers linked through β -4 glycosidic bonds.” (Nanobiomaterials in Medical Imaging, 2016) Chitosan is an expensive product and inaccessible to some, hence the objective to search for a substitute that can be available for everyone at a reasonable price, yet can perform equally to the chitosan solution or better. “Chitosan coating maintains fruit quality during storage by preventing the loss of fruit weight, soluble solid contents, vitamin C, titratable acidity, and firmness...” (Hesami, A. Kavooosi, S. et al., 2021) Garlic is a greater Allium plant with its antimicrobial activity that contains several hydrophobic antimicrobial compounds, such as allicin, vinylthiins, ajoenes and diallyl polysulfides. Allicin is a sulfur-containing compound found in raw garlic produced from alliin and it is where antimicrobial activity is exhibited to fight against both Gram-positive and Gram-negative bacteria. In addition, it has been reported that allicin inhibits the biofilm formation of bacteria, which is a major cause of bacterial resistance to treatments of bacteria and other pathogens. (Kunimura, K. Kodera, Y. et al., 2019)

A flavouring like Garlic is rich in Phosphorus, Zinc, Potassium, and Magnesium and can typically be used as a remedy or as an herb to empower dishes. The mentioned variable displayed a similar property as Chitosan – the antimicrobial property that can aid in preventing food-borne illnesses. To this day, Chitosan prevails as the go-to product used in prolonging the shelf life of fruits and

vegetables, although it isn't as affordable and accessible as Garlic which will later undergo experimentation to compare which among the two give more promising results that could possibly help everyone save or earn more money, especially in the sector of agriculture where fresher produce matters the most in the eyes of the consumers.

STATEMENT OF THE PROBLEM

This study aims to study the efficiency of garlic and chitosan solution as a preferable product in prolonging the shelf life of fruits and vegetables.

Specifically, this sought to answer the following questions:

1. What is the contribution of the size of the fruits and vegetables to the success of the experimentation?
2. How does the thickness of the peels of fruits and vegetables affect their shelf life when applied with the solutions?
3. Which among the Chitosan Solution and the Garlic Solution performs best in prolonging the shelf life of fruits and vegetables?

HYPOTHESIS

Fruits and vegetables with thicker peels will not be successful when they undergo trials because of their thick peel which may hinder the efficiency of the experimentation.

They may also not produce affirmative results due to their sensitivity to freezing temperatures and/or excessive heat which is quite common here in the Philippines especially at noon or at night. Additionally, fruits and vegetables with thicker peels may show signs of decaying on the inside first rather than on the outside due to their thick peeling.

SIGNIFICANCE OF THE STUDY

The magnitude of this research solely focuses on providing our consumers and

labourers in the agriculture sector the innovation they necessitate which is the solution fitted in prolonging the shelf life of produce because chitosan cannot be bought in your local sari-sari stores and may require an overseas shipment due to the lack of accessibility.

Luckily, Garlic Solution is edible and rich in various nutrients, making it safe to consume as the said nutrients received from the product can improve body activity and protects the body system from illnesses caused by pathogens found. In the sector of agriculture, the supply of fresh fruits and vegetables may escalate due to the delayed decaying process of the products, making them last longer than usual. This situation wherein there is an immense increase in the supply of produce can be the solution to lowering the price of fruits and vegetables consumed every day that will be helpful to those in need and are living off of the minimum wage that can assist them financially and even save money.

The purpose of this research is for the fruits and vegetables to have a longer life and

for the people to eat and for it to be safe for the human body to consume and for the fruits and vegetables to be stable, so that it can survive longer and for the decaying process to be slower. This study also focuses on finding out which between Chitosan Solution and Garlic Solution is best in prolonging the shelf life of fruits and vegetables especially on fruits with thicker peeling as they may inhibit the solution from working due to their sensitivity.

Unlike chitosan, garlic is typically found in your local markets or even in your nearby sari-sari stores which enables consumers to save more money especially if the

experimentation trials produce affirmative results.

SCOPE AND LIMITATION

The researchers found that the Garlic has a possibility to increase the life of fruits and vegetables as it holds the same properties found in Chitosan that is helpful in delaying the process of decay in fruits and vegetables. This report can help the common folk majorly as well as the food and agriculture industry that focuses on the best quality of produce to be sold in markets. Although, the possible predicaments that will be faced in this research is the lack of resources especially laboratory services which are costly and typically inaccessible.

METHODOLOGY

List of Materials

Chitosan Solution

1. One-tenths (.1) gram of powdered chitosan in an evaporating dish
2. One (1) litre of distilled water placed in an Erlenmeyer flask
3. One and five-tenths (1.5) litre Erlenmeyer flask
4. One (1) teaspoon of white vinegar placed on a test tube
5. Balances in order to measure the powdered chitosan.

Garlic Extract

1. 330 grams of powdered garlic placed on a beaker
2. Two and five-tenths (2.5) cups of beer in an Erlenmeyer flask
3. One (1) litre Erlenmeyer flask

4. Balances in order to measure the peeled garlic.

Experimental Procedure

Chitosan Solution

1. Pour 1 litre of distilled water into a 1.5 litre Erlenmeyer flask.
2. Next, add in .1 grams of powdered chitosan.
3. Proceed to include a teaspoon of vinegar from a test tube.
4. Stir the solution continuously for an hour.
5. Close the Erlenmeyer flask with an evaporating dish and leave it in a cool dry place away from sunlight.
6. Repeat this 3 times.

Garlic Extract

1. Prepare 330 grams of powdered garlic into a 1-litre Erlenmeyer flask.
2. Proceed to include 2 1/2 cups of beer in the Erlenmeyer flask.
3. Close the Erlenmeyer flask and stir it with a spoon for 5 minutes.
4. Store the Erlenmeyer flask in a cool dry place away from sunlight.
5. Repeat this 3 times.

PRESENTATION, ANALYSIS, AND INTERPRETATION OF DATA

This chapter encloses the data collected by the researchers after conducting the

experimentation that will include its presentation, analysis, and interpretation by which will

answer the questions in the Statement of the Problem.

1. What is the contribution of the size of the fruits and vegetables to the success of the experimentation? The following images below shows the contribution of the size of fruits and vegetables by which elongates their shelf life rather than the produce smaller in size due to the bigger semipermeable barrier created encompassing the whole produce delaying its rotting process.

Table 1. Garlic Solution applied on Oranges.

Table 1. Garlic Solution applied on Oranges.

Variable	Size (CM)	Shelf Life (Days)
Orange Without Any Solution Applied	8	7
Orange A	8	12
Orange B	7.50	14
Orange C	8	13
MEAN OF ORANGES A,B, & C	7.50	13

The table above with Oranges applied with Garlic Solution showed an affirmative result with the shelf life extended to an average of 6 days.

Table 2. Garlic Solution applied on Oranges.

Variable	Size (CM)	Shelf Life (Days)
Orange Without Any Solution Applied	8	7
Orange A	8	9
Orange B	7	12
Orange C	7.50	12
MEAN OF ORANGES A,B, & C	7.50	11

The table shows that there is a significant increase on the shelf life of Oranges applied with Chitosan Solution compared to the one without any solutions and it was concluded that the shelf life of Oranges was extended to an average of 4 days.

Table 2.1 Garlic Solution applied on Apples.

Variable	Size (CM)	Shelf Life (Days)
Apple Without Any Solution Applied	10	21
Apple A	10.50	23
Apple B	10	24
Apple C	9.50	23
MEAN OF APPLES A,B, & C	10	23

The table shows that the shelf life of Apples extended to an average of 2 days when applied with the Garlic Solution.

The table shows that the shelf life of Apples extended to an average of 2 days when applied with the Garlic Solution.

Table 2.2 Chitosan Solution applied on Apples.

Variable	Size (CM)	Shelf Life (Days)
Apple Without Any Solution Applied	10	21
Apple A	10	22
Apple B	10.50	23
Apple C	10.50	24
MEAN OF APPLES A,B, & C	10.33	23

The Apples applied with the Chitosan Solution showed a 2 days average of expansion in their shelf life.

Table 3.1 Garlic Solution applied on Bananas.

Variable	Size (CM)	Shelf Life (Days)
Banana Without Any Solution Applied	18	7
Banana A	19	9
Banana B	18	10
Banana C	18	10
MEAN OF BANANAS A,B, & C	18.33	10

This table shows the 3 days expansion of the shelf life of Bananas when applied with the Garlic Solution.

Table 3.2 Chitosan Solution applied on Bananas.

Variable	Size (CM)	Shelf Life (Days)
Banana Without Any Solution Applied	18	7
Banana A	18	8
Banana B	19	8
Banana C	18.5	9
MEAN OF BANANAS A,B, & C	18.50	8

The Bananas applied with the Chitosan Solution were observed to have an average shelf life extension of 1 day.

Table 4.1 Garlic Solution applied on Cherries.

Variable	Size (CM)	Shelf Life (Days)
Cherry Without Any Solution Applied	3	6
Cherry A	4	8
Cherry B	3	9
Cherry C	3	8
MEAN OF CHERRIES A,B, & C	3.33	8

The Cherries applied with the Garlic Solution extended its life to an average of 2 days compared to the Cherry without any solution applied.

Table 4.2 Chitosan Solution applied on Cherries.

Variable	Size (CM)	Shelf Life (Days)
Cherry Without Any Solution Applied	3	6
Cherry A	3	7
Cherry B	3	7
Cherry C	2.5	7
MEAN OF CHERRIES A,B, & C	2.83	7

The shelf life of the Cherries applied with the Chitosan Solution showed an average shelf life extension of 1 day.

Table 5.1 Garlic Solution applied on Cabbages.

Variable	Size (CM)	Shelf Life (Days)
Cabbage Without Any Solution Applied	50	30
Cabbage A	52	33
Cabbage B	50	36
Cabbage C	51	34
MEAN OF CABBAGES A,B, & C	51	34

The shelf life of Cabbages extended to an average of 4 days after the application of the Garlic Solution.

Table 5.2 Chitosan Solution applied on Cabbages.

Variable	Size (CM)	Shelf Life (Days)
Cabbage Without Any Solution Applied	50	30
Cabbage A	51	31
Cabbage B	50	33
Cabbage C	50	31
MEAN OF CABBAGES A,B, & C	50.33	32

The Cabbages applied with the Chitosan Solution showed a positive result, having a 2 days extension on their shelf life after the application of the solution.

Table 6.1 Garlic Solution applied on Potatoes.

Variable	Size (CM)	Shelf Life (Days)
Potato Without Any Solution Applied	6	14
Potato A	6	17
Potato B	5	18
Potato C	6	17
MEAN OF POTATOES A,B, & C	5.67	17

The shelf life of Potatoes increased to an average of 3 days when applied with the Garlic Solution.

Table 6.2 Chitosan Solution applied on Potatoes.

Variable	Size (CM)	Shelf Life (Days)
Potato Without Any Solution Applied	6	14
Potato A	6	15
Potato B	6	17
Potato C	6	16
MEAN OF POTATOES A,B, & C	5.67	16

There is an evident increase on the shelf life of the Potatoes applied with the Chitosan that came up with the average of 2 days.

Table 7.1 Garlic Solution applied on Eggplants.

Variable	Size (CM)	Shelf Life (Days)
Eggplant Without Any Solution Applied	23	5
Eggplant A	23	8
Eggplant B	22	7
Eggplant C	23	7
MEAN OF EGGPLANTS A,B, & C	22.	7

A 2 days average on the shelf life of Eggplants applied with the Garlic Solution was observed.

Table 7.2 Chitosan Solution applied on Eggplants.

Variable	Size (CM)	Shelf Life (Days)
Eggplant Without Any Solution Applied	23	5
Eggplant A	24	7
Eggplant B	23	7
Eggplant C	23	6
MEAN OF EGGPLANTS A,B, & C	23.33	7

There was a significant difference in the shelf life of the Eggplants applied with the Chitosan Solution which has a 2 days extension compared to the one without any solution applied.

Table 8.1 Garlic Solution applied on String Beans.

Variable	Size (CM)	Shelf Life (Days)
String Bean Without Any Solution Applied	18	10
String Bean A	18	13
String Bean B	19	14
String Bean C	18	14
MEAN OF STRING BEANS A,B, & C	18.33	14

A 4 days extension average was observed on the shelf life of String Beans applied with the Garlic Solution.

Table 8.2 Chitosan Solution applied on String Beans.

Variable	Size (CM)	Shelf Life (Days)
String Bean Without Any Solution Applied	18	10
String Bean A	19	12
String Bean B	17.5	11
String Bean C	18	12
MEAN OF STRING BEANS A,B, & C	18.17	12

The String Beans applied with the Chitosan Solution had an average life extension of 2 days.

Table 9.1 Garlic Solution applied on Onions.

Variable	Size (CM)	Shelf Life (Days)
Onion Without Any Solution Applied	9	21
Onion A	8	25
Onion B	9	26
Onion C	9	26
MEAN OF ONIONS A,B, & C	8.67	26

The Onions applied with the Garlic Solution had a great result of a 5 days average extension in its shelf life.

Table 9.2 Chitosan Solution applied on Onions.

Variable	Size (CM)	Shelf Life (Days)
Onion Without Any Solution Applied	9	21
Onion A	10	22
Onion B	9	23
Onion C	9.5	23
MEAN OF ONIONS A,B, & C	9.5	23

Chitosan Solution was applied on Onions and the application resulted in a 2 days extension on its shelf life.

Table 10.1 Garlic Solution applied on Carrots.

Variable	Size (CM)	Shelf Life (Days)
Carrot Without Any Solution Applied	13	25
Carrot A	13	27
Carrot B	12	28
Carrot C	13	29
MEAN OF CARROTS A,B, & C	12.67	28

The Carrots applied with the Garlic Solution showed a 3 days extension on its shelf life after the application.

Table 10.2 Chitosan Solution applied on Carrots.

Variable	Size (CM)	Shelf Life (Days)
Carrot Without Any Solution Applied	13	25
Carrot A	13	26
Carrot B	13	27
Carrot C	14	27
MEAN OF CARROTS A,B, & C	13.33	27

The Carrots applied with the Chitosan Solution showed an average life extension of 2 days.

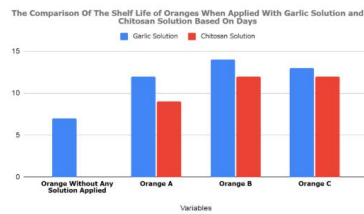
The Carrots applied with the Chitosan Solution showed an average life extension of 2 days.

2. What is the significant difference between the Chitosan Solution and the

Garlic Solution? The significance of each solution applied on the various fruits and vegetables showcase an observable change in odor as the one applied with the Garlic

Solution has a much stronger odor while the variables with the Chitosan Solution produce a neutral smell. In terms of its effects on the following produce, the ones applied with the Garlic Solution delays the rotting procedure of the variables, however the ones applied with Chitosan Solution did delay the rotting process of the produce, yet the Garlic Solution lengthens it more.

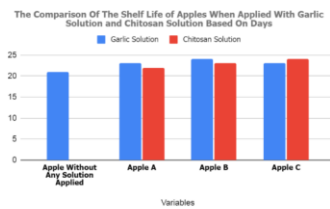
Figure 1. The Comparison Of The Shelf Life Of Oranges When Applied With Garlic Solution and Chitosan Solution Based On Days



The Oranges applied with the Garlic Solution lasted longer compared to the Oranges applied with Chitosan Solution.

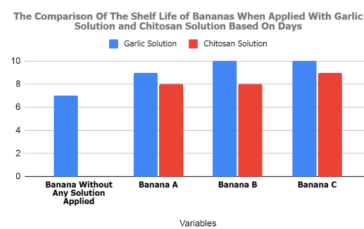
The Oranges applied with the Garlic Solution lasted longer compared to the Oranges applied with Chitosan Solution.

Figure 2. The Comparison Of The Shelf Life of Apples When Applied With Garlic Solution and Chitosan Solution Based On Days



The graph shows that the Apples applied with the Garlic Solution lasted better compared to the Apples applied with the Chitosan Solution.

Figure 3. The Comparison Of The Shelf Life of Bananas When Applied With Garlic Solution and Chitosan Solution Based On Days



The Bananas applied with the Garlic Solution lasted longer compared to the Bananas applied with the Chitosan Solution.

The Bananas applied with the Garlic Solution lasted longer compared to the Bananas applied with the Chitosan Solution.

Figure 4. The Comparison Of The Shelf Life of Cherries When Applied With Garlic Solution and Chitosan Solution Based On Days

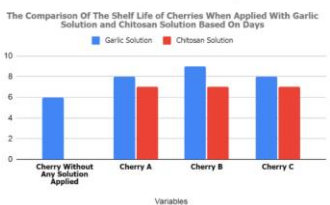
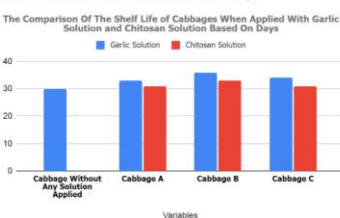
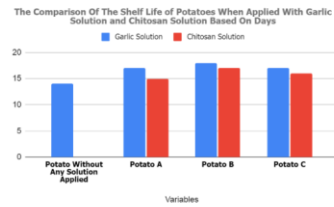


Figure 5. The Comparison Of The Shelf Life of Cabbages When Applied With Garlic Solution and Chitosan Solution Based On Days



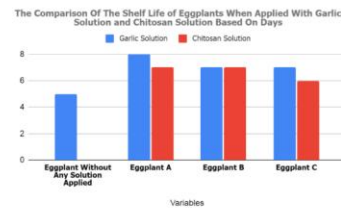
The Cabbages applied with the Garlic Solution lasted longer compared to the Cabbages applied with the Chitosan Solution.

Figure 6. The Comparison Of The Shelf Life of Potatoes When Applied With Garlic Solution and Chitosan Solution Based On Days



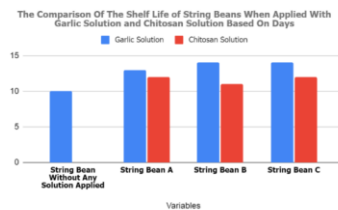
The graph shows that the Potatoes applied with the Garlic Solution lasted better compared to the Potatoes applied with the Chitosan Solution.

Figure 7. The Comparison Of The Shelf Life of Eggplants When Applied With Garlic Solution and Chitosan Solution Based On Days



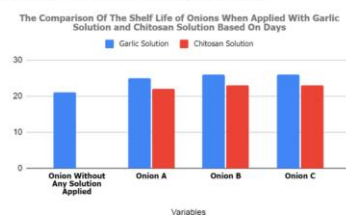
The Eggplants applied with the Garlic Solution lasted longer compared to the Eggplants applied with the Chitosan Solution.

Figure 8. The Comparison Of The Shelf Life of String Beans When Applied With Garlic Solution and Chitosan Solution Based On Days



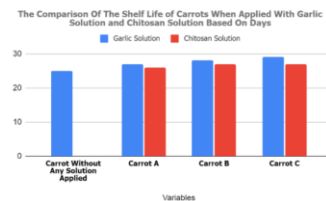
The graph shows that the String Beans applied with the Garlic Solution lasted better compared to the String Beans applied with the Chitosan Solution.

Figure 9. The Comparison Of The Shelf Life of Onions When Applied With Garlic Solution and Chitosan Solution Based On Days



The Onions applied with the Garlic Solution lasted longer compared to the Onions applied with the Chitosan Solution.

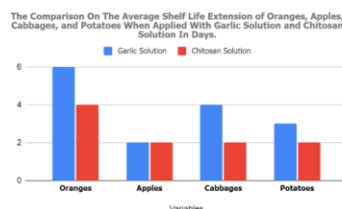
Figure 10. The Comparison Of The Shelf Life of Carrots When Applied With Garlic Solution and Chitosan Solution Based On Days



The graph shows that the Carrots applied with the Garlic Solution lasted better compared to the Carrots applied with the Chitosan Solution.

3. How does the thickness of the peels of fruits and vegetables affect their shelf life when applied with both solutions? The thickness of the peels proved to have an effect on their shelf life that can be observed on the comparison between Oranges and Apples as well as Cabbages and Potatoes wherein those who have a thicker peel resulted in a longer shelf life compared to those with a thinner peeling.

Figure 11. The Comparison On The Average Shelf Life Extension of Oranges, Apples, Cabbages, and Potatoes When Applied With Garlic Solution and Chitosan Solution In Days.



It can be seen on the graph above that there is a direct relationship between the peelings of the produce to the life extension that they'll have since the thicker the peeling was, the greater the average shelf life was when applied with the solutions.

RESULTS, CONCLUSION, AND RECOMMENDATIONS

RESULTS

The researchers learned that the proposed hypothesis for the study is proven to be false. In fact, certain vegetables and fruits with thicker peels like Oranges and Cabbages were successful in prolonging their shelf life compared to produce with thinner peelings. Apples and Potatoes also extended their shelf life, although the ones with thicker peelings lasted longer. It was also discovered that produce with thicker peels and firmer structure performs better because the semipermeable film created by the extract is much stronger in resisting bacteria from affecting its decaying process.

The size of the fruits didn't contribute to the result of the experimentation for significant differences in size were observed, yet it did not compromise the result of the experiment conducted on both fruits and vegetables.

CONCLUSION

In conclusion, the researchers found out that using the Garlic extract works better than the Chitosan Solution, this is because of the stronger antimicrobial property that the Garlic has that becomes stronger as it ferments unlike the Chitosan Solution that becomes toxic overtime as it killed a bird after accidentally consuming it.

Additionally, Garlic is an ingredient that is eaten almost everyday in various ways, therefore it is edible to eat and safe to use.

In the experimentation phase of the research, the researchers were able to deduce the fact that the Garlic Solution actively helped the purpose of extending the shelf life of fruits and vegetables with hopes that this could help consumers to save more money especially in the food industry and it can also contribute to the predicament of inflation as the agriculture sector can produce more fresh crops that can help ease the price of the products and help the farmers earn more money.

To finally conclude this study, the Garlic Solution is now considered to be better in prolonging the shelf life of fruits and vegetables compared to the longstanding Chitosan Solution.

RECOMMENDATIONS

When measuring out materials, especially garlic, which can vary from different brands, it's important to find and use the right equipment to further examine the product and to measure accurately. Additionally, when buying vodka or gin, make sure you are of legal age or have an adult present with ID and to choose pure beer and not the ones mixed with other additives or flavors.

To minimize the smell of garlic, open the windows or be mindful of the odor especially when it ferments as it is known

to have a strong smell. It's also essential to use or bring hand soap or any strong cleaning material to clean and get rid of the smell.

To prevent the smell from getting into your hands, try using gloves when crushing the garlic. When stirring chemicals, use a big beaker to avoid spillage and use a glass

stirring rod or a long, strong, thin, and clean object for stirring as it takes time for the chitosan to dissolve completely.

To ensure accuracy and a more scientific approach, try to find a laboratory that can help you out or that's available for outsiders, if your school doesn't have or only has limited apparatuses.

Lemon Juice (Citrus Limon) with Vinegar (Acetic Acid) and Lemon Juice (Citrus Limon), Lemon Zest and Vinegar (Acetic Acid) as a Better Alternative Disinfectant

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Abstract: In this study, the researchers opted to search for an alternative disinfectant that is cheaper yet still as good as branded disinfectants and chemical-free. The researchers used lemon, and vinegar, particularly, lemon zest and lemon juice. Since the researchers aimed for a safe and chemical-free alternative disinfectant, they used the lemon because it is not only a good natural cleaner, but the citrus aroma is also attracting and refreshing. Vinegar also helped in making the alternative disinfectant to be more acidic but safe. It's certainly cheap, non-toxic, and biodegradable, and it's been used as a disinfectant for thousands of years. This suggestion was produced as a one-part experiment that creates and compares two home-made disinfectants that will be compared by its surface compatibility on wood, metal and plastic. As well as its smell and affordability. A Likert scale is used to determine the surface compatibility and affordability, while each ingredient's cost was recorded in order to determine its affordability. The process of creating the disinfectants requires juicing, boiling, and mixing the ingredients together to create the disinfectants. As for major findings, the study showed that both alternative disinfectants are affordable and can be compatible with surfaces such as metal, wood, and plastic. However, lemon juice and vinegar cannot be a better alternative in terms of odor. Thus, the researchers concluded that the better alternative is lemon juice, lemon zest, and vinegar. Key Words: lemon; vinegar; disinfectant; chemical-free; affordability.

1. INTRODUCTION

1.1 Background of the Study

Humans nowadays are naturally prone to adverse bacteria, contaminants, and other potentially harmful microorganisms. As a result, it is a prime reason to maintain a clean environment. Infectious illnesses like flu and measles are brought on by microbes. However, there is compelling evidence that suggests bacteria may have a role in a number of chronic, non-infectious disorders, including coronary heart disease and a few types of cancer (Microbiology Society, 2023).

Microorganisms can be harmful through our environment by causing disease in humans, animals, and plants; these microbes are called pathogens. There are 4 groups of microbes that contain the pathogens: bacteria, fungi, protozoa, and viruses. Historically, diseases have been the most significant cause of death in humans or animals, such as

smallpox, which contains all four groups of microbes (T. Kenneth, 2015).

Disinfectants have become increasingly widespread, with sales increasing hence the growing number of individuals who want to be protected. Currently, many individuals require disinfectants due to the pandemic. Disinfectants are one of the most critical items required today. Cleaning and disinfecting various home surfaces are a part of everyday life. Unfortunately, those disinfectants consist of harmful chemicals that can affect humans and the environment. This is why the researchers conducted a study to develop and seek a better alternative disinfectant that is chemical-free and economical using lemon (*citrus limon*) and vinegar (*acetic acid*).

The study will conduct two sets of different proportions for three trials, with each group having more or less of one ingredient to see which is a better alternative disinfectant. It can be applied to clean surfaces such as floors, tables, and other objects that are frequently touched and used, as well as to help decrease viruses and germs that can't be seen with the naked eye. And especially in this global pandemic, it is fundamental to assist and protect people from viruses and germs that they encounter in their everyday lives.

2. METHODOLOGY

Table 1. Materials List

Materials List	Certain Amount Required
Distilled White Vinegar	473 mL
Lemon	10 pieces
Distilled Water	150 mL
Grater	3 pieces
Spray Bottle	6 pieces
Glass Jar with Lid	6 pieces
Hot Plate	1 piece

Experimental Procedure

1. Prepare all of the necessary materials.
2. Make sure that all of the materials are clean.
3. Get 2 glass jars.
4. Label each glass jar so that you can tell them apart.
5. Label the first jar: "Lemon Juice with Vinegar." and the second jar as "Lemon Juice and Lemon Zest with Vinegar."
6. Put the vinegar in a pot.
7. Turn on the heat and bring the vinegar to boil.
8. While waiting for the vinegar to boil, start to zest and juice the lemon.
9. Set aside the lemon zest and juice.
10. Let the vinegar cool down for a while.
11. Fill the first jar with Lemon Juice and the second jar with Lemon Juice and Lemon Zest.
12. Add the warm Distilled White Vinegar to each 2 jars.
13. Sealed shot your jar.
14. Wait for two weeks to infuse the vinegar with the citrus fragrance of the zest and juice.
15. After two weeks, put it all in each spray bottle.

Testing of the Sample

The disinfectants; one containing Lemon Juice and Vinegar, then one containing Lemon Juice, Lemon Zest and Vinegar were

tested after two weeks to see which was a better alternative disinfectant in terms of acidity level, affordability, surface compatibility, and odor. The researchers tested the acidity level by using pH test strips. To know which is a better alternative in terms of affordability, the researchers will compare the prices of homemade disinfectants to different types of commercial brands and get the average. To test the surface compatibility, the observers will clean visible dirt from a metal, wooden, and plastic surface. Researchers will also check the odor of each disinfectant. Following this, each observer will use a Likert scale to rate it, then determine which alternative disinfectant is better and start collecting data.

Data Collection of the Experimentation

The researchers found that the homemade disinfectants had a lower pH level and it is consistent with every trial. For context, a lower pH level indicates that a substance is acidic. For affordability, it was shown that one homemade disinfectant was not more expensive than the other commercial brands. As for the surface compatibility, it is found that the two sets of disinfectants are compatible with the given surfaces but have different results. Also, it was discovered that the homemade disinfectant meets the expectations of the researchers in terms of odor.

Statistical Analysis of Data

For the statistical treatment in the study, the researchers will apply the mean formula and standard deviation. The mean was used to get the average of the ratings, and the standard deviation was applied to calculate how much data was scattered, indicating that the alternative disinfectants would provide a higher average. The table presentation will be used by the researchers to show the experimental results of the procedures used.

$$\bar{X} = \frac{\sum X}{N}$$

$$\sigma = \sqrt{\frac{\sum (x_i - \mu)^2}{N}}$$

3. RESULTS AND DISCUSSION

Fig. 1 Amount of components of Lemon Juice and Vinegar



Fig. 2 Amount of components of Lemon Juice, Lemon Zest, and Vinegar

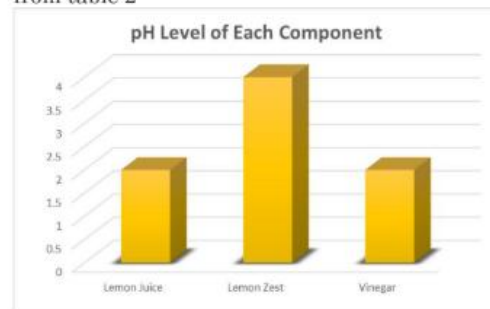


Figures 1 and 2 show the proportion of each component used by the researchers to compare each disinfectant. Figure 1 shows that in all trials of lemon juice and vinegar, it contained 60 mL of lemon juice, 30 mL of vinegar, and 20 mL of water. All of this resulted in a total of 100 mL. For the lemon juice, lemon zest, and vinegar trials, the researchers combined 50 mL of lemon juice, 30 mL of vinegar, 10 mL of water, and 4 tbsp of lemon zest. All of this added up to 90 mL.

Table 2. pH level of each component

Components	pH Level
Lemon Juice	2
Lemon Zest	4
Vinegar	2

Fig. 3 pH level of each component obtained from table 2



Tables 2.1 and 2.2 show that in all trials of lemon juice with vinegar and lemon juice and lemon zest with vinegar, the pH level was consistent. The result showed pH 2, which indicates that mixing the components didn't cause that much of a change in pH level. Though there is no change after combining the components, it still indicates that these disinfectants are acidic; there's a chance that these disinfectants can kill bacteria because the lower the pH level, the higher the acidity level, which can kill the bacteria, according to Water Science School (2019).

Table 3. Price of each product

	Product 1	Product 2	Product 3
Commercial Brand	₱ 85	₱ 99	₱ 79
Lemon Juice and Vinegar	₱ 44	₱ 44	₱ 44
Lemon Juice, Lemon Zest, and Vinegar	₱ 44	₱ 44	₱ 44

As shown in Table 3, the researchers determined affordability by comparing it to different types of commercial brands, then taking the average of each disinfectant's price. The commercial brand's first product costs 85 pesos. Product 2 is priced at 99 pesos, while Product 3 is sold at 79 pesos. While both of the alternative disinfectant are priced at 44 pesos only.

Table 3.1. Average of each product

Average Price of Commercial Brand	Average Price of Lemon Juice and Vinegar	Average Price of Lemon Juice, Lemon Zest, and Vinegar
₱ 87.67	₱ 44	₱ 44

Table 3.1 displays the average of each disinfectant used to compare. According to the findings, the average cost of commercial disinfectants was 87.67, whereas the average cost of both alternative disinfectants was 44. This demonstrates that the alternative disinfectants were less expensive than the commercial disinfectants.

To determine which is better in terms of surface compatibility, the researchers used a Likert scale. For each trial, each researcher rated the performance of each disinfectant in order to see a comparison.

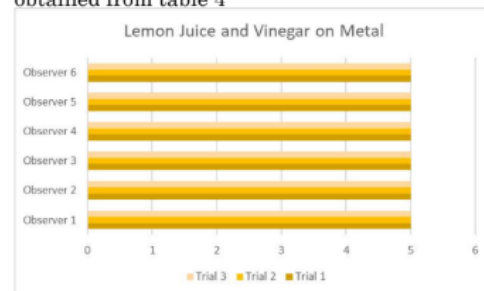
Legend of values:

- 5 – Outstanding
- 4 – Exceeds Expectations
- 3 – Meets Expectations
- 2 – Needs Improvement
- 1 – Unsatisfactory

Table 4. Lemon Juice and Vinegar's surface compatibility on metal

METAL			
Lemon Juice and Vinegar	Trial 1	Trial 2	Trial 3
Observer 1	5	5	5
Observer 2	5	5	5
Observer 3	5	5	5
Observer 4	5	5	5
Observer 5	5	5	5
Observer 6	5	5	5
Mean	5	5	5
Standard Deviation	0	0	0
Interpretation	Outstanding	Outstanding	Outstanding

Fig. 6 Lemon Juice and Vinegar on Metal obtained from table 4

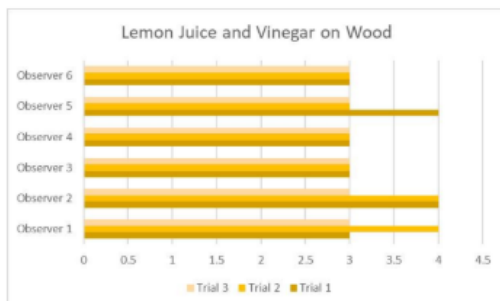


For Table 4, which contains the lemon juice and vinegar, the observers spray a moderate amount of each trial on a metal. As can be seen in the table, all the trials got a 5 rating from the observers, resulting in a mean of 5, which means that lemon juice and vinegar can be used on metal surfaces. As for the results, the surface was not damaged by the acidity of the disinfectant; instead, the rust that was on the metal was smudged a little. It also showed that the standard deviations have a low average that gives a total of 0 in all trials, which indicates that the data was grouped.

Table 4.1. Lemon Juice and Vinegar's surface compatibility on wood

WOOD			
Lemon Juice and Vinegar	Trial 1	Trial 2	Trial 3
Observer 1	3	4	3
Observer 2	4	4	3
Observer 3	3	3	3
Observer 4	3	3	3
Observer 5	4	3	3
Observer 6	3	3	3
Mean	3.33	3.33	3
Standard Deviation	0.47	0.47	0
Interpretation	Meets Expectations	Meets Expectations	Meets Expectations

Fig. 7 Lemon Juice and Vinegar on Wood obtained from table 4.1



For Table 4.1, the observers sprayed the disinfectants on the wood to observe if there would be an effect or change. The table above indicates that trials 1 and 2 both have a mean of 3.33, but trial 3 has a mean of 3. The researchers observed that there was a small stain that quickly disappeared, which is why the rate of each only meets expectations. Yet, based on these calculated measures, the disinfectants are still said to be compatible with wood. Table 4.1 showed that each of the trials' standard deviations has a low average that gives us 0.47 in trial 1, 0.47 in trial 2, and 0 in trial 3, which indicates that the data was grouped.

Table 4.2. Lemon Juice and Vinegar's surface compatibility on plastic

PLASTIC			
Lemon Juice and Vinegar	Trial 1	Trial 2	Trial 3
Observer 1	5	5	5
Observer 2	5	5	5
Observer 3	5	5	5
Observer 4	5	5	5
Observer 5	5	5	5
Observer 6	5	5	5
Mean	5	5	5
Standard Deviation	0	0	0
Interpretation	Outstanding	Outstanding	Outstanding

Fig. 8 Lemon Juice and Vinegar on Plastic obtained from table 4.2

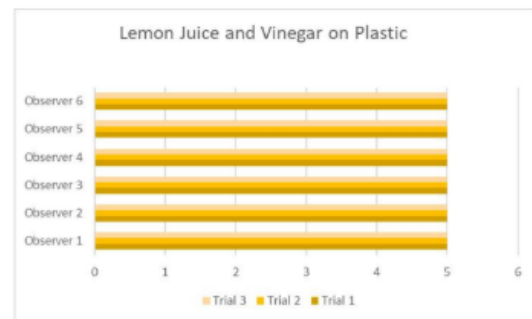
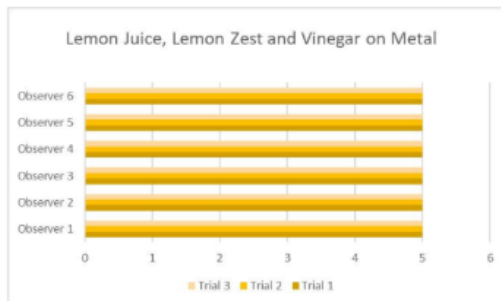


Table 4.2 shows that all of the observers gave a rating of 5 for each trial of lemon juice and vinegar. All of the trials of lemon juice and vinegar resulted in a mean of 5. This means that it is outstanding, and the disinfectant doesn't damage or affect the plastic. It also says that in all trials, the standard deviation is 0, which generally shows that the data used in the research were grouped. This disinfectant is therefore shown to be chemical-free and plastic-compatible.

Table 5. Lemon Juice, Lemon Zest, and Vinegar's surface compatibility on metal

METAL			
Lemon Juice, Lemon Zest, and Vinegar	Trial 1	Trial 2	Trial 3
Observer 1	5	5	5
Observer 2	5	5	5
Observer 3	5	5	5
Observer 4	5	5	5
Observer 5	5	5	5
Observer 6	5	5	5
Mean	5	5	5
Standard Deviation	0	0	0
Interpretation	Outstanding	Outstanding	Outstanding

Fig. 9 Lemon Juice, Lemon Zest, and Vinegar on Metal obtained from table 5

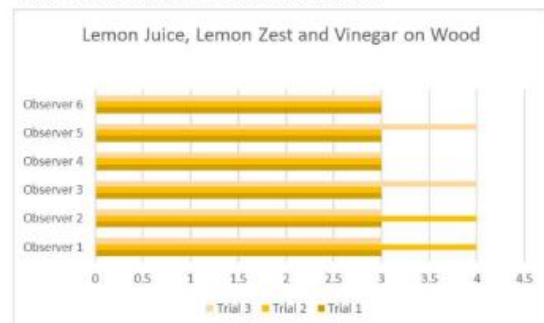


For Table 5, which contains lemon juice, lemon zest, and vinegar, the observers spray a moderate amount on the metal surface. The table above shows that all of the trials of lemon juice, lemon zest, and vinegar got a rating of 5, which resulted in a mean of 5. It means that the metal was not affected by the acidity of the disinfectant; instead, the rust that was on the metal was smudged more than in Table 4. Table 5 proves that all of the trials' standard deviations are 0, which means that the data was not scattered. As a result, lemon juice, lemon zest, and vinegar can be used on metal surfaces.

Table 5.1. Lemon Juice, Lemon Zest, and Vinegar's surface compatibility on wood

WOOD			
Lemon Juice, Lemon Zest, and Vinegar	Trial 1	Trial 2	Trial 3
Observer 1	3	4	3
Observer 2	4	4	3
Observer 3	3	3	3
Observer 4	3	3	3
Observer 5	4	3	3
Observer 6	3	3	3
Mean	3.33	3.33	3
Standard Deviation	0.47	0.47	0
Interpretation	Meets Expectations	Meets Expectations	Meets Expectations

Fig. 10 Lemon Juice, Lemon Zest, and Vinegar on Wood obtained from table 5.1



On Table 5.1, the observers sprayed the disinfectants with the same amount to see the results and if there would be any changes. According to the table, trial 1 has a mean of 3, while trials 2 and 3 both have a mean of 3.33. The observers found a stain on the wood after spraying the disinfectants, but it quickly disappeared, like in Table 4.1. Table 5.1 has a standard deviation of 0 in trial 1, 0.47 in trial 2, and 0.47 in trial 3. This tells us that the data was grouped accordingly. The calculated means and standard deviation say that the disinfectants are still compatible with wood, which meets the expectations of the researchers.

Table 5.2. Lemon Juice, Lemon Zest, and Vinegar's surface compatibility on plastic

PLASTIC			
Lemon Juice, Lemon Zest, and Vinegar	Trial 1	Trial 2	Trial 3
Observer 1	5	5	5
Observer 2	5	5	5
Observer 3	5	5	5
Observer 4	5	5	5
Observer 5	5	5	5
Observer 6	5	5	5
Mean	5	5	5
Standard Deviation	0	0	0
Interpretation	Outstanding	Outstanding	Outstanding

Fig. 11 Lemon Juice, Lemon Zest, and Vinegar on Plastic obtained from table 5.2

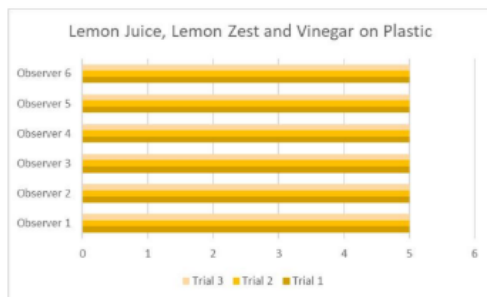


Table 5.2 shows that the mean average of all the lemon juice, lemon zest, and vinegar trials was 5. The trial mean of 5 indicates that the disinfectants produced are highly compatible and have no effect on any type of plastic. Table 5.2's standard deviation was computed and shows that all of the trials had a total of 0, which tells us that the data was not scattered. As a result, the disinfectants have been discovered to be plastic friendly and remarkable at cleaning dirt from plastic.

To determine which is better in terms of odor, the researchers used two Likert scales for intensity and aroma. For each trial, each researcher rated the performance of each disinfectant in order to see a comparison.

Legend of values in aroma and intensity:

- 5 – Very Strong and Pleasant Smell
- 4 – Strong and Good Smell
- 3 – Moderate smell
- 2 – Weak and Bad Smell
- 1 – Very Weak and Terrible Smell

Table 6. Lemon Juice and Vinegar's odor

ODOR			
Lemon Juice and Vinegar	Trial 1	Trial 2	Trial 3
	Aroma and Intensity	Aroma and Intensity	Aroma and Intensity
Observer 1	3	4	4
Observer 2	4	3	3
Observer 3	3	2	4
Observer 4	2	3	3
Observer 5	4	3	2
Observer 6	3	4	3
Mean	3.17	3.17	3.17
Standard Deviation	0.69	0.69	0.69
Interpretation	Moderate Smell	Moderate Smell	Moderate Smell

Fig. 12 Lemon Juice and Vinegar's odor obtained from table 6

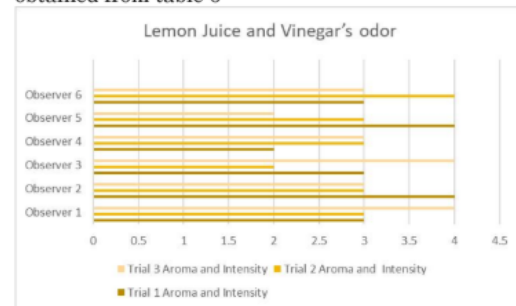


Table 6 shows the ratings of each observer for the aroma and intensity of each disinfectant. All trials got a mean of 3.17, which, according to the legend of values, is moderate smell. Table 6 indicated that all trials have an average of 0.69 in standard deviation, which says that the data was well grouped. This result means that lemon juice and vinegar only meets the expectations of the researchers.

Table 7 Lemon Juice, Lemon Zest, and Vinegar's odor

ODOR			
Lemon Juice and Vinegar	Trial 1	Trial 2	Trial 3
	Aroma and Intensity	Aroma and Intensity	Aroma and Intensity
Observer 1	4	4	5
Observer 2	4	4	4
Observer 3	4	5	4
Observer 4	4	3	4
Observer 5	3	4	3
Observer 6	5	4	4
Mean	4	4	4
Standard Deviation	0.58	0.58	0.58
Interpretation	Strong and Good Smell	Strong and Good Smell	Strong and Good Smell

Fig. 13 Lemon Juice and Vinegar's odor obtained from table 7

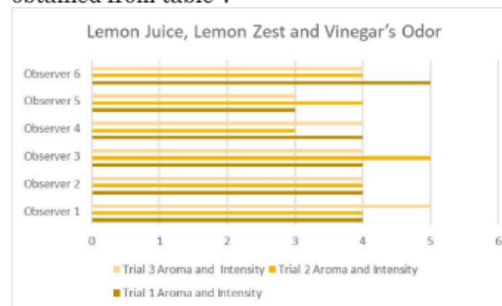


Table 7 shows the ratings of each observer for the aroma and intensity of each disinfectant. All the trials got an average of 4. This means that it has a good aroma and strong smell. Table 7 also shows that the computed average for the standard deviation had a total of 0.58 in all trials, which means that the data used in the research was not scattered. This result means that lemon juice, lemon zest, and vinegar can be better alternative in terms of odor.

4. CONCLUSION

The pH level of the samples was determined by the researchers throughout the experimental procedure, indicating that the disinfectants' acidity is consistent, signifying that these disinfectants have the chance to kill bacteria since the lower the pH level, the greater the acidity level. The pH level of the samples was determined by the researchers

during the experimental phase. Because the disinfectants have a low pH, they contain acid in the form of lemon juice and vinegar.

It was proved that both alternative disinfectants had a lower price than the other commercial brands. The researchers found that all sets of disinfectants are compatible with wood, metal, and plastic surfaces. Lemon juice, lemon zest, and vinegar achieved a better outcome, and it suggests that this is a better alternative in terms of odor because of its good and strong smell.

As such, lemon juice, lemon zest, and vinegar were deemed the best alternative disinfectants by the researchers, as they gave a good performance in terms of affordability, surface compatibility, and odor.

5. ACKNOWLEDGEMENTS

The researchers would like to extend their gratitude for the ones who guided and helped in the creation of this research.

The study could not have been completed if not for the help of: Their Basic Research 10 Teacher, Mrs. Marielle Conde-Balayo, who was responsible for correcting and validating majority of the paper. Mr. Eliazar Luciano, Their Statistics 10 Teacher, who helped in the statistical treatment and interpretation of the data in the paper. And last but not the least, Mrs. Joan Oledan, who helped the researchers in terms of language, grammar, and overall suggestions for the paper.

Finally, the researchers would like to thank San Jose Academy, for giving them the facilities and equipment that was needed for the study.

Incorporated Cavendish Banana (*Musa Acuminata* Cavendish Subgroup) as an Alternative Hair Conditioner

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Abstract: In this study, the researchers are expected to search for an alternative for a hair conditioner which can give multiple health benefits to a human hair and to our overall health. The goal of the study and the researchers is to lessen the use of chemicals and substances that can harm the human hair by using more natural resources or ingredients that can be found at home. After executing our methodology and conducting trials on a sample human hair, it is proven that the Cavendish Banana is a better substitute for an existing hair conditioner nowadays. The researchers gathered data from 20 respondents regarding their unbiased opinion on the outcome of the sample hair after the conducted trials. Based on the results indicated on the fourth chapter of the paper, Cavendish Banana as an alternative hair conditioner will work accordingly within the time span of 30 minutes instead of 10 and 20 minutes of trials. It is proven as an effective alternative hair conditioner that will provide better health benefits to the human hair. The ingredient to a hair conditioner that is less harmful and chemical-free. Since the researchers aimed for a healthier variant of hair conditioner, along with the Cavendish Banana, the team also included honey, aloe vera, lemon, banana peel extract, and olive oil. This will help in producing a good and healthier variant of hair conditioner since it has more nutrients and healthy ingredients.

Key Words: Cavendish Banana; hair conditioner; smoothness, sheen, softness

1. INTRODUCTION

1.1 Background of the Study

Hair is one of the jewels of the human body in terms of beauty but often overlooked for its other jobs. It serves as an insulation against cold, protection from external factors and lubrication to maintain the coolness of the skin. Hair is a sensitive accessory organ, it can be easily influenced both positively and negatively. Some factors that influence hair growth are hormones, age, gender, medications, foods and how people take care of it.

Cavendish Bananas have been part of people's daily meal or fruit intake. A human person can never go wrong with bananas given the fact that it attains several vitamins and nutrients that can help our growth, development, physical appearance, and

inner health system. Cavendish Bananas or also known as *Musa Acuminata* Cavendish Subgroup, when translated to its scientific term, is a type of banana with long, slightly curved and cylindrical, with slightly pointed ends. Their skins are bright green when unripe and ripe to a bright golden yellow, gaining black freckles or spots as they continue to ripen. They have a classic banana flavor and are available year-round.

(Produce Market Guide, n.d.) *Musa Acuminata* Cavendish Subgroup has 400 milligrams of potassium per 100 grams of fresh fruit. This type of banana can regulate a person's blood pressure and control the activity of the heart. (Food and Agriculture Organization of the United Nations, 2016) A Cavendish Banana consists of 23 grams of carbohydrates, 12 grams of sugar, and 89 calories.

Using a Cavendish Banana in human hair is

one of the useful treatments for our hair in improving its smoothness and shine. Folic acid brings shine to a human person's hair which the Cavendish Banana or any type of banana attains. They also keep your hair moisturized and well hydrated. The potassium and other oils of the fruit itself improves the health of our hair. (Tadimalla R., 2022)

In this Science Investigatory Project, the researcher's goals are to create a hair conditioner made out of natural ingredients and ingredients that are accessible and can easily found inside your homes. After this research proposal, the researchers will compare the usual hair conditioners that can be bought at supermarkets or stores to the finished product of this Science Investigatory Project.

2. METHODOLOGY

This part of the paper indicates the list of materials that will be used in creating a hair conditioner out of organic materials, non-experimental and experimental procedures that should be done in order to gather data.

MATERIALS LIST

- 62.5ml of Olive oil or coconut oil (either of the two)
- 1 tbsp of honey (for every 3 pieces of Cavendish Banana)
- 150ml of Lemon juice or Calamansi (depends on the availability in your household)
- 3 pieces Cavendish Banana
- 50 ml of Banana peel oil
- Aloe Vera

- Containers
- Knife
- Metal pot
- Small bowl
- Stove
- Filtering mesh or strainer
- Funnel
- Mortar and pestle
- Fork and spoon
- Measuring cups

PROCESS/PROCEDURE

In order to get and create an alternative hair conditioner made out of Cavendish Bananas, the researchers thought of these procedures to create the hair conditioner using the materials that mostly can be found inside the house or surroundings.

1. Prepare and measure all of the necessary materials.
2. Make sure that all of the materials are clean and sanitized.
3. Start the process by peeling the bananas available and set aside the peels of the banana.
4. Once peeled, put the banana inside the mortar and pestle or using a fork and gently crush it slowly. Remember to not over crush it thoroughly.
5. After crushing the bananas, put it in a bowl and mix it with the other materials such as olive or coconut oil, honey, and lemon juice or calamansi.

6. While letting the mixed materials rest, prepare the metal pot or pan and put the peels of the banana together with a little amount of olive or coconut oil. Wait until the peel extracted or exerted its oil.

7. After getting the oil from the peel, mix it a little and combine it with the mixed materials on the 5th procedure.

8. After combining them all together in one bowl, mix them using a spoon until it thickens. You can also add an enough amount of aloe vera to help with the thickness or consistency of the hair conditioner.

9. After making sure that the consistency is thick or enough already, put it in a container and give it a final mix before letting it rest for the final step and proceed to using the final product.

EXPERIMENTAL PROCEDURE

This procedure will serve as the final process in knowing if the hair conditioner made out of Cavendish Banana is successful as an alternative hair conditioner compared to the usual hair conditioners sold at the market.

1. To test if the final product or outcome will work, prepare several hair samples (human hair if possible) and tie them in a knot. Prepare 3 samples to compare and contrast at the end of the procedures.

2. Apply the hair conditioner made by the researchers on the three sample and let it stay for:

2.1 Time frame: 10 minutes

2.2 Time frame: 20 minutes

2.3 Time frame: 30 minutes

3. Keep documentation of the whole process and compare and contrast the

samples.

3. RESULTS AND DISCUSSIONS

This chapter of the paper shall provide the data gathered by the researchers after executing the procedures. This chapter includes the presentation of data, its analysis, and interpretation in which it also tackles the answers of the questions given in the

Statement of the Problem part of this paper.

1. How much is the needed portion of Cavendish Banana and other materials to produce an alternative hair conditioner?

After the procedure of making the alternative hair conditioner made out of Incorporated Cavendish Banana, the researchers gathered 200ml of Cavendish Banana, 60ml of Olive Oil mixed with the extract of the banana peel, 75ml of Lemon juice, 15 ml of honey, and 60ml of aloe vera.

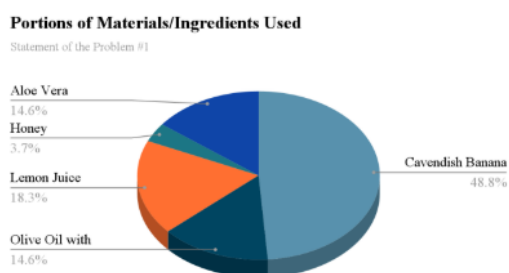


Fig. 1. The photo above shows the graphical form of the data gathered for Statement of the Problem #1.

Components	Measurements/Portions
Banana	200ml
Coconut Oil/Olive Oil	60ml
Lemon Juice	75ml
Honey	15ml
Aloe Vera	60ml
Total:	410ml

Table 1. Portions of Cavendish Banana and other materials used.

2. How effective is the Cavendish Banana as an Alternative Hair Conditioner in terms of these following properties: (2.1) Softness, (2.2) Smoothness, and (2.3) Sheen. (ratings from 1-5)

Based on the results shown after the experimental procedure of the researchers, this double bar graph indicates the comparison of every trial completed. In the first to third trial, the effectiveness of the hair conditioner made out of Cavendish Banana when it comes to smoothness, shininess, and softness is the same given the fact that the time difference of every trial is not uniform.

LEGEND

1	Poorly Effective
2	Slightly Effective
3	Moderately Effective
4	Effective
5	Strongly Effective

TABLE 2.1. The effect of Cavendish Banana as an alternative hair conditioner in a span of 10 minutes of trial and testing.

DESCRIPTIVE	MEAN	STANDARD DEVIATION	INTERPRETATION
Softness	2.95	0.241	Slightly Effective
Smoothness	3.6	0.3	Moderately Effective
Sheen	1.3	0.4	Poorly Effective
Overall Weighted Mean	2.62		Slightly Effective

Table 2.1 shows that the alternative hair conditioner made out of Cavendish Banana is moderately effective in a span of 10 minutes of trial and testing since the overall

weighted mean is 2.62.

TABLE 2.2. The effect of Cavendish Banana as an alternative hair conditioner in a span of 20 minutes of trial and testing.

DESCRIPTIVE	MEAN	STANDARD DEVIATION	INTERPRETATION
Softness	3.75	0.14	Moderately Effective
Smoothness	4.3	0.7	Effective
Sheen	1.45	0.5	Poorly Effective

Overall Weighted Mean	3.17		Moderately Effective
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Table 2.2 shows that the alternative hair conditioner made out of Cavendish Banana is moderately effective in a span of 20 minutes of trial and testing since the overall weighted mean is 3.17. The softness and smoothness of the hair after the trials improved compared to the previous testing, meanwhile, the shine of the hair did not improve and stayed the same as poorly effective.

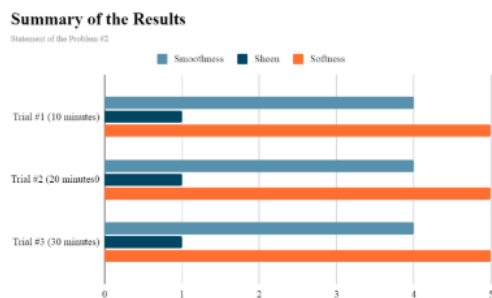
TABLE 2.3. The effect of Cavendish Banana as an alternative hair conditioner in a span of 30 minutes of trial and testing.

DESCRIPTIVE	MEAN	STANDARD DEVIATION	INTERPRETATION
Softness	4.6	0.36	Effective
Smoothness	4.6	0.36	Effective
Sheen	1.65	0.6	Poorly Effective
Overall Weighted Mean	3.62		Moderately Effective

Table 2.3 shows that the alternative hair conditioner made out of Cavendish Banana is effective in a span of 30 minutes of trial

and testing since the overall weighted mean is 3.62. The descriptives improved compared to the two previous time spans. From moderately effective, it became effective because of the high ratings gathered from the respondents.

Fig. 2. This graph shows the summary of the results that the researchers have gathered with the help of the 20 respondents asked regarding the honest opinion or insights in every trial that the researchers have done in this research.



3. How beneficial is a Cavendish Banana as a substitute natural ingredient for hair conditioner? According to several studies and other researchers, it has been proven that Cavendish Banana has a lot of nutrients and is beneficial to people's health especially to the human hair. Based on the results that the researchers have collected in this chapter, it is undeniably beneficial as a substitute natural ingredient for hair conditioner instead of using harmful and high amounts of chemicals or substances used in the usual hair conditioners.

When it comes to the smoothness and softness of the samples after the experimentation, the researchers can assure that Cavendish Banana truly works as an alternative organic ingredient for hair conditioner. Bananas contain a good amount of potassium, vitamins, calcium, carbohydrates as well as natural oils that provide nourishment to our hair and make them smooth and soft. Bananas can also

help to seal cuticles as well as get rid of split ends effectively. Furthermore, bananas can restore the natural elasticity of our hair and make them soft as well as smooth once again. The potassium present in bananas repairs dry hair

effectively. The antioxidants benefits of bananas also help to maintain healthy and smooth hair. Banana also adds a natural shine to our hair as well as nourishes the hair follicles and leads to healthy hair growth. (Singh, 2018)

To prove the excellency of Cavendish Banana as an alternative hair conditioner, the researchers used Table 2.3 as supporting evidence that an incorporated Cavendish Banana can also be a better alternative hair conditioner.

TABLE 2.3. The effect of Cavendish Banana as an alternative hair conditioner in a span of 30 minutes of trial and testing.

DESCRIPTIVE	MEAN	STANDARD DEVIATION	INTERPRETATION
Softness	4.6	0.36	Effective

Smoothness	4.6	0.36	Effective
Sheen	1.65	0.6	Poorly Effective
Overall Weighted Mean	3.62		Moderately Effective

A hair conditioner made out of Cavendish Banana and other organic ingredients has a lot more benefits instead of the usual hair conditioners that can be found on leading supermarkets since it includes several chemicals. In this research study, the researchers can prove using the tables, graphs, and data collected above that it is also effective when it comes to smoothness and softness of the hair. Based on the given results after the experimentation and trials, it has been proven by the data gathered that Cavendish Banana can also be an

alternative hair conditioner when it comes to the human hair's smoothness and softness. The hair conditioner did not pass the expectancy of the respondents when it comes to the shininess of the hair but it exceeded the expectations of the respondents when it comes to the softness and smoothness of the hair based on their unbiased judgment after some trials.

For this study, the researchers gathered this data by asking several respondents when it comes to

their opinion about the effects of the hair conditioner made out of Cavendish Banana after undergoing some trials and experimentations. The final data shown on the Chapter 4 can prove that the Cavendish Banana can also be an alternative ingredient for a much better, organic, and chemical-free hair conditioner that can really improve the smoothness and softness of the human hair. However, the researchers found out that the conditioner's estimated shelf life only lasts within 1-2 weeks, if it exceeds the estimated shelf life, the appearance and smell slowly changes because of its ingredients or materials used. The appearance became dark while the smell was sour.

It's a known fact that bananas are an excellent source of minerals, since the researchers only used one kind of banana. One of the researcher's recommendations would be to try other variants of bananas to check the efficiency of all types of banana. And also, it is important to check how many days the efficacy will last and if the variants used are compatible with the reagent or honey that the researchers have used before. The researchers wish those who are interested to contribute in the study, first, to search for an ingredient that can help when it comes to the shininess of the hair since the researcher's experimentation did not pass beyond the expectations when it comes to the hair's shininess. Second, try to find out its effectiveness on curly hair or any

various types of hair. This will make the study more effective and accurate. Third, search for an additional ingredient or material that can prolong the shelf life of the conditioner itself. Addition of processes & ingredients that can improve the quality of the product is greatly recommended as the team was limited by budget and ability. Lastly, the researchers also suggest proper implementation of steps in making the research product for improvements as many factors have affected the availability of the team allotted for the project.

4. CONCLUSIONS

The goal of this study is to create a hair conditioner made out of natural ingredients and ingredients that are accessible and can easily be found inside your homes. After this research proposal, the researchers will compare the usual hair conditioners that can be bought at supermarkets or stores to the finished product of this Science Investigatory Project.

This is to test if the Banana peel is a better alternative for a natural hair conditioner in terms of smoothness shininess, and softness of the human hair. It demonstrated that such waste materials can be transformed into something useful for everyone. The researchers are attempting to determine whether or not the Cavendish Banana is an effective hair conditioner and a viable alternative. The researchers in this study don't have enough materials to complete the entire process. But after completing the other components of the experiment, the researchers continued making the process at home. In that instance, the conditioner's outcome is excellent and believable.

5. ACKNOWLEDGEMENTS

The researchers would like to extend their gratitude to Ms. Marielle Balayo, our Basic Research 2 subject teacher, for extending her patience when it comes to teaching new things and information about our subject

and study.

Second, the researchers would like to extend their gratitude to Mr. Eliazar Luciano and Ms. Joan Oledan, our Introduction to Statistics 10 subject teacher and Library subject teacher, for giving advantageous comments and critiques on our Investigatory Project Proposal which helped us

The Internet Seller's Marketing Strategies

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Abstract: When the pandemic started, online shopping became one of the most convenient ways of buying and selling products. Local internet sellers used social media like Facebook, TikTok, and YouTube. Internet sellers also use shopping apps like Shopee and Lazada and other online platforms that can be used to sell a product. According to Adam Barone (Marketing Strategy: What It Is, How It Works, and How to Create One, 2022), marketing strategies are a business's overall game plan for reaching prospective consumers and turning them into buyers of their products. In this research, readers will learn the marketing strategies that can help local internet sellers. This study wants to determine the marketing strategies that the local internet sellers used to gain more profit. Identify how local internet sellers will gain money in their small businesses, and students will have knowledge of marketing strategies that they can use in making a business in the future. In the end of this study, researchers give the marketing strategies that local internet sellers can use and explain how internet sellers will use the marketing strategies in a proper way. The readers of his study will know different limitations, like that online marketing's biggest flaw is how time-consuming it is, among others. Readers will also gain knowledge from the different recommendations in this study. a recommendation that will help you in making a business and how your business will succeed, like gaining more profit, money, and happiness in your business by using different marketing strategies, and how you will make your business better.

Key Words: Marketing, Online, Strategies, Shopping, Internet sellers

I.	INTRODUCTION	social media, shopping apps, and other online platforms to sell and buy people's necessities.
Background of the study	When shopping online, internet or online selling refers to the buying and selling of products and services via the internet. When the government declared a pandemic due to the Covid-19 virus, online sales began. It became popular among many consumers, particularly business owners. Online selling makes use of	The disadvantage of purchasing items online is that there is no guarantee of product quality. Reviews are not always reliable, and no amount of research can guarantee the quality of a product; fraudulent sellers who intentionally mislead customers in order to increase sales are the primary cause of faulty/sub-par products being sold online. With the volume of goods handled by e-

commerce companies these days, it can be difficult for them to conduct quality checks on each and every product they sell. Furthermore, getting the correct size remains a significant disadvantage when purchasing clothing and footwear online. Sizes differ from brand to brand, and because you can't try on the products before purchasing them, deciding on the right size is always a gamble. When shopping online, one issue that frequently arises is when the order will be delivered. While all e-commerce sites provide order tracking for their customers, these systems are not always accurate. Because there is no way to schedule a specific time for the delivery, delivery personnel frequently arrive at our homes while we are at work or elsewhere. The same problem arises when returning products. Another issue is that the vast majority of India's rural and Tier-III cities are unable to shop online because not all e-commerce sites provide delivery services to their locations (Mittal, 2017).

Statement of objectives

This study aimed to determine the marketing strategies that the local internet sellers used to succeed in their businesses by gaining more profit and to help those students who want to build a business by using those marketing strategies that young entrepreneurs and internet sellers used. This paper aimed to address the following objectives:

1. Determine the marketing strategies that local internet sellers used to gain more profit in their businesses
2. Identify how they will gain money and turn their small business into a big business now

3. Determine those marketing strategies to help students and those who want to build a business

Significance of the study

This research is of great significance in the field of marketing and for people who want to become online sellers because it will help them learn more about local internet sellers who succeed in their businesses using marketing strategies. In addition, this research will help certain groups and individuals, such as aspiring online sellers who want to know more about business and marketing strategies. Finally, future researchers who want to investigate the same topic can use this

Scope and Delimitation of the study

This study included senior high school students at San Jose Academy in the second semester of the school year 2022-2023. Effective internet sellers' and entrepreneurs' marketing strategies sought to help those students who would start their own start-up. This study limits its efficiency and precision in terms of marketing strategy to business owners because it might work for a certain group of people but not for others.

II. ANALYSIS

The coronavirus pandemic has had a significant impact on purchasing behavior, with many people suffering and struggling to find work. As a result, businesses laid off workers and sellers decided to launch their business online. People began to buy their wants and needs online, leading to a shift in purchasing behavior (GeekWire, 2020).

Many businesses' marketing efforts must target

a local audience. Whether you run a business that relies heavily on local engagement or simply want to improve your local marketing, these strategies are simple, inexpensive, and effective. Here are some ideas for local marketing for small businesses (2023, Uzialko A.) :

Improve your website's performance, Title tags and meta descriptions should be updated, Create local landing pages for each of your company's locations, Improve the appearance of your social media pages, Encourage positive user feedback and participation online, Collaborate with other local businesses.

The goal of this study is to map the knowledge management research in small enterprises and make recommendations for future initiatives to improve managerial practices. They promote consumer happiness, foster the growth of innovation within the organizations. It then lists the most important contributions, discusses current topical areas, and makes recommendations for further study and legislative measures to promote economic growth among small businesses. Due to their expertise and skill, they can profit because they can manage it well. By advising ways to enhance knowledge management methods in small enterprises to achieve a competitive advantage.

Local online sellers can grow their small businesses' earnings by reaching a wider audience with their products and services through the internet's wide applications. They can set up an online store on e-commerce sites like Shopee and Lazada, which provide a range of features like safe payment gateways, logistics, and shipping services, as well as marketing tools to assist merchants in marketing their goods and drawing in new buyers. Besides that, social media sites like Facebook, Instagram, and TikTok may be utilized to produce interesting content that advertises goods and services, which can help boost brand recognition and draw in new

clients. Local internet vendors can expand their operations and increase sales by strategically utilizing various online channels.

Identifying new industry trends might help students stay current in the rapidly evolving field of marketing today. Application-focused case studies are frequently used in the teaching of marketing management. Showcasing businesses and brands that have employed effective marketing techniques is crucial. Students are better able to relate to the analyses of these case studies and vignettes as a result. (Pearson, 2018)

The way you promote yourself, apply for challenging and gratifying jobs professionally, and advance your career has changed as a result of social networking. To earn more money, students looked into online businesses and discovered how marketing methods help businesses expand. We can understand how social media has transformed conventional recruiting techniques by seeing how students use these resources to find employment that advances their careers. (Mary Beth McCabe, 2017)

III. CONCLUSION

To sum up, in conclusion, this study examines the pros and cons of online shopping, specifically during the pandemic, highlighting benefits such as convenience, time-saving, and a wider selection. The research also underscores the role of marketing strategies in the success of e-commerce businesses and the potential of online selling as a source of income for those impacted by the pandemic. The implications of the study suggest that

online shopping benefits both buyers and sellers, and the growth of e-commerce is driven by various factors such as the marketing mix, promotions, and fast payment transactions. However, the study also identifies limitations, such as difficulty ensuring product quality and the potential negative impact of feedback on a seller's reputation. The study provides practical marketing recommendations, including social media advertising, search engine optimization, and email marketing, for young entrepreneurs to enhance their businesses. Overall, this study emphasizes the need to consider both the advantages and limitations of online shopping when making informed purchasing decisions.

Social Media Marketing: An Analysis of Lived Experiences of Students

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5. ACKNOWLEDGMENTS

First, the researchers would like to thank God for giving us strength every day. They will not finish this study without the guidance of God. Second, researchers want to thank Ms. Frances Valencia for giving us motivation in every part that we do in doing this paper and for guiding us in making this study possible. Third, researchers would also like to thank those who helped us in making this study and those who gave us some advice and tips that we used in finishing this research. And last, we also like to thank ourselves in not giving up in doing this study and gave a lot of time and effort to make this study good and better.

Abstract: Social Media Marketing (SMM) is a rapidly growing marketing strategy that involves the use of social media in which users build social networks and share information. The utilization of SMM has attracted students, which are the current consumers of products online (Shields & Peruta, 2018; Vishnu, 2020). It is not new for them to see certain products being advertised. The research has identified that a significant number of students have already ordered and purchased online, which means that teenagers, particularly students, can retrieve information faster, have more choices and time while saving money through social media marketing. Although SMM has advantages for students as a consumer, there are some risks that cannot be avoided, such as inability to physically test and touch a product, scams, fraud, bogus websites, and identity theft, which are common in online shopping websites. Students became impulsive buyers as a result of their eagerness, self-satisfaction, and lack of self-control. As a result, the analysis has clearly

discussed SMM and its impact on student's knowledge, awareness, and even experiences. It also mentions the most popular social media platforms that students use to gather information and make purchases online. This study examines the factors that influence online purchasing behavior to students as online consumers, as well as to define and provide information about the impact of SMM on their knowledge, awareness, and lived experiences. With this, the study's findings will assist online buyers, particularly students, in better understanding the SMM's effectiveness in their purchasing decisions and perceptions and consumers.

Key Words: Social Media Marketing (SMM), consumer behavior, shopping behavior, purchasing decision, impulsive buying

1. INTRODUCTION

1.1 Background of the Study

Social Media is a platform marketers use to reach a larger population of potential consumers. Social Media Marketing (SMM) involves the use of various social media networks to promote a company and its products. 93% of marketers worldwide are using social media on their business (Schaffer et al., 2022). It builds engagement and influences their purchasing decision through various social media platforms. That is why consumers adhere more to this kind of marketing

compared to physical products they see at physical shops. Moreover, students are the main users of social media (Shields & Peruta, 2018; Vishnu, 2020), it is not new for them to see certain products being advertised. Students being the main users of social media are also the frequent consumers of SMM. According to the survey of Kuswanto et al. (2019), 47% of students purchase fashion products, 19.3% on electronics, and the rest are skincare, accessories, internet and household needs. However,

students being adolescents, they tend to attach to the danger of over buying and purchasing unnecessary things as they are easily influenced by internal and external factors that include peer influence, trending products, and advertisements they see at social media platforms. The studies that have been conducted to assess the awareness and behavior of students regarding social media marketing are somehow limited to the products they usually buy. That is what pushed researchers to analyze the lived experiences of students that aimed to ascertain the following:

1.2. Objectives

1. Determine the knowledge and awareness of students regarding social media marketing.
2. Determine the reliability and influence of social media marketing through the lived experiences of students.
3. Analyze the consumer behavior of students behind impulsive buying in purchasing products in social media.

1.3. Significance of the Study

This study will help to evaluate the knowledge and awareness of students

in regards to their shopping behavior on social media platforms, which involves Social Media Marketing (SMM). Thus, this analysis might reveal how SMM influences the purchasing decision of students and determine the reliability of this marketing strategy in accordance to the needs or wants of students and also identify, what is the danger behind it. With that, this study will also determine the knowledge and awareness students have when seeing advertisements and purchasing online. The findings of this study will reflect on how effective and reliable SMM is and determine the possible dangers students might face when purchasing online. Through this study, it will help students gain insight and assist them in determining what is the right action they should take when purchasing online and to avoid the predicaments of SMM. All in all, this study will help students to alleviate the dangers of impulsive buying and other risky consumer behavior via online and social media platforms.

2. ANALYSIS

Social Media Marketing (SMM)

Social media marketing (SMM), also known as digital marketing and e-marketing, involves the use of social media in which users build social networks and share information. This is to build a business' brand, increase sales and revenue. It is the process of gathering people to get them interested in a business' product or service. This happens through utilizing market research, analysis, and understanding the customer's interest (Forsey C.,

2022). SMM has built-in data analytics that provide marketers track of the business' efforts and to research more possible ways for customer engagement (Hayes A., 2023).

The utilization of social media and social networks on SMM is mainly to promote a business's line of goods and services. In order to connect with potential customers, social media marketing places a strong emphasis on improving user interaction and brand recognition. The common practices under SMM is analyzing your consumer at all times, conducting surveys, studying their purchasing habits, and asking how they want to communicate with the business. It aims to deliver utmost value for prospects and consumers through satisfaction which give content to the consumers, along with the long-term goal of illustrating product value, prospering brand loyalty, and to ultimately increase sales.

On the other hand, the survey of Pudvelis (2020) revealed that over 80% of consumers reported that social media, especially influencer contents, remarkably affects buying decisions along with marketers across different industries driving the evolution and development of social media marketing (SMM). That is why it is important for a business as it makes the customer aware of your products or services, it gives them engagement, and helps them in buying decisions. SMM plays a pivotal role in the business' success as without the understanding of the importance of marketing, managing a business would be difficult in today's world.

Accordingly, an article made by an admin on Galaxy Weblinks Blog (2022) has characterized SMM, the following is the said characteristics; Participation, as social media marketing encourages everyone's contributions and feedback; Openness, what users do, what users say, everything in social media is open, that is why businesses have to be honest; Relationship building, as social media marketing is a two-way communication, in which it requires participation from both the brand and its customer; Reliability, that online presence to be shown as reliable as a means of trust-building; Community building; Customer service, that says that customers must be prioritized.

The most significant advantage of SMM is its level of connectedness. SMM makes it easy for people to find groups or reach new audiences. It is also a way to nurture existing relationships with friends and families. It offers benefits for businesses that market your products, engages audiences, and eventually turns them into customers. The opportunities that a business can get by utilizing SMM is limitless (Hashem, 2022). That makes SMM to be one of the most effective marketing strategies because it encourages its consumers to engage with the producer to receive feedback accordingly. With that being said, SMM is essential in businesses and it should be part of every brand's main marketing strategies.

All in all, those are the reasons why consumers tend to adhere more on this marketing strategy because the level of engagement consumers receive is considerably more than any other

strategies marketers use in the marketplace.

Knowledge, Awareness, and Experience

Social media is constantly evolving. This has given rise to the use of SMM in which students are the primary users (Shields & Peruta, 2018; Vishnu, 2020). It is not new for them to see certain products being advertised. In fact, the research has identified that a significant number of students have already ordered and purchased online. Main factor that has contributed to this behavior of students is efficient utilization of SMM. However, it is revealed that it is the trust among the students that keeps them buying on social media. This is proven in the study of Vishnu (2022) that tells that SMM heavily influences the purchase intention and behavior of students. If students do not see a brand as trustworthy that is marketed through social media, they usually ignore the product that is being marketed. This makes SMM seem to be reliable in terms of its consumers' perception.

With that, it is known that students are able to distinguish trustworthy products that are being marketed and investigate thoroughly before actually buying products online. This can be seen nowadays in which the majority of the students have already accomplished an order online. This implicates that students are well-informed to the constantly evolving social media and marketing based on their experiences. SMM is a well-known tool for teenagers, particularly students, to find the right product for their daily lives. Given that SMM is one of the

specialized subjects in senior high school, most students are already familiar with how it works; from how it affects consumers, to how effective it is in perceiving buyers. Since most students understand how businesses use buyer perception strategies, they can apply what they have learned to be clever when selecting a product. As a result, the prior knowledge of students is already there. In addition, it is constantly growing and expanding as they gain experience from purchasing online products through SMM.

Students as Users of Social Media

The researchers discovered that Instagram is one of the most popular and useful social networking sites because it not only allows people to interact nationally and globally, but it has also become a new marketing tool in social media marketing. Other social media platforms, such as YouTube and Facebook, have a significant impact on students because of their ability to invest heavily in social commerce features, making it easier for them to attract students as a target audience. While online shopping sites including Lazada, Shopee, Shein, and other websites that push video content to as many potential customers as possible are used to purchase goods by simply tapping it, most students prefer to watch live selling videos because it is more convenient and has a lower price that can easily persuade them to buy. It also allows them to communicate with product owners and producers as much as possible when they have concerns about what they have purchased and it is also thought to be a useful tool for

them because it allows them to expand their inquiries, which can sometimes satisfy their curiosity about something they want to purchase. All of these social media platforms incorporate SMM as their primary strategy they utilize every time.

However, a notable study of Kumar and Kaur (2018) titled "Understanding Online Impulsive Buying Behaviour of Students" revealed that students possess the tendency to buy impulsively online. This consumer behavior of students is correlated with the factor of age among them. With them being adolescents most of the time, they are easily influenced with the trends found within their peers, and those which are found online through advertisements. With those circumstances, it becomes a sudden desire that leads to unplanned purchases — which is irrational and impractical. This sudden urge of desire may arise conflicts and dangers that could affect both the student and their immediate environment.

SMM, despite being an effective and efficient marketing strategy, the impulsive behavior of students might affect its overall reliability. Students are knowledgeable in the part of distinguishing prospective products online and investigate the trustworthiness of each one, but in terms of their behavior as consumers, they are prone to overbuying and their shopping decision has the capacity to negate the reliability of SMM. These students play a significant role in the effectiveness and reliability of the said marketing strategy

3. CONCLUSION

Altogether, this research has discussed the relationship of Social Media Marketing (SMM) on students. It has been revealed that students are well-informed on purchasing products online, and in fact, they have already done it many times. The most popular social media platforms students usually use to purchase products are Facebook, Instagram, Shopee, Lazada, Shein, and Twitter. The stated social media platforms heavily influence the shopping behavior of students by utilizing promotions, discounts, and deals. However, through analyzing various studies, it is found out that there is a danger behind shopping online. Students being adolescents, they tend to impulsively purchase if not unnecessary, more than the amount they should buy. They are caught off on buying too much which is impractical and unnecessary. These are driven by their immediate desire when they are influenced by internal and external factors that affect their behavior as consumers. These influences on their shopping decisions have the capacity to negate the reliability of SMM. They play a significant role in the effectiveness and reliability of the said marketing strategy.

The researchers only focused on certain social media platforms like Facebook, Instagram, Shopee, Lazada, Shein, and Twitter. The researchers are not that

knowledgeable on the other aspects of social media platforms like Zalora, EBay, TikTok, Amazon, and Sephora which are not mentioned in the study. With that, future researchers may further investigate the internal and outside factors that influences students' shopping behavior and analyze other social media platforms as a replication to the study or to further broaden the study's topic.

4. ACKNOWLEDGMENTS

The researchers would like to express their heartfelt appreciation to everyone who helped them with their research. The researchers would like to express their sincere gratitude to the following individuals for their assistance and guidance in carrying out this study.

The researchers would like to express their gratitude for their **parents**. The researchers would like to credit their money allotted for printing and other expenses the researchers needed during the study. If not through their efforts and support, the completion of the term paper is impossible.

The researchers would like to express their appreciation and gratitude to **Miss Frances Erica D. Valencia** for making this research possible through her perseverance and guidance throughout all stages of the research. Her suggestions significantly aided in the completion of this study. The researchers thank you for believing in their abilities.

The researchers would also like to

express their sincerest appreciation to **San Jose Academy** for molding the researchers' ability to conduct this study. The researchers are extremely grateful for providing assistance to the researchers in developing research skills and knowledge that will be useful in the coming school year.

An Analysis of Technology in Aiding Small Business

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ABSTRACT: The high advancement of technology in society has been widely debated most especially in the field of business. Several literature and studies, such as the study of Mgunda (2019) which explains the influence of technology on the development of businesses, argue some reviewed literature that states the disadvantages of technology. Many studies have looked at different aspects of technology, social media, and business to understand the significant role of technology in business. However, it is still unknown how social media and/or technology affect corporate performance. To develop a more refined knowledge of the aforementioned problem as well as offer possible approaches to the identified disadvantages of technology, this paper was made to address these issues with special attention to one, if not the most relevant aspect of technology, social media. Specifically, the researchers aim to combine the findings of prior studies to disclose some previously rarely focused relationships between technology and business. By clarifying the role of technology on businesses, highlighting knowledge gaps, and recommending further study by integrating the previous studies, the researchers wish to strike a limelight on fresh and deeper comprehension of the topic. In conclusion, this paper, by conducting a thorough analysis of technology and business, sheds new light on the unclear concern about the role of technology in businesses and finds out that technology has a large impact in assisting and as to why they flourish.

Key Words: technology; small business; social media; technological disadvantage; innovation

1. INTRODUCTION

1.1 Background of the Study

For as long as humanity has existed, technology is believed to have advanced in human society. Human life is full of concerns that need addressing, and the job that technology was

assigned by humanity itself was to generate new remedies to those problems that minimize effort and promote efficiency (Ford & Cena, 2021).

The Greek terms *techne* and *logos*, when simply given, are words that make up the origin of the word technology. *Techne* is the Greek word for arts, skills, and crafts, as well as the method or process by which something is acquired. On the other hand, the Greek term *logos* translates as "word," "utterance," "statement," or "expression." In short, technology means statements or conversations concerning how things are acquired (Technology, 2019).

Several studies have been conducted to evaluate how and in what ways technology may help small and local businesses. Studies have addressed the impact of technology in some small firms in a broad sense, taking the article by Brookins (2017) as an example. However, the aforementioned article was intended to be general, it, therefore, displayed a lack of personal experience in a particular, updated, and local context.

The primary goal of this research is to evaluate and demonstrate how technology may help small and local businesses. The paper provides information for business owners who want to discover how they can improve the overall performance of their firms. Moreover, the researchers wish to determine the types and aspects of technology that influence businesses. Being made aware of these factors will lead to a deeper

comprehensive understanding of how businesses, both small and big could utilize technology as an efficient tool for their operations. Finally, the researchers wish to discover possible solutions to help combat technological disadvantages to give the readers more room for innovative methods that will benefit the people and support the school's core values of excellence and integrity of creation. To achieve their objectives, the researchers have reviewed and combined the insights of several literature and studies regarding technology and how it aids businesses to further address the knowledge and possible issues of the topic.

2. ANALYSIS

2.1 Technology Aids on Business

The development of technology provided people with immense opportunities and continues to do so while innovating methods for different societal industries. Having similar assertions, Arnía (2021) stated in their article that technology had been currently and drastically changing how businesses operate in front of humankind's eyes. In addition, the use of technology has made it possible to generate new remedies to certain businesses concerns which require little-to-no effort and resulted in an immense amount of growth in both trade and commerce, as it provided both convenience and efficiency regarding performing different transactions and operations that are

most especially related to the business field (Admin, 2023; business.gov.au., 2022; Ford & Cena, 2021; Santander, 2021; Webmaster, 2021;).

Moreover, the sudden strike of COVID-19 in the Philippines has proven more than enough of technology's usefulness in the business industry. Since the pandemic's peak, over 3 million Filipinos have been unemployed. Many have experienced difficulties, which prompted them to establish their businesses while still residing in their own houses to continue living their lives at large even in the midst of the pandemic. As a result, the majority of the successful enterprises founded within the peak of the event were technology-based (Mendoza, 2021).

Technology provides businesses with the capability to instantly share content publicly, meaning that it also provides society more room for opportunities (National Film Institute, 2022). One opportunity is that the emergence of technology-based businesses expands the community of small and local businesses and that expansion has a substantial benefit for both the community and its people. As Cumberland Business (2022) said, the more small and local businesses emerge inside the community, the more it will reduce the unemployment rate by providing more work possibilities and options for individuals that need so.

This proves that many businesses, regardless of their type, flourish and become successful with the influence of technology, and can be

seen significantly in the valuable effects of businesses that utilize it (Mgunda, 2019).

2.2 Influential Technology Advancements

Technology has been realized to have the potential to influence local and small businesses as some rely greatly on a variety of advanced electronics such as laptop computers that have access to printers and applications that are web-based (Brookins, 2017). With it, even small businesses have developed and adapted innovative methods to keep up with larger enterprises and occasionally outperform some (Sutherland, 2021).

The study by Nikraftar, et al. (2022), has found that technology has a large impact on the business industry which is greatly reinforced by the factors that can affect an organization's process. These influential factors are; production techniques, information and communication resources, production, logistics, marketing, and e-marketing technologies.

Furthermore, providing business and business owners tools such as computer and software systems that can be utilized in assisting and enhancing business concerns and processes, and technological aspects such as Artificial Technology (AI) and Information Technology (IT) is especially fit for the role (Mgunda, 2019; Simplilearn, 2022).

The concept of social media has improved the capacity to instantly communicate information to others as they can easily interact with one another. Social Networks, such as the reputable Facebook and Twitter are prime examples of this; they are platforms where users may share ideas, opinions, and content with other users. The famous application called Tiktok is an example of a Media Network. This sort of social media allows users to share media assets such as photographs, videos, and many others. Review Networks, on the other hand, are social media platforms where individuals may review and rate various items or anything they can think of. Examples of this are Online Shopping apps such as Amazon, Lazada, and Shopee. Finally, Reddit and Quora are examples of Discussion Networks that allow individuals all over the world to discuss a variety of issues and communicate with one another (National Film Institute, 2022).

It has also changed how business owners operate their businesses. In a sense, because social media is so popular nowadays, it is an excellent addition for firms especially in giving advantages in advertising, promotional giveaways, and mobile applications (business.gov.au., 2022).

2.3 Technological Disadvantages

Technology has created a myriad of possibilities that were unprecedented in human history. With each having its drawbacks, technology

isn't one of an exemption. The improper use of technology's powerful influence can lead to things such as addiction, ethical dilemmas, dehumanization, breach of privacy, and even pollution. Aside from that, the use of technology may require additional resources to manage, and the risk of receiving negative feedback, information leaks, and/or being hacked are significant disadvantages. In a society where technology permeates every aspect of our everyday lives, having proper technical knowledge and proficiency is believed to be essential. This will enable one to adopt a critical and practical perspective on the currently emerging technologies. So, the only way to empower oneself and effectively use and benefit from technological advancements is through lifelong learning (Mgunda, 2019; Santander, 2021; sintellyapp, 2021).

3. CONCLUSION

Through a thorough analysis of all the prior information collected from several sources of relevant kinds of literature and related studies, the researchers have gained a much better comprehension of the relationship between technology and social media in small businesses. It has been made clear that technology does provide business assistance, regardless of its size. This paper has emphasized the significance of taking a contextual approach to understanding the growth of small and local businesses by applying technology in their systems and the key factors that contributed to

the reason for its current state. As a result, the researchers encourage businesses, particularly those that operate online, to willingly incorporate technological advancements to innovate on how to improve their present progress. Furthermore, applying technological social media platforms can demonstrate areas where firms can improve, such as their operations, marketing, processes, etc.

It is then suggested to conduct more research of this type given that technology has a broad range and many of its factors are believed to have not yet been fully investigated, especially since the researchers only focused their search on the believed most current popular sector of technology, social media. Nonetheless, the researchers believe that a lack of understanding of technology in businesses can still cause others to face its downsides as there are no solutions yet that can entirely eliminate those drawbacks.

4. ACKNOWLEDGEMENTS

The researchers sincerely express their respect to their Practical Research adviser, **Ms. Frances Erica D. Valencia**, for her extremely prolonged patience in supervising and consulting her students' research papers to guide each with ideal outputs.

Extending their acknowledgment toward their **family**, the researchers would like to express their gratitude for the pieces of advice

that they conveyed that made it possible for the researchers to finalize the paper.

The researchers would also like to thank their **beloved friends**, for their unwavering support and encouragement throughout the process of their research.

The researchers also appreciate **God's** grace, for giving the researchers strength and knowledge. Without Him, all of this wouldn't be possible.

Lastly, the researchers would like to thank their school, **San Jose Academy**, for giving the students an immense opportunity to use a platform like this to demonstrate their exemplary capabilities.

A Comparative Study of the Effects of Covid-19 to Small Businesses
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Abstract: Many important changes have been brought about by the COVID-19 Pandemic, which has also changed the lives of numerous people. Every community needs small businesses, and the COVID-19 Pandemic has changed both the global economy and how people live. Several studies have examined various facets of COVID-19, social media, and small businesses to help us comprehend how the changes brought about by COVID-19 have affected all owners of small businesses and what their effects may be. The exact mechanism by which COVID-19 transforms every little business into what it is today is still a question. This study's main objective is to examine the factors that made significant changes to small businesses, To know the current state of small businesses today, and to know the actions and strategies of small business owners to control these changes. This paper is made to offer thoughtful analysis and recommendations that can help small businesses carry on while the pandemic is happening and grow stronger and more resilient as a result. Due to this, researchers undertake a document analysis that gives readers a thorough understanding of the impact of COVID-19 on small enterprises before and after it was implemented.

Keywords: Small business; Covid-19; changes; state; strategies

1. INTRODUCTION

The COVID-19 Pandemic has made many significant changes in our world and altered many people's lives. COVID-19 Pandemic is a highly transmittable disease and has spread throughout our country. To control the spread of Covid-19, the Government imposed Enhanced Community Quarantine (ECQ) followed by multiple stages which greatly affected not just small businesses but the whole economy. Businesses are highly affected by these events and highly impacted the economy.

Small businesses drive the economy. According to the Asian Development Bank (ADB, 2020), they accounted for 99.5% of all enterprises and employed 63.2% of the labor force as of the end of 2018. Small Businesses are crucial in every community and the changes made by COVID-19 Pandemic have affected the whole economy of the world; how people live. The economy began to suffer during the lockdown, a significant reduction in global trade, national production, and home and foreign demand and customer assurance. It indicated finance restrictions for firms in addition to the beginning of a massive economic loss (ADB, 2020).

The effects of the COVID-19 Pandemic on small businesses have been widely investigated not just by the government but also by other researchers outside the country. However, most of the studies made their research from 2019-2021 which means that they only studied business owners' experiences throughout the pandemic. This study sought to fill this gap by creating a comparative study of the impact of the Covid-19 Pandemic on small business owners before, throughout, and after the COVID-19 Pandemic.

The primary goal of this research is to investigate the challenges and obstacles that small businesses faced during the pandemic. The goal is to provide insightful analysis and suggestions that can assist small businesses in continuing to operate while the epidemic is occurring and becoming stronger and more resilient as a result. To achieve the primary goal, the following research objectives were given:

1. To know the factors from the Covid-19 pandemic that made significant changes to small businesses
2. To know the current state of small businesses today
3. To know the actions and strategies of small business owners to control these changes

This study has made significant contributions to our understanding of how pandemics alter each business owner's way of living and the

differences between operating a firm in a pandemic circumstance and in a typical one. The COVID-19 pandemic's long-term effects go far beyond overburdened hospitals and broad travel restrictions, same as in the business enterprise. Small business owners in the Philippines still struggle mightily to keep their doors open, and those who are situated in rural areas struggle even more. The purpose of this research is to give employers information about how the crisis is currently affecting the financial markets. These results will be useful to

companies trying to better help their staff during the ensuing crisis phase. It is important to keep in mind that the pandemic's short- and long-term effects won't always follow the same trends as before, and further investigation into the COVID-19 crisis' effects will be necessary to guide businesses' ongoing response and strategic business planning. Additionally, this study seeks to provide advice on how business owners might mitigate the pandemic effect through the deployment of their own initiatives.

This study will mainly focus on how the pandemic affected small business owners. This research study is to know how the pandemic affected our lives, our economy, and of course, small businesses. Big enterprises such as corporations will be excluded from the study. Small businesses all

around the globe are the scope of the said study.

2. ANALYSIS

2.1. Small Businesses

According to the American Society for Quality (ASQ), any privately held company, partnership, or sole proprietorship that has fewer employees and lower yearly income than a corporation or a regular-sized business is considered to be a small business. Also, by legal definition, small enterprises are privately owned entities operated by a small number of individuals with a relatively modest volume of sales. It consists of small convenience stores known as the sari-sari store, bakeries, salons, dressmakers, food carts, etc. (In The Philippines). Moreover, according to the American Society for Quality (ASQ), small organizations may encounter distinct obstacles while implementing the same quality management systems as giant corporations, yet they may frequently do so. For instance, small businesses tend to have fewer human resources and less up-front funding to spend on quality projects. Top management commitment and accessibility, however, can be stronger in a smaller organization, and internal communications can be more straightforward. Small business closures were anticipated to rise sharply before the pandemic due to pent-up demand and an aging population of business owners.

When information asymmetries grew, limiting the small business owner's selling alternatives, COVID-19 may have lowered such expectations. Delaying a sale may not be an option for SBOs because they can leave for a variety of reasons, including illness, family obligations, and retirement.

SBOs can also reduce crisis uncertainty by agreeing to different deal terms (Krukowski K.A., DeTienne D.R., 2021).

2.2. Changes in Small Businesses

Small business owners have had it tough, not just in the Philippines, but throughout the country, because first, no one can leave their jobs, and second, all businesses are closed. As a result, it might be difficult for small business owners to access their savings or add funds to their businesses (Bartik, et. al, 2020).

According to Salonga, J. of SPPI (2022, September 29), those who worked in positions deemed to be in "non-essential sectors" are now feeling the effects of the new normal negatively. Micro, small, and medium-sized firms (MSMEs) in the Philippines are suffering the most financially from the current economic crisis although large conglomerates may survive.

Moreover, businesses' ability to maintain their operations while also striving to support their workers is

put to the test by the absence of consumer demand.

In another study from Mehrotra et. al. (June 2020), due to the effects of COVID-19, businesses have been compelled to cut back on operating hours or close due to local regulations. Based on the data they have collected, the Government only permitted classified enterprises as "essential services" to operate during the data collection period.

The other businesses were all closed. As a result, 74% of the companies in their sample were available, while the other 26% were closed. The income of MSMEs has been affected by shortened operation hours and decreased consumer traffic. It is also stated in the study that during the community quarantine, the administration strictly enforced curfew hours (8 p.m. to 5 a.m.), which led to a significant loss of customers for their business. (Mehrotra et al, n.d)

Lastly, a survey performed by Bartik et. al. (2020) on over 5,800 small firms, resulted in the following; several significant themes emerged. First and foremost, massive layoffs and closures have already occurred.

Based on their survey, 43 percent (43%) of enterprises are temporarily closed, and businesses have cut employee counts by 40 percent (40%) on average since January 2020.

2.3. Coping Strategies and Actions

Owners immediately adapted and developed creative operating model modifications in order to survive. Several small businesses have so far failed.

Although it is uncertain how this would affect the nation's millions of workers, some who survived the pandemic aim to use the innovations they accepted to raise sales and offer new chances once the economy recovers. (Gurchiek, K., 2020, September 19)

Based on the study of Gurchiek, K., (2020, September 19), the small business, Moriarty's Gem Art innovation to cope with the pandemic meant producing a live-streamed gem display. The business promoted live streams on its website, through emails, and through social media.

The two-hour program, which airs every other Wednesday, currently has a viewership of more than 1,000. Moriarty Gem Art made \$12,000 from its July 8 exhibition thanks to live streaming, which Jeff Moriarty claims has also helped the business stay in touch with its clients.

One of the strategic plans of the United Nations (03 August 2021) in their study is using value chain financing to reduce risk and release micro, small, and medium-sized

businesses from the cycle of resource constraints. The development of MSMEs firms in emerging markets and developing nations is hampered by this shortage of capital. Governments must concentrate on utilizing their resources as effectively as possible in order to support small enterprises in growing.

It became essential to adopt a number of technologies that small businesses did not see as being essential in order to keep the economy from completely shutting down (Ting et al., 2020). Several firms of all sizes have since used technologies such as Zoom virtual meetings and other approaches (Ting et al., 2020; Webster, 2020). These technologies became one of the survival strategies used by different levels of government during the lockdown of communities in order to contain the spread of the COVID-19 pandemic and enable remote management of operations and projects (Vaccaro et al., 2020), or conduct business meetings without physical contact among employees (Puddister & Small, 2020; Vaccaro et al., 2020).

Additionally, in the study of Francisco, J. P., et. al. (December 6, 2022), features can identify some common if you're new in business, which can be an excellent opportunity to recognize your new market. Social media is a great help when you're running your own business,

and it helps to promote your product, especially during this pandemic. Many people use this to make their business more noticeable. Supporting this with the study of Salonga, J. of SPPI (September 29, 2022), according to the researchers, few MSMEs provide online and delivery services in an effort to keep up with the algorithm of today's expectations. But in order to meet their financial demands, fewer staff are necessary.

Support from the government has also been a great help for small businesses. An online article by PricewaterhouseCoopers entitled "Startups and the business impact of COVID-19" aimed at entrepreneurs, startup founders, investors, and business leaders in the Philippines in May 2020. The Bayanihan to Heal as One Act includes a PHP 1 billion Enterprise Rehabilitation Financing (ERF) facility under the Small Business Corp. of the Department of Trade and Industry. Micro-enterprises with assets up to PHP 3 million can borrow up to PHP 200,000, while small enterprises with assets from PHP 3 million to PHP 10 million can borrow up to PHP 500,000, with an interest rate of 0.5% per month or 6.0% per annum.

Another help from the Philippine Government called the "Pangkabuhayan sa Pagbangon at Ginawa" Program happened just last January 21, 2023 (Manila Public Information Office, 2023). Where 100

selected micro to small business owners who were affected by the pandemic received support through the aforementioned initiative run by the Department of Commerce and Industry. 10,000 pesos will be given to each beneficiary, which they can use as additional capital for their business. Assistance will be provided for any potential benefits. Then the government assists them in regaining market presence and establishing their own businesses.

Also, aid from the Department of Trade and Industry (DTI) has continued to roll (Crismundo K., February 17, 2021). This stated that the Department of Trade and Industry (DTI) is constantly working out measures that will aid the micro, small and medium enterprises (MSMEs) survive and develop the coronavirus disease 2019 (COVID-19) pandemic. The Department of Trade and Industry (DTI) collaborates with the Bank of the Philippine Island (BPI) to offer workshops and programs for business owners along with access to working capital loans as well as financial service. Also, the Department of Trade and Industry (DTI) office in the Davao Region aims to support current and prospective MSMEs in their entrepreneurial journey as they will produce more graduates from the Kapatid Mentor ME program (Crismundo, 2021).

3. CONCLUSION

Researchers, therefore, conclude that Covid-19 has made a huge change in small businesses; Due to municipal rules and due to controlling of the Covid-19 spread. Also, some businesspeople devised a method for generating extra revenue in the midst of the pandemic; the use of technology and social media. Help from institutions has also been a great support for small business owners.

Research is essential but has limitations. Limited access to primary data led us to rely solely on secondary data. Additionally, the study only focuses on small businesses and does not take into account the position of major firms, nor the impact of COVID-19 on them.

Based on the limitations, the following recommendations are suggested: By comparing data from different geographic areas, countries, and historical eras, researchers can better understand the phenomenon and identify areas for improvement.

Researchers can find a similar study about how other factors affect both small businesses and enormous corporations because Covid-19 was just a recent occurrence.

4. ACKNOWLEDGEMENTS

Individuals who provided direction and support to the Researchers as they carried out this study helped

make it effective. Researchers are extremely grateful to the following people for helping them extend their viewpoints throughout this investigation:

The researchers would like to acknowledge and give their warmest thanks to their research advisor, Ms. Frances Valencia who made this work possible. Her guidance and advice carried the research through all the stages of writing this study. The researchers would like to thank her for her patience, motivation, enthusiasm, and immense knowledge.

The researchers would also like to express their sincere gratitude to San Jose Academy because of its development agenda, strategic focus on research innovation, and for accelerating student research skill development.

Behind Successful Business Owners: An Analysis of Lived Experience of Small Business Owners

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Abstract: This literature review aims to explore the lived experiences of successful small business owners, with a focus on identifying the factors that contributed to their success. Small businesses play a vital role in the economy, providing employment opportunities, contributing to local communities, and driving innovation and growth. Despite the extensive research on small business owners, there is still a research gap in understanding the lived experiences of successful small business owners. Most studies focus on the challenges and barriers faced by small business owners, rather than examining the experiences that lead to their success.

Key Words: Innovation, Small Business, Challenges, Success, Growth

1. INTRODUCTION

1.1 Background of the study

A small business is one that is independently operated and owned and has a small number of employees and a low volume of sales. The precise definition of a small business varies depending on the industry and country, but it is generally defined as a company with fewer than 500 employees and annual revenue of less than a certain threshold, such as (\$10 million or \$25 million.) Small businesses are frequently regarded as the economic backbone, contributing to job creation, innovation, and economic growth. (Kenton, W. 2022) Entrepreneurs or individuals with a particular skill or passion for a product or service who want to turn it into a viable business often start small businesses. They could also be family-run businesses or

franchises. Entrepreneurship is viewed as a crucial component in economic development, bringing significant progress to every country in the world (Pesotsky et al., 2021). People could really make a good living by generating and providing products and services that meet the requirements and desires of the purchasing public. With the increasing importance of small businesses in the industry, the government is supporting the incorporation of entrepreneurship training in basic and higher academic programs, with the objective of expanding the entrepreneurial thinking of the youth. (De Carolis & Litzky, 2019).

According to researchers, in today's marketplace, small business owners are facing a variety of challenges that contribute to its tendency to fail easily. The availability of capital is one of the most significant challenges. Numerous

small businesses do not have the assets to obtain loans from financial institutions, making it difficult to fund expansion or expand production. Furthermore, most business owners may struggle to keep up with bigger companies that have greater brand recognition and marketing budgets. Another issue that small businesses confront is staying in compliance with federal laws. Compliance with government regulations can be costly for small-business owners, and a failure to adhere can result in heavy fines or even closure. As a result of working with larger organizations, some smaller companies collapse. Small businesses are unable to grow as quickly as major corporations due to the greater quality of their products. Small Business owners struggles more significantly as they have been impacted by the COVID-19 pandemic and in addition to that the pandemic has caused significant disruptions in supply chains and has led to reduced consumer demand, which has had a negative impact on the revenue and profitability of small businesses. Many small businesses have been forced to shut down temporarily or permanently, resulting in job losses and economic instability. The COVID-19 pandemic has added an additional layer of challenges for small business owners, further exacerbating pre-existing difficulties in accessing capital and competing with larger corporations. With the predicaments of small businesses being identified, the research sought the need to develop solutions that could aid businesses overcome the challenges they face.

The primary goal of this research is to examine the challenges and barriers

that small businesses face and to propose solutions to these problems. The focus of this study is to help small business owners achieve success and improve their performance even after they have overcome these challenges. As a result, the following goals have been established for the research:

- Determine and evaluate the lived experiences of successful small businesses
- Identify the factors that has contributed to their success.
- To provide insights and recommendations for aspiring small business owners and policy-makers on how to support the growth and development of small businesses.

To achieve this aim, the researchers plan to consult a range of literature, including academic research, case studies, and practice guidelines from industry experts.

This study has made significant contributions in analyzing the lived experience of successful small business owners and provides valuable insights into the factors and strategies that contribute to their success. This can serve as a guide for aspiring entrepreneurs and advisers in the industry, as well as contribute to the body of knowledge on small-business ownership and management in academic circles. Understanding the challenges, opportunities, and best practices of small business ownership can also inform policies and support for economic development and small

business growth. Ultimately, our research can provide practical and actionable recommendations for small business owners to improve their chances of success in a competitive market.

2. ANALYSIS

2.1

Small Business and Covid-19

According to American Society for Quality (2023) a small business is a type of enterprise that is privately owned, whether it is in the form of a corporation, partnership, or sole proprietorship. It generally has a lower number of employees and generates less annual revenue compared to larger corporations or regular-sized businesses. Commonly, small businesses are consist of small stores or also known as convenience store like sari-sari store, Food trucks, mobile food stands, bakeries or coffee shops, Home-based catering, Online shops selling handmade crafts or products, etc. (in the Philippines) Long (n.d.) stated that small business functions cohere to support the achievement of both short- and long-term objectives. Accounting, production, and marketing are a few typical business operations. Pricing strategies are created by marketing, and customer feedback is gathered. Production works to make sure that goods are distributed effectively and in accordance with corporate standards. Accounting creates financial statements and manages the budget. Other duties include those connected to research and development and human resources. Brown (2018) further stated that small businesses are an important engine for economic growth, job creation, innovation, and

community development. They contribute to the diversity and resilience of economies and play a vital role in building and supporting local communities.

However, based on the study of the COVID-19 pandemic has disrupted the normal functioning of small businesses, making it more difficult for them to achieve their short- and long-term objectives. The pandemic has caused widespread economic disruption, leading to reduced consumer demand, disrupted supply chains, and financial uncertainty. These factors have made it difficult for small businesses to maintain their operations and stay afloat. The pandemic has also forced small businesses to adapt to new ways of working, such as remote work and online sales, which may be challenging for those without the necessary infrastructure or resources. Furthermore, small businesses that rely on in-person interactions, such as restaurants and retail stores, have been hit particularly hard by lockdowns and social distancing measures. Despite these challenges, small businesses have shown remarkable resilience during the pandemic, with many adapting quickly to the new reality and finding innovative ways to stay afloat. Governments and communities have also provided provided support to small businesses through grants, loans, and other forms of assistance.

Holt (2021) emphasizes the importance of passion, patience, and perseverance for entrepreneurs to succeed in their businesses. A sense of purpose is often at the heart of successful businesses, and entrepreneurs who are passionate about

their work are more motivated, creative, and dedicated to achieving their goals. Patience is required for entrepreneurs to invest time and energy in building a successful business, and it also assists them in remaining calm and focused during difficult times. Entrepreneurs must persevere in order to overcome obstacles and learn from their mistakes in order to improve their businesses. Overall, these characteristics are critical for entrepreneurs to maintain motivation, focus, and resilience on their path to success.

Small business owners who are successful are frequently capable of adapting their business strategies and operations in response to changing market conditions and customer needs. According to Kevin McLeod's "A Complete Guide to Managing Small Business Finances," the article includes key financial concepts like budgeting, accounting, cash flow management, and taxes, as well as practical advice on how to create a budget, track expenses, manage debt, and keep accurate financial records. For small business owners to make informed decisions about their operations, McLeod emphasizes the importance of forecasting and financial planning. The manual also includes advice on how to improve cash flow, manage inventory, and cut costs. The guide concludes with advice on how to assess financial performance and plan for future growth.

According to Gupta (2023), Building a Customer-Focused Culture emphasizes the importance of customer

focus in creating a successful business culture. The guide offers practical advice on how to create a customer-focused culture by identifying customer needs and expectations, building a customer-centric team, and developing a customer-centric strategy.

(Hamman 2023) emphasizes the ongoing significance of networking for small businesses in the modern era. The article discusses the advantages of networking, such as the ability to build relationships, generate leads, and obtain referrals. It emphasizes the value of face-to-face networking events and the advantages of developing relationships with other industry professionals. The article also includes networking tips such as being prepared, authentic, and following up after meetings. Hamman discusses the importance of technology in networking and the advantages of using social media platforms and online networking tools. The article concludes by emphasizing the importance of small businesses prioritizing networking because it can lead to increased business opportunities and growth.

2.2

Factors of Success and Failures

According to PRAJAWATI, M.I.W.A.H.J.O.E.D.I. (2020) in business, success generally refers to achieving one's goals and objectives, such as increasing profits, expanding market share, or developing a strong

brand reputation. Meeting customer needs, providing high-quality products or services, and retaining a loyal customer base can all contribute to success. Financial metrics, such as revenue, profit margins, and return on investment, are frequently used to measure business success.

Failure in business, on the other hand, refers to not attaining the intended results or goals. Failure can manifest itself in a variety of ways, including failing to meet financial targets, losing customers, or failing to adapt to changing market conditions. Poor management decisions, insufficient resources, or ineffective strategies can all lead to failure. Failure can have serious consequences, such as bankruptcy, loss of investment, or reputational damage. Failure, on the other hand, can provide opportunities for learning and growth and can be an essential part of the entrepreneurial journey. (Up Counsel 2018)

This paper discusses several factors that contribute to the success of small businesses. Effective leadership is emphasized as a crucial aspect of setting the tone for the organization and motivating employees. In today's competitive marketplace, understanding the market and creating innovative products or services are identified as key drivers of success. Additionally, effective financial management is essential for ensuring that the company has sufficient

resources to operate and grow, including managing cash flow, controlling costs, and obtaining capital when necessary. Furthermore, businesses need to prioritize their customers by providing high-quality products or services, excellent customer service, and maintaining a strong reputation. On the other hand, small businesses may fail due to inadequate planning, poor financial management, a lack of customer focus, or ineffective marketing. Sources such as Investopedia, Forbes, SCORE, and The Balance Small Business support these insights.

According to Long (444) there are five factors that contribute to the success of a business, including having a clear vision and mission, effective leadership, a strong team, a focus on customer satisfaction, and a willingness to adapt and innovate. The author emphasizes the importance of setting specific, measurable goals and regularly evaluating progress, as well as the need for a positive and supportive company culture. Additionally, the article highlights the importance of staying up-to-date with industry trends and using technology to streamline operations and improve efficiency.

This article of London and Zurich "Five Common Causes of Business Failure" outlines five common causes of business failure, including poor cash flow management, insufficient market research, ineffective marketing strategies, lack of customer focus, and

poor leadership. The article emphasizes the importance of proactive management and taking steps to address potential issues before they become major problems.

In conclusion, Learning and growth can arise from failure. Success in business is achieved by meeting goals and objectives such as increasing profits, expanding market share, and developing a strong brand reputation, among others. Failure in business refers to not achieving intended results and can result from poor management decisions, insufficient resources, or ineffective strategies. Effective leadership, innovation, customer focus, and financial management are crucial to the success of small businesses, while inadequate planning, poor financial management, lack of customer focus, or ineffective marketing can lead to failure.

3. CONCLUSIONS

The researchers' findings show that despite the difficulties, small businesses have the potential to overcome challenges and thrive despite the obstacles they face. The preceding studies focused on factors influencing small business success, survival, and growth, with a particular emphasis on innovation and entrepreneurial alertness. This study will only focus on small businesses and will exclude medium and large enterprises. This study will only examine the period before and during the pandemic. The study emphasizes the importance of innovation for small business success

and provides recommendations for encouraging innovation and preventing potential risks in order to avoid failure. The study's conclusion emphasizes the importance of outside assistance in enhancing small business owners' ability to survive in times of crisis. The studies provide valuable insights for small business owners, policymakers, and researchers interested in promoting small business development and economic growth.

In light of these limitations, the following recommendations are suggested: Provide more training and education: Small business owners and employees often lack the training and education necessary to succeed in their industry. More resources should be devoted in providing training and education programs for small businesses. Future researchers may explore a comparable subject matter to this study, but with a focus on different types of businesses or a distinct time frame, such as the post-pandemic era.

4. ACKNOWLEDGMENTS

The researchers would like to express their sincere gratitude to all those who have contributed to the success of this research. First and foremost, the researchers are thankful to the participants who took the time to share their experiences and insights with us, without whom this study would not have been possible.

The researchers would like to thank their **family and friends** for their

patience, understanding, and encouragement throughout this journey. Their unwavering support gave the researchers strength and motivation to pursue their research goals.

In addition, the researchers also extend their appreciation to their research advisor, **Ms. Frances Valencia**

who provided guidance, feedback, and support throughout the research process.

Lastly, the researchers would also like to thank their school, **San Jose Academy** for giving us this opportunity to improve their capabilities in conducting this research.

Lived Experiences of Street Vendors During and After Lockdown

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Abstract: The objective of this study is to know the lived experiences of the Street Vendors during and after the lockdown to the new normal. The COVID-19 pandemic has had a major impact on businesses worldwide, among these sectors street sellers are the most affected. To stop the virus from spreading and overtaxing healthcare systems, cities have instituted strict lockdown protocols. Such as social distancing and avoiding close contact in public places. This has caused vendors in Metro Manila and other countries to shut down their businesses, resulting in lower income. Research has revealed that the pandemic has reduced the revenues of street vendors, and they are often forbidden from operating due to social exclusion. Street vendors are a highly vulnerable population, especially those sellers with lack of coping strategies to adapt to the changes, as they are the primary breadwinners in their homes. They face work interruptions, income reductions, and debt, and have limited access to government programs. They can no longer complete two meals a day and are obligated to skip a meal, so they are forced to go back to selling outside, putting their health at risk. They have adopted different strategies to face the pandemic, such as staying at home temporarily and selling homemade products online in social media but selling outside is preferably caused by gaining more income. However, they are limited by selling a particular weight to control people's capacity and avoid close contact and they face difficulties such as walking, riding, and carrying food products. The income of street vendors has decreased after crisis, from their original income before the crisis leading to having only earned half of their past income.

Key Words: street vendors; pandemic; lockdown; protocols;

1. INTRODUCTION

The two billion informal laborers around the world are in a state of chaos as a result of lockdowns being

implemented, and street sellers, whose livelihoods depend on being in public spaces, have been particularly hard hit. Street vendors here in the Philippines

now continue to sell street foods around areas where people came from. As they proceed to the new normal, many have changed as they proceed to adopt COVID-19 preventive behaviors. They have developed new strategies to adapt to the new system of the new normal. Laws and regulations of COVID-19 may affect the changes of informal vendors that involve their social interaction. These factors made street vendors' routines change unlikely before the pandemic compared to the practices they're doing after the lockdown.

In many cases, the lockdown has affected a lot of businesses in the world, including street vendors. Due to the health protocols implemented, they have changed how they sell foods that would affect their income. They have limited movement as the number of people going outside decreases due to the lockdown. As their customer decreases the lower their income. Other street vendors tend to stop selling on the street and struggle to have a source of income. As the economic crisis occurs the government responds to the issues as it negatively impacts street vendors (Martínez, L., & Young, G. 2022). Also, many street vendors have struggled to adapt quickly to the new system of the pandemic as they lack skills and coping strategies.

In Southeast Asian countries, there are urban areas that consider selling street foods as their main source of income (WIEGO 2012). Covid-19 has affected the lives of street vendors and how they sustained their businesses to provide their essential consumption due to social distancing (Thanh & Duong, 2022). And the government generally prioritizes health protocol practices amid the pandemic. In other countries,

they have decreased their sales from kilos to a minimum amount due to the limitation of customers. In some cases, the majority has ignored the protocols to gain income for them to survive (WIEGO 2021).

There are a lot of studies internationally including changes in the way street vendors sell their foods. But also explains that there are countries that continue the way they sell before the pandemic (Thanh 2022) Knowing that areas aren't experiencing extreme lockdowns during the pandemic. Major countries tend to experience heavy lockdowns and the changes among street vendors are still unknown, especially in our local studies amidst them. Not knowing what alternative they can do in the crisis of the pandemic. Leading them to not sustain their family as selling on the street is their source of income.

Locally, street vendors are essential to many people or tourists as they go to public places. This study shows the strategies, struggles, and changes among street vendors as they proceed to lockdowns and into the new normal. Understanding different crises among demands, supplies, and destruction of vending sites due to many restrictions. There is still a need to know especially on every side of their situation during the lockdown and there is still a need to address how street vendors will continue and cope with the new strategies to continue their source of income.

2. ANALYSIS

Before the lockdown, it was easy for them to sell their goods because safety

protocols were not focused on. A major impact of the COVID-19 pandemic has been felt by businesses worldwide, particularly street sellers. They have modified how they sell foods and are limited in their movement as a result of the health rules put in place. The difficulties have prompted the government to act because street vendors, who lack strategies to cope, are badly affected. Due to consumer restrictions, sellers in several countries have reduced their sales from kilograms to a minimum amount. To stop the virus from spreading and overtaking healthcare systems, cities have instituted strict lockdown protocols.

Due to the COVID lockdown, vendors in Metro Manila suffered significantly since only a limited number of people were allowed to go outside and vendors were cut off from business prospects. They were compelled to shut down their businesses, which resulted in revenue losses and higher liabilities. They also had to deal with debt, lost income, and work interruptions. Research has revealed that the pandemic has reduced the revenues of street vendors and that they are frequently forbidden from operating because of social exclusion. This has left them unable to meet their basic needs, such as eating two meals a day. They also face work interruptions, income reductions, and debt. Additionally, they have limited access to government programs that can act as a social safety net and address structural inequality issues. Previous research has

revealed three patterns. Street vendors are a highly vulnerable population, have lower educational levels, and are the primary breadwinners in their homes.

Street vendors have adopted different strategies to face the pandemic and its protocols, such as staying at home temporarily and selling homemade products online via Facebook. Street vendors in Manila are struggling to adapt to the COVID-19 rules and sanitary requirements, such as wearing facemasks, proper sanitation, and self-hygiene. They are limited by selling a particular weight to control people's capacity and face difficulties such as walking, riding, and carrying food products. Others cannot easily adopt new strategies of the pandemic, forcing them to go back to their old routines. Considering putting themselves at risk just to earn money. It is also shown that the income of street vendors has decreased after the crisis occur, in the situation of people in Bacolod before the pandemic ranged from 2000 to ₱2000, but after the lockdown they only earned almost half of their past income, affecting their budget.

The COVID-19 Pandemic as a Global Crisis Around the World

Cities all over the world have implemented strict lockdown procedures since the World Health Organization declared the COVID-19 illness to be a pandemic in March 2020 (WHO, 2020). This is done in order to avoid the virus

that is causing it from spreading and overwhelming healthcare systems. As a result of the local and global economic crisis, additional challenges appeared, including the need to earn an income and provide people under lockdown with necessities while maintaining personal hygiene and keeping "social distance," or avoiding close contact with other people in public places.

Street Vendors in a Vulnerable State as Proceeding to Lockdown

As documented in a study by (Thang, P.T et.al 2022) street vending is one of the representations of strategies for survival and a source of employment for income in poor, uneducated, low-skilled, and immigrant individuals. They are making it recognized as self-employment in response to the economic crisis.

In the situation of Metro Manila covid lockdown affected the vendors greatly. With limited people going outside they're not paying attention to the food by vendors (Leyesa and Obanil (2021). Some vendors are even forced to stay at home because they don't have the proper requirements to operate in such a state. When the nationwide lockdown happened to prevent the deadly viruses spread in the Philippines. Many vendors were the first to be cut off from the economic opportunities. They suffered heavy blows because the economy of our country at that time we're slow. Metro Manila Vendors Association (MMVA)'s "The street vendors and their families

went hungry." As they battled to fulfill their basic necessities, many street vendors were forced to close their enterprises, endangering their capacity to maintain their financial stability and resulting in income losses that increased their liabilities. It goes without saying that their families cannot meet their basic needs with their current salary. Unlike before, they can no longer afford to eat two meals a day. With the money they make working as day laborers, food is not being managed properly. The majority of them are consequently obliged to skip a meal. The issue with Covid-19 has left the street vendors down. We learned that some of the merchants, along with other family members, are ill. Together with difficulties with their children's educational access, street vendors also encountered work interruptions, income reductions, and debt (Ullah, 2021). Moreover, street vendors report having limited access to government programs that can act as a social safety net, protecting them from the pandemic's consequences while also addressing persistent structural inequality issues (Martinez and Young, 2022).

Past research has looked at how COVID-19 social exclusion affected street vendors' livelihoods and how they managed to maintain their operations while still providing for their basic needs (e.g., housing and food) (Coletto et.al.,2021). Numerous COVID-19-related laws and regulations had a severe negative impact on informal vendors. (WIEGO 2022). Studies also

showed that the earnings of street vendors have decreased due to the pandemic and indicates among formal and informal sectors street vendors were most affected by the crisis due to not receiving a fixed salary and tending street vendors not stopping working (Romero-Michel et al., 2021). The research reveals that COVID-19 protocols including social distancing have significantly affected street vendors around 56% have reported that they are seriously affected by the COVID-19 crisis. Street vendors are often not allowed to operate due to social distancing (Thang, P.T et.al 2022).

Street Vendors Coping with the Global Pandemic Crisis

The study shows that as the government generally focuses on the pandemic's protocols, street vendors are more conflicted about their source of income as consuming daily foods every day (Maniktala, N., & Jain, T., 2021). Their sales went down as quarantine occurred. The majority of these vendors don't have enough savings to sustain their needs temporarily practically. Seeing the risk of the COVID-19 pandemic street vendors, they are forced to go back to their old routines, just to earn bread by putting their health at risk.

In the neighborhoods of Manila, street vendors resumed their operations after the first two weeks of the community quarantine, from 15 March to 14 April 2020, when police enforcement had mostly relaxed. During the lockdown,

many street vendors violently policed the urban poor who violated curfew and restrictions to conduct their livelihood (ABC, 2020; Aljazeera, 2020). By 7 AM, there were vendors roaming the streets. They would be transformed into a field hospital for COVID-19 victims by April 2020. On large wooden pushcarts, all the vendors were selling food, primarily fresh fruits, and vegetables (Recio, R. et.,al 2022).

In a study of Colleta D. et al., (2021), in some street vendors in La Parada adopted different strategies facing the pandemic and its protocols, some of them choose to stay at home temporarily and sell homemade products online via Facebook. Life quality while at home is preferred but compared to selling on the streets the income they gain is less than what they sell outside. Some of them followed the COVID-19 rules early pandemic, however as time went by, they are forced to go back to selling on the street. Others continued street vending adapting new routines and sanitary requirements following social distancing and wearing facemasks. They are also limited by selling a particular weight to control people's capacity as it is only maximized to follow the protocols. But some street vendors are struggling to adapt to these practices and proceed to go back to their old practices before the pandemic (Thanh, P. T et.,al 2022).

In the article of Fenix (2021) after releasing the lockdown vendors proceed back on selling street foods, but effects of the pandemic crisis are still evident to street vendors in Manila. Requiring

facemasks is one of the struggles encountered by street vendors caused by the still ongoing risk of COVID-19. Vendors still face difficulties such as walking, riding, and carrying food products, plus adapting to the safety measures of COVID-19 making them implement new routines, such as wearing facemasks, proper sanitation, and self-hygiene for the vendors. In the article (Eyes of Bacolod Street vendors tell pandemic Struggle.,2021) the situation of people in Bacolod before the pandemic, their income ranged to ₱2000. After the crisis occurred and going back to selling on the street they only earned almost half of their past income, affecting their budget for their daily needs.

3. CONCLUSIONS

As the result of the researchers' thorough study regarding the lived experiences of the Informal Sector Workers or the Street Vendors during and after the lockdown, the researchers have found out that the quarantine affected a lot of businesses in the world, including the street vendors. Prior to the pandemic, it was simple and effortless for them to sell their products because there were no health protocols. And as the government have limited movement of the number of people going outside, the income of the street vendors also decreases due to lockdown. Furthermore, they have experienced work interruptions, income reductions, and debt problems. Street vendors' livelihood and ability to provide for their daily basic needs were affected by

COVID-19 social exclusion. This just shows how COVID-19 pandemic has negatively impacted Informal Sector Workers. The forced shutdown of many street vendors' businesses put their ability to maintain their financial stability in jeopardy and led to income losses that raised their liabilities. Moreover, COVID-19 street vendors' routine changed during lockdown as they had to cease selling on the street due to protocols. Now in a new normal, street vendors are slowly adjusting and recovering. In response to the pandemic and its protocols, street vendors have adopted a variety of strategies. Several of them chose to sell homemade products online via Facebook. This strategy still applies to this day, and now even a lot of sellers sell their products online.

Recommendation

As stated in the results of the analysis, in conducting experiences of street vendors during and after lockdown future researchers may conduct research more focused on the local studies of street vendors' situations to further focus on more struggles of street vendors besides of pandemic. The researchers may also focus on how practices adopted by street vendors affect customers in terms of satisfaction to buy their products. Research focused on the side of customers will be a good study for future research.

4. ACKNOWLEDGMENTS

The researchers sincerely express their sincere sense of gratitude to **Ms. Frances Erica Valencia**, the English

Coordinator of San Jose Academy, and the researchers term paper advisor, for her continuous support, patience, motivation, enthusiasm, and immense knowledge, and supervision in this paper.

The researchers would also like to thank **Ms. Melanie A. Signa**, an alumna of San Jose Academy and a current Architecture Student at Mapua University, for her valuable suggestions, constructive discussions, and useful comments. This term paper is the result of her painstaking and generous attitude throughout this research work.

The researchers would like to take this opportunity to record their sincere gratitude to all their **family members** who extended their help, and their support towards the fruitful and timely completion of this term paper.

And last but not the least, the researchers would like to thank **San Jose Academy** for its research agenda and strategic thrust on research innovation, and for intensifying the development of the research skills among the students.

Analysis of Business Skills and their Significance to Business Success

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Abstract: There are some factors that need to be considered when someone is preparing to start or improve their business. Some of the entrepreneurship studies have focused on only one or some certain skills per research, and there are only limited numbers of recent researches that are related to this topic. Some recent studies that were analyzed have different foci, but they all have one thing in common: the different skills and their connections or effects that lead to business success. This study attempted to identify different business skills, the importance of knowing these skills, and how they can contribute to business success, which is about generating greater profits and achieving numerous goals. Moreover, this paper also aimed to identify the different things needed to acquire and improve these skills, and some factors that can bring a business down. In order to address these objectives, the researchers used a qualitative research method. Through analyzing research and literature that are related to this topic, it was found out that various business skills such as financial management, marketing, and so on are one of the major contributors to achieve success in the business world, and this can be obtained through education and training. On the other hand, in the business industry, it is impossible to achieve success without facing problems throughout the process. It is suggested that, alongside having insights about business skills, it is also crucial to identify factors that hinder one's business success in order to find a way to solve this and build a more solid business foundation.

Key Words: business skills; success; entrepreneurship; business failure; entrepreneurial learning

1. INTRODUCTION

1.1 Background of the Study

Business skills are a set of all necessary skills that enable entrepreneurs to achieve success in the business world. The most common business skills are the

following: communication, negotiation, delegation, time management, leadership, financial management, project or business management, problem-solving, marketing, and networking. (Oliveria, 2021; Birt, 2020; Gavin, 2019). These skills are the

abilities needed in order to achieve success when it comes to generating money or greater profits and accumulation of achievements or numbers of accomplished goals of a business. Money and profits are often seen as the primary indicators of business success because they are essential for sustaining and growing a business in the long run. A company that consistently generates profits has the resources to reinvest in its operations, develop new products or services, expand into new markets, hire more employees, and provide better compensation and benefits for its workforce. Additionally, the accumulation of accomplishments or goals achieved is one indicator of a successful business. This is because having a bigger number of accomplishments is considered as an evidence that your firm is successful and developing in the industry. Now let us discuss the different skills and how they can contribute to success of a business. First, effective communication and negotiation skills are critical for building strong relationships with customers, suppliers, employees, and other stakeholders, and this can result in greater income and the accomplishment of more goals. Next, delegation and time management skills enable leaders to delegate tasks and responsibilities effectively, prioritize tasks, and manage their time efficiently, and as a result, they can finish more tasks. Leadership skills are also essential for driving business success. Effective leaders

inspire their teams to work towards a common goal, provide guidance and support, and make strategic decisions that align with the company's mission and values. Financial management skills are critical for business success, as they enable leaders to make informed decisions about how to allocate resources, manage cash flow, and optimize profitability. Next, Project management can help your team plan, manage, and execute their work to meet your project's requirements on time. Your team can concentrate on the important job without being distracted by unmanageable budgets or projects that get out of hand. It gives them the ability to produce outcomes that truly affect the revenue of the company. After that we have problem-solving skills, this can help businesses identify and address inefficiencies in their operations, leading to cost savings and improved productivity. By encouraging a culture of problem-solving within a company, employees may also feel more empowered to take initiative and suggest innovative solutions to challenges they encounter on the job. This can lead to increased morale and job satisfaction as well as greater overall success for the organization. Next, a clearly defined marketing plan boosts sales and marketing for the company. By examining data on consumer purchases and product preferences, marketing can boost revenue. You must invest in marketing skills if you want to have the best chance of becoming successful in business. Marketing makes your

products more widely known and attracts customers. Lastly, we have networking. Networking helps grow your small business. Small businesses can interact with new clients and business partners through networking and create connections that can spur growth. By connecting with others, you can develop a reputation as a competent, trustworthy, and helpful entrepreneur who can connect those in need with resources and connections. Also, you are more likely to receive leads and recommendations since you will be the first to come to their minds when they require what you provide.

Having insights about business skills before building or improving one is essential for its success, as it can help run a business more efficiently, lessen risks, and exploit opportunities. However, the researchers have learned from observations or through some literature reviews that some entrepreneurs do not fully recognize the importance of essential business skills and the factors that caused poor performance and failure in their businesses. If left unchecked, as Fuel (2022) claims, problems that emerge within the company can swiftly escalate. That is why it is crucial that you recognize the main internal causes of business failure in order to avoid them in your own management. One of the most common internal causes of business failure is poor management. The results of this study will be a great benefit to people who are interested in business, just like the ABM students. The data given will provide knowledge about specific essential business skills that might help entrepreneurs or

aspiring to be one with starting steps and help them enhance their capabilities, be prepares, and be equipped with vital knowledge and skills.

1.2 Statement of Objectives

This study aims to understand the importance of being ready by knowing the essential skills before establishing a business and how these skills can affect its future. Specifically, the paper aims to address the following objectives, which in turn might help entrepreneurs or aspiring ones:

1. to identify business skills and emphasize their importance and how these relate to business success
2. to determine the things or steps needed to acquire or improve the said business skills
3. to identify the factors that decrease the chance of success of a business

2. ANALYSIS

2.1 Business Skills and Success

The studies explained in this review are studies that have a relation to business skills and success, and are mainly studies for SMEs (Small and Medium Enterprises). Essential business skills are a set of all the skills needed to succeed in the business sector. They are vital to success, especially when establishing a business, since they help entrepreneurs comprehend the elements that impact an organization's growth as well as the procedures involved in reaching business objectives.

As stated at the introduction the following are the most common business skills: communication, negotiation, delegation, time management, financial management, leadership, marketing, networking, and project or business management (Gavin, 2019; Birt, 2020; Oliveria, 2021). Aside from these, other studies stated other skills needed such as business research skills, creativity, risk-taking, and so on. Each skill has distinct characteristics that contributes to company's success when we are talking about greater profit and accumulated achievements or numbers of accomplished goals. It is also revealed that these skills can be acquired through some programs, trainings, or simply by studying or learning it (Hamburg, 2019; Rașcă & Deaconu, 2018; Umar, et al., 2018). Moving forward, according to a study, individuals view business success differently, but they all have one thing in common: achievements individuals accumulate and amount of money earned. (Hani, 2021).

2.2 Factors that hinder business success

According to the *Bureau of Labor Statistics*, around 20% of new businesses fail during the first two years of operation, 45% fail within the first five years, and 65% fail within the first ten years. The main individual variables influencing business failure in newly founded small businesses in the industrial sector are lack of crisis management skills, lack of marketing, financial, human resource management skills. Many business entrepreneurs will

not consider failure while launching a new venture. Kirsty Fitzgerald, a management accountant, discusses the five bad practices to avoid if you want to give your business a fighting chance of success: poor cash flow management, losing control of the finances, poor planning, a lack of strategy, and poor leadership (Morgan, 2018). It only shows that business skills are really helpful to make a business thrive.

Some recent studies that were analyzed have different foci, but they all have one thing in common: the different skills and their connections or effects that lead to business success. Most of them used surveys and reviewed literature to come up with their findings. The analyzed studies were mostly about micro-entrepreneurs or SMEs. Analyzed papers conducted their research to explore the relationship and extent of business competencies and business success. The studies provide information about the skills they focused on, and data from their findings and observation. Some research also suggested further scope for future research and give some attentions to specific demography of their future sample. This only implies that it is crucial for entrepreneurs, or those aspiring to be one, to possess business skills, as their absence may hinder their success, but it is not the end of that; business people must also know different factors that can bring their businesses on top and stay on track, as well as the factors that can pull their

enterprises down, for them to be prepared and create a solid foundation.

3. CONCLUSIONS

With this researches, it is important to fully recognize the business skills needed together with the factors that caused poor performance, in order to achieve entrepreneurial success. This study gathered information from other studies and literature to identify each essential business skill and their importance to business success. It was found out that the things needed to obtain and develop those skills are through education, training, etc. Furthermore, it is inevitable to encounter some failures and factors that will drag your business down, but what is important is that you identify these things and find a way to overcome them. Meanwhile, it was found out that there are several ways to increase the chances of success for business, such as business plans, knowing business skills, and so on. The studies relating to business skills and success are only limited and their coverage are only about some skills or focusing only to one and as a result, this can lead readers to have skewed understanding. So, it only shows that providing a study with enough numbers of business competencies will be more useful as it provides sufficient data that is needed.

Since this paper is quite novel, there are only limited numbers of recent research related to this topic. The researchers want to conduct a review of various papers on this topic. However, it is not possible for the researchers to review few studies, as

the date they were published was beyond what was recommended. As a result, the scope will have to be reduced to current researches with a focus on SMEs (Small and Medium Enterprises). Another possible limitation of this study is it somehow oversimplifies the complicated realities of corporate operations. In order for a business to thrive, a variety of factors influence business performance, including market trends, economic conditions, industry competitiveness, and corporate culture, among others. Additionally, the business skills may differ depending on the setting and type of firm. For example, a small retail firm may need different skills than a major global organization.

There are findings that show the rates of failure of one's business. Also, you simply have to drive around your neighborhood to see the revolving door phenomena of retail enterprises closing down after a few months of operating, so studies just like this will be a great help for entrepreneurs to start their businesses stronger, create positive effects on our economy, and make an impact on our society. The researchers recommend that future researchers conduct study scoping out other factors that contribute to business success aside from the business skills that were tackled in this study. It is best that the next researchers also add or find more studies and literature that are related to this topic, as it can make the study more solid and dependable.

4. ACKNOWLEDGMENTS

The researchers are beyond grateful to **GOD ALMIGHTY**, for

without His grace and blessings, this study would not be possible.

Also, the researchers would like to give their immeasurable appreciation and deepest gratitude to **Ms. Frances Erica Valencia**, English Coordinator at San Jose Academy, and our term paper advisor, who made this work possible. Her guidance and advice carried us through all the stages of writing this paper.

Lastly, the researchers would like to thank **San Jose Academy**, for giving us the opportunity to conduct a research that pave way to boost the development of the research skills among the students.

A Comparative Analysis of Online and In-Person Shopping for Physiological Needs

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Abstract: There are two developed ways for consumers to sustain their physiological needs: online and in-person, and because of this development, consumers and entrepreneurs are now seen as confused and uncertain about which shopping method will be suitable for them. Therefore, to address this problem, researchers will attempt to assist consumers and entrepreneurs in choosing a method that will sustain their needs by giving an in-depth explanation of the two ways of shopping, outlining their pros and cons, providing safety tips, and also recommending things that will help entrepreneurs grow their businesses. To be able to answer these aims, researchers reviewed literature that is connected to our topic, and it was found that online shopping is the better choice for those consumers who want to attain a convenient way of purchasing, as this will help the consumers save time and also save money. In addition to this, this method is also preferred by women when purchasing their clothes, and it is rarely used by consumers when purchasing foods. On the other hand, in-person shopping is considered the best choice for consumers who like checking the quality of products before purchasing and keeping their information and money in a safe place. This is also the best choice for food purchases, and it was found that men loved purchasing their clothes personally. To add, this study suggests that online sellers should improve their security management while physical store owners should increase the shopping convenience for their customers, and those entrepreneurs that can establish their businesses both online and in person should do so, as consumers' shopping patterns are dynamic and mostly based on their availability and preferences.

Key Words: online shopping; in-person shopping; consumers; entrepreneurs; physiological needs

1. INTRODUCTION

1.1 Background of the Study

Two of the factors that will help a human to survive are their physiological needs, such as food and clothes, and the advancement of technology and the start of the pandemic have greatly affected consumers' purchasing patterns in favor of online shopping, as it has become the most convenient method for them to avoid the coronavirus and also to save time (Muntaqheem & Raiker, 2019; McMullen, 2022). However, since everything is slowly getting back to normal, the rate of people who shop in physical stores has increased again, and most of the establishments that closed are restarting; hence, people's mentality has changed toward in-person shopping, and because of this, there have become two ways for consumers to buy them: online and in person.

In a study that has been reviewed, Muntaqheem and Raiker (2019) stated that checking the qualities and experiencing the product prior to purchase is a must for almost all consumers, which in-person shopping offers, and Lokhande (2022) found that consumers in the younger age tend to spend more time in physical stores and give value to it. In contrast with this statement, Milhana (2022) proves that online shopping is a better alternative to personal shopping, as

consumers save more time and money because of it. However, even though online shopping has become increasingly popular these past few years, the purchasing pattern for food is still seen as the less common shopping method for consumers, as they still prefer purchasing their foods in person or taking them out from restaurants and any other food chains (Brenan, 2022). On the other hand, in terms of clothes, Petro (2019) noticed that women are more likely to purchase clothes online, and men are more likely to value in-person shopping for clothes, but both genders are proven to search for items online, add them to their carts, and then go to physical stores to make their final purchase.

Nonetheless, researchers have noticed that some of the works that have been reviewed are somehow lacking in information and that some of them have focused on and given more significance to online shopping and provided less information about in-person shopping. Therefore, to address the research gap, researchers will focus on and give importance to both online and in-person shopping to provide more in-depth information to the readers as this research attempts to assist consumers in choosing the method that will be suitable for their needs by discussing the difference between online and in-person shopping, stating its advantages and disadvantages, and

also providing tips on how they will keep themselves safe when shopping online. In addition to this, since consumers cannot purchase a product without a seller, this study will also try to help entrepreneurs, especially the younger ones who are known to be new in the business industry, by providing information about their possible target customers' preferences and making suggestions for the growth of their businesses.

This research has not been conducted just to help consumers and entrepreneurs determine which method is best for them but also to bring awareness to different problems that both sides were experiencing. Since people are just getting back from the massive effect of the pandemic that results in high rates of unemployment and poverty, the safety of their incomes and information is important, and to add, consumers prefer to buy a product that will last longer and be strong enough to not get easily broken to save money, and because the COVID-19 is still evident, people's safety from the virus is also significant.

Objectives:

- Differentiate between online and in-person shopping.
- Determine which type of shopping is convenient, safe, and best for purchasing clothes and foods.
- Assist the entrepreneurs in choosing which type of selling will help their businesses grow.

2. Analysis

Online and In-Person Shopping

Online shopping is a popular method of purchasing items these days in which consumers will need to use their phone or any other gadget to purchase with the help of the internet, and this relates to using applications or sites that are used in online selling such as Lazada, Shopee, Foodpanda, and Grabfood (McMullen, 2021). Shopping for physiological needs online has its advantages and disadvantages, which people like and at the same time dislike. Online shopping offers cheap prices that will help the consumers save their money, and this type of shopping offers more convenience to consumers as, with this method, people will just need to stay at home, make their purchases with their phones, and wait for their purchases to arrive (Solutions, 2022). However, this method faces problems that make some consumers lose trust and interest in it, including the high risk of online fraud, security issues, and the possibility of the wrong items arriving or being damaged (Milhana, 2022).

On the other hand, in-person shopping, also known as "traditional shopping," is the method people grew up with. This method requires consumers to visit markets and malls to purchase their needs and wants. This type of shopping also has pros and cons that some people may love and hate. In-person shopping's advantages that people love are the direct quality

checking of products since consumers like to have an experience with the product or check it out before purchase, the fast transaction as after you pay you can get your purchase immediately, consumers will save money from paying for shipping costs, and if you accidentally purchase a cloth that is not your size, you can return it as long as you know the return policy (Solutions, 2022; Ginsberg, 2023). In contrast, the cons that this type of method faces are that it is found to be an inconvenient type of shopping since consumers will need to go around to find the products that they need, which takes a long time (Muntaqheem & Raiker, 2019).

Consumers' shopping pattern

In research conducted, it was found that most of the ages 18–29 made their purchases with their phones, and consumers ages 60 and above rarely used their phones to buy as most of these ages preferred shopping personally (Online Shopping and Buying Related Activities by Internet Users by Age, 2018). However, the latest study by Lokhande (2022) has found that most consumers of a younger age spend more time in physical stores and give value to personal shopping experiences.

Petro (2019) has found that in purchasing clothes, men are the ones who give more value to personal shopping and engage with it the most, while women were found to buy their clothes online. Nevertheless, both

genders are found to do their research online first before going to a physical store to make their final purchase.

On the other hand, in terms of food, despite having a lot of online food shopping platforms around, consumers are still in favor of in-person purchasing and taking out foods from restaurants and other food chains as they trust it the most (Brenan, 2022).

Convenient and Safe

In terms of convenience, online shopping has proven to be the best choice for consumers. Online shopping can help you save time as you can quickly find items that you would like to purchase. These days, people are known to like to make things fast, and as people are just getting back from the massive effect of the coronavirus, people like to save money, and this type of shopping is considered to have the best price and often gives discounts (Milhana, 2022).

Meanwhile, in terms of safety, in-person shopping is considered the best option for consumers to choose, as this method gives a more trusting and reliable feeling since you can personally check the items and you can get your purchase immediately after paying (Muntaqheem & Raiker, 2019; Solutions, 2022). But then, since some consumers still prefer shopping online, they could follow the tips that will keep them safe during every transaction, such as the use of a secured internet connection, shopping with the businesses they've already transacted

with, checking the seller's feedback, and requesting the seller's ID for verification and safety (10 Tips for Smart and Safe Online Shopping You'll Be Glad to Read, n.d.).

Business growth

According to the research of Milhana (2022), it suggests that online shopping platforms should improve their security management to help entrepreneurs gain customers, as this will also help their platform gain popularity and reliability. In addition to this, business owners online should also provide some information that will make their customers feel secure in every transaction they make with them. While physical store owners are encouraged to increase shopping convenience for their customers and offer promotions and sales to earn customers, This research also recommends that entrepreneurs who have the capability to build their businesses in both types do so, as consumers' shopping ways are dynamic and based on their capabilities and availability at the moment.

3. Conclusion

Online and in-person shopping have their characteristics that people like and dislike, as both have their advantages and disadvantages. This study concludes that, in terms of convenience, online shopping will be the best choice for consumers to make, as this helps consumers save time because it offers quick and easy finding

of items, and it will not just help them save time but also help them save money, especially those young consumers who are commonly dependent on the allowances that their parents give them. But in terms of safety, in-person shopping will be the better option for consumers, as in this type of shopping, consumers can immediately get their purchase after payment, and in this type of shopping, consumers can experience and check the quality of products first before purchasing.

This study also found that consumers still prefer buying their foods personally rather than online. While shopping for clothes, men are proven to give more value to personal shopping, and women are proven to use their phones in making a purchase, but both genders were seen to do research online before making a final purchase in physical stores. In addition to this, this study also concludes that entrepreneurs who have the capability to establish their businesses in both online and in-person ways do so, as consumers' shopping patterns are seen as dynamic and uncertain.

As this study focuses on people's physiological needs, it suggests making further research about the consumers' purchasing patterns when it comes to gadgets and other material things, and it also examines how business owners online have gained the consumers' trust and loyalty despite the risks they face.

4. Acknowledgement

The researchers would like to express their sincere gratitude to **Ms. Frances Erica Valencia**, the English Coordinator of San Jose Academy and practical research adviser, for her long patience in checking our papers, answering our inquiries, and for her guidance and advice that have greatly helped in the development of this study.

Lastly, the researchers would like to thank **San Jose Academy** for the implementation of research paper creation among the students in order to shape the students' skills in creating one that will greatly help the students in preparing for the future.

Teenage Business: The marketing strategies and online selling of teenagers through Social media

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Abstract: This paper is about teenage business, how they sell it and how they market the business. The social media that the researchers have used is only focusing on Facebook, Instagram and Tik Tok because those social media platforms are a trend nowadays, and there are many users that may help the teenagers on their online selling specifically on Facebook live, Tik Tok live, and Tik Tok Shop and posts on Instagram that can promote the online shop. This study discusses the unique marketing strategies of teenagers, Benefits of online selling, and the difficulties that the teenagers may encounter. The objectives of this study are to determine the teenage marketing through the use of social media, to help the teenagers in marketing and selling their business through the use of social media, and lastly, to identify the problem of online selling and how to solve it. The gaps of this study are about how teenagers use famous selling sites to sell their products, and not showing the strategies of teenagers that they use to market the products. The purpose of this study is to help teenagers if they want to start their own business because nowadays, there are only few and limited studies about this kind of topic. Following these objectives may help the teenagers to become successful because it is not easy to think or to plan on how to market and sell the products without any prior knowledge. The researchers also use and focus only on Facebook, Instagram and Tik Tok because there are many users there that may increase sales and customers of the online business. For the conclusion, Facebook, Instagram and Tik Tok are social media that can help teenagers especially when starting just a small business.

Key Words: Online Selling; Marketing Strategies; Teenage Business; Teenagers; Social Media

1. INTRODUCTION

1.1 Background of the Study

The researchers chose the teenage business because nowadays,

many young people are starting a business through social media and the researchers chose teenage business because in some of the studies it does not talk about how teenagers market the products on social media. The online selling that the teenagers are

using are Facebook Live, Tik Tok Live, Tik Tok shop and even posting on Instagram because there are many users on those social media platforms. For some time now teenage entrepreneurs have used multiple social media sites specifically Facebook, Tik Tok and Instagram for them to market and sell the products. Social media has been a great way for these teenage entrepreneurs to reach multiple new and old customers and they use it to entertain them also. Because of the pandemic and with the current

New normal teenagers found a way for them to sell and market their products in many ways, one of these is using social media.

This study only focuses on the following social media platforms which are Facebook, Instagram and Tik Tok because those social media platforms have greatly helped these teenagers to market and sell their products. Through selling and marketing on social media they can be easily found by the people who need or want their product or service.

This is the trend nowadays that is why the researcher saw that there are few or limited research about how teenagers use famous selling sites to sell their products and another limited research is that some research does not show the strategies teenagers use to market the products online or through social media and the researchers

see the importance to it because this will help if there would be teenagers that would want to open their own

business. And it is important because it will help the teenagers to learn about how teenage entrepreneurs use social media as a way for them to sell and market their products and how it helps improve their business.

Objectives:

1. to determine the teenage marketing through the use of social media
2. to help the teenagers in marketing and selling their business through the use of social media
3. to identify the problem of online selling and how to solve it

2. ANALYSIS

2.1 Marketing Strategies for teenagers

For teenagers who want to start a business online, determining marketing strategies is important. More than ever, teenagers need to be capable of marketing themselves and their ideas online given the over-increasing influence of the internet in the lives of people. To connect with potential customers or clients, young social media marketers use sites like Facebook, TikTok, and Instagram. Both promoting the business or product on social media and posting interesting content that will attract the target audience. To reach even more people, the young entrepreneur can also employ sponsored advertising on social media (Jamsed, 2022). Reaching millions of people through online marketing is highly effective. The owner can add pictures, write descriptions, develop an audience, and get in touch with potential customers directly. Any teenager who wants to be successful in the business world of

today must possess marketing knowledge (Leangap. (n.d.)

Using social media to engage with prospective customers or clients can be quite effective. It is, nevertheless, critical to use it wisely. Focusing on developing interesting and valuable products for the targeted users is crucial. Always maintain a professional manner. First impressions matter, so always present yourself in the strongest possible way when meeting new customers. This involves having good manners, respect, and having effective communication skills with the customers.

The effectiveness of word-of-mouth advertising should not be understated. People will talk about the business if the teenager produces amazing work or offers excellent service. Consistently giving the best effort and treating others with respect will help promote advantageous word-of-mouth about you (Jamsed, 2022). Create interesting contents. It is important to stand out from others by producing quality material on social media because their feeds and timelines are used by millions of users. Build a community among followers by interacting with them to appear more approachable. Live streaming, polling, and responding to comments are a few ways to accomplish this. Follow the latest trends. To stay relevant, it is crucial to follow current trends so that the teenagers can have more opportunities for the business (Imoto, 2022). Ensure that the prices of the products are reasonable.

The business will grow if teenagers set a reasonable price for the products that are neither too expensive nor too cheap. Pricing the products in

accordance with the value of the customers that see in them can ensure that the customer experience can provide and meet their expectations. The teenager may develop stronger relationships with the customers, strengthen the brand's reputation, and ultimately increase the bottom line (Campbell, 2017). They will also have a greater understanding of the market if teenagers will comprehend the competitors and how they will communicate with their audiences. These insights can be used to strengthen the marketing strategy (Brandwatch, (n.d.).

In social media marketing the teenagers must set goals to promote the business and these goals are to make the brand aware, grow the target audience, and think of a target audience that is suitable for the business, and lastly, make a tagline for the business that the customers will remember (Kenan, 2022).

2.2 Benefits of Social Media Marketing and selling

The benefits of social media marketing are it helps the teenagers to promote the business and attract customers. There is advanced technology now that can do Facebook live, TikTok live, Tik Tok Shop and posting high-quality photos and videos on Instagram (digitalcommons.odu.edu. (n.d.). The benefits of doing marketing on social media specifically, Facebook, TikTok and Instagram is that those social media have many users so that many users can see the product or services of the business. The business can be discovered by other online brands and can do a collaboration with another brand. There are 1.8 billion Facebook

groups and with tens of million groups, there are possibilities and chances that the owner can meet a business partner in those groups, and it can help to promote the business. While on Instagram and TikTok, there are paid influencers or celebrities that can do marketing strategies for the business (CoSchedule, 2023).

The need for establishing an effective social media marketing plan has grown as social platforms have expanded to attract enormous audiences, making it essential for creating a successful online business. The ability to integrate customer care and support into the marketing plan is a huge benefit. By offering the best assistance while integrating it into marketing, is that the owner assists the customers while advertising the online business' goods and services. The owner can accomplish the desired benefits of social media marketing by managing the image of the business through social media, creating the perception of the business that the owner wants, and interacting with the target audience. It can boost sales and leads for the rivals by using social media marketing, and the business can also experience any kind of major internet growth. Researching the top methods that would work the best for the business is necessary to develop a social media marketing plan that is effective for your business. Social media marketing allows the business and owner to interact with more potential clients than ever because it is easy to access (Engagio Digital. (n.d.).

Advertisements can help the business through the use of social media by increasing market reach and the market sales target. Through advertisements many people especially

to those who are really interested and a potential target audience for the product can help the business. Social media especially facebook, instagram and TikTok have many audiences that can have a brand awareness of the product. By advertising the product, the products or the online shop may appear on someone's social media. It will also be easy for teenagers because nowadays, many users of social media are teenagers. It is a win-win situation because both persons can receive a benefit from advertising the online shop or product because teenage owners can have an increase of sales and markets and may develop a brand awareness while the target market can see the product and its completed details like the ingredients, and what are the use of the product if the owner choose to advertise it on social media and they can benefit from it especially if the product is essential (2023).

Promoting the business through social media will help the teenagers to attract more customers and it can increase the product's market reach. It has different benefits such as improving the brand and impact of the sales, and also increasing the brand awareness of the customers.

With media involvement, public relations can be a benefit in controlling a business' public image. Building connections with bloggers through social media platforms like Facebook, TikTok, and Instagram can help to make sure that they are likely to share beneficial or intriguing information about the company. However, the teenagers should also be aware of the things that can damage the online shop's and the owner's reputation. When engaging with influencers, make

sure that they are using the right platform. While some platforms are excellent for influencer marketing, others simply are not worthwhile to invest in. Facebook, TikTok, and Instagram are by far the most popular social media platforms for influencer marketing, which could be beneficial for the business (Stefanski, 2023).

Personal selling can help teenagers in selling and promoting their products by connecting with new potential customers on social media, where they are already active and participating in conversations, social selling offers opportunities to increase brand awareness. The teenager's sales representatives can go one step further by using social listening technologies to find leads who are already talking about the online shop, rivals, or sector. This implies that the teenagers may connect honestly with a market that is already interested in what they have to offer and provide them with helpful information when the timing is appropriate. Authenticity fosters trust, which can develop into customer loyalty (Newberry, 2023).

Direct marketing can help the online business through the use of social media by messaging directly the potential target market directly through the use of social media, specifically facebook messenger, instagram direct message and TikTok message. It is also a way to directly promote the products of the online shop.

2.3 Difficulties of online selling

The difficulty of online selling for teenagers is that cash on deliveries is slowing down business because in cash on delivery there are theft, add

expenses, restrict the cash flow, and work delays. Second is the customer loyalty because the teenagers do not know when the customer's and how long the customer's interest on the online shop. Third, E-commerce is changing because in online selling, the owner will not be able to avoid the competition between the online sellers. That is why the teenager needs to think of another plan on how to still maintain and increase the customer, sales and how to expand the market on the online business. In this difficulty or problem, the teenager needs to think on how to sell the product in Facebook live, and TikTok live or shop. One difficulty of online selling is the regulations because there are regulations that the online seller needs to follow. Like Facebook live and TikTok live those social media platforms have regulations because if the online seller will not follow that there is a possibility that the business can lead to community guidelines like Tik Tok or deleting of business on social media (22, 2021).

The online selling difficulties to teenagers can be finding a reliable supplier because nowadays, it is hard to find a trustworthy supplier so that the product can be of high quality. Changing a target market can be one of the difficulties because teenagers need to be specific and know what the suitable target market for the online business are for example, in Facebook live and TikTok live if the teenager is selling cosmetic products, then the teenager needs to set his/her target market to a suitable consumer. Failing to promote the products or services can be one of the difficulties of online selling because failing to promote the products or services for example on Tik Tok, Facebook and Instagram. Because

many people will not see the products and services anymore of the online shop that is why when doing an online selling specifically on Facebook live, Instagram posts, and Tik Tok live there is a possibility that customers will not visit it anymore (Valdez, 2017). The other difficulties are common problems on an online business which are the scamming, wrong parcel delivery, and low-quality product.

The teenagers can solve the difficulties of an online selling by improving the way they sell the products on Tik Tok live, and Facebook live because it is to avoid making the customers find the online selling boring and uninteresting. Address the problem of customers on the business because it is showing that the customers are the most priority and important when it comes to business. Always check the product and its quality because by doing that, many customers may find the product high quality and accurate on the price. Be professional because if the teenager's appearance in Facebook live and Instagram live are not professional and unpresentable there is a possibility that the customers may find the business not too interesting especially if the teenager is not smiling. The teenagers must give the full details and information about the product because by doing that the teenager is giving the customers the knowledge about the product and by doing that the teenagers are also promoting the product and it makes the customer wants to buy the product and lastly, the teenagers entrepreneurs can solve it by guaranteeing the customers that their online business is safe and ensuring them that the product and the price of a product is accurate based on the quality. Teenagers must be ready for

these kinds of problems to make the business become successful.

3. CONCLUSION

For the conclusion, teenagers struggle when they are starting a business considering that they are still new to the business industry and unfamiliar with it. The objectives of this study can help the teenagers to be successful in their business. This study only focuses on teenagers because entrepreneurs nowadays tend to start their own business at the age of 16-19 years old. The researchers chose Facebook, Tik Tok and Instagram because those social media are famous and may help the business in terms of social media marketing and selling. The specific kinds of selling using social media are Facebook live, Instagram posts, Tik Tok live and Tik Tok live. It is necessary that the business has a unique marketing strategy to stand out from the competitors.

There are few and limited research about this topic that is why the researchers chose this topic. In fact, all people can use these marketing strategies and may encounter the difficulties of online selling. That is why owners must have knowledge and learn about the business.

The implication of the study is about bad user experience because there are many factors that might happen that is why the users are having a bad user experience. The bad user experience that the customers might encounter on the business are wrong delivery parcels, lack of information about the product, and the low quality of product. Another implication is about the marketing strategy of the product because if the

owner of the teenager is not creative enough then the customers might find the marketing strategy boring and dull.

The limitation of the study only focuses on teenagers, teenage business, Facebook, Instagram, and Tik Tok because this social media is a trend nowadays. It will be easy for teenagers to understand this kind of study because plenty of teenagers like to earn money. And the researchers would want to help the teenagers who are not yet knowledgeable about this kind of industry but want to start their own business.

The recommendation of the study that this research did not address but hopefully future researchers will address are the other platforms of online selling aside from Facebook, Tik Tok and Instagram because those three are not the only online selling platforms that can be used by other people, specifically teenagers.

4. ACKNOWLEDGEMENTS

The researchers would like to thank **GOD** for always giving a blessed day to do and to make this study. This study would not be possible without his guidance.

This research will also not be possible without the help of the **GROUPMATES OF RESEARCHERS** because this research will not be finished without their help and cooperation.

The researchers would also like to thank the research adviser **MS. FRANCES ERICA VALENCIA** for always giving advice and for her long patience for answering questions about research. This study will not be finished without her guidance and advice.

Lastly, the researchers would like to thank **SAN JOSE ACADEMY** for enhancing and advancing us when it comes to research.

Freedom of the Press: An effective Tool for the Voice of Feminists

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Abstract: Press freedom is an important part of our individual rights and a powerful tool for promoting the voices of women. In order to explore feminists' issues, this study examines how the press may provide feminists' perspectives a voice and support the social equality of their rights. The findings demonstrate that women journalists have challenges in their

1. INTRODUCTION

1.1 Background of the Study

Press freedom is a crucial sign of democracy because it allows people to report freely for the public good without worrying about being arrested. According to the Global Press Freedom

professions. For instance, they are less likely to work as independent contractors, stay employed by the same organization, or pursue a prolonged media career. The media has done a lot to highlight gender inequality and discrimination, particularly through the strident voices of feminists. By using their right to free speech, feminists can tell their stories, express their opinions, and call attention to issues that may be relevant to them. They may now fight against gender inequality and inherited power structures. It will also look into the idea of using press freedom as a way to raise the voices of women. In this study, the press's existing state and its potential to support feminism going forward are examined.

Key Words: Press freedom; feminists, rights, voices, media, individuals

Index, the Philippines is ranked 147th, making it "tough" for journalists to operate there. According to the World Impunity Index published by the Committee to Protect Journalists, it is also one of the worst nations for unsolved journalist murders. The Coalition for Women in Media identified

32 instances of abuse against female journalists in March 2022, including detentions, verbal and physical harassment, and attacks. The rising dangers faced by female journalists covering the front lines in Ukraine stood out among them.

Over the past ten years, media freedom has declined globally, with new kinds of repression emerging in both authoritarian and open cultures. Experience has demonstrated that, when given the chance, press freedom may recover from even protracted periods of suppression. The media has been an essential tool for feminism's powerful voice in bringing attention to issues of gender inequality and oppression. In order to advocate for their rights as feminists and magnify their voices in support of their right to speak up for society, this study will examine how press freedom may be utilized to fight oppressive words and practices. Although female journalists are more prevalent, they continue to face professional disadvantages. Some studies have found that, despite being in the majority, women journalists remain professionally disadvantaged. They are much more likely than their male peers to work as freelancers as opposed to contracted employees, much less likely to stay in the same organization throughout their career, and much less likely to want to continue to work in the media in the long run. Women hold only about 30 to 40 percent of the leadership and management positions in the media (Bistransky, 2020). Feminist journalism means giving a point of view that is not one-sided but inclusive. A space where we can talk about our diversity: about our different ethnicities, about diverse sexual identities. It is about speaking

freely and independently. So, feminism for us actually means freedom. Where you can also point out the people or the problems that harm you as a woman. We are trans-feminist, meaning we focus on women's issues, including those of the LGBTQ+. This current issue about how press freedom makes it hard for feminists to be heard isn't very helpful. limited. It shows that the role of the media has been focused and how it used to amplify the voices of feminists. It enables feminists to exert pressure on governments and on authorities and other interested parties to take action.

2. ANALYSIS

Press Freedom on the Light of the Voices of the Feminism

Without assuming permanent or static gender disparities, feminist media studies took gender seriously as a factor that structures identity and experiences. The idea that if women were in charge of media production, the content would be different and better has long dominated the feminist media concept (Stenier, 2014).

Feminist media studies took gender seriously as a factor that structures identity and experiences, and the idea that if women were in charge of media production, the content would be different and better has long dominated the feminist media concept. Press freedom (PF) can promote women's rights by expanding positive rights or decreasing the violation of restrictive rights. Increased media reach or accessibility increases the impact of

media freedom on women's rights, and democratic capital also has a similar impact. Greater media freedom enhances women's rights. Increased media reach or accessibility increases the impact of media freedom on women's rights. Further, democratic capital also has a similar impact in enhancing the impact of press freedom. (Cooray et al., 2017). It will examine the ways on how press freedom can utilize the rights of Feminism to advocate their rights, perspectives and to enlighten their voices in the nation.

In order to create a society that is more democratic and just, critical issues like press freedom and feminism must be addressed. Social justice movements have historically benefited greatly from the contributions of women. Feminists have long recognized the value of self-managed, alternative media, using it to spread their views, challenge conventional norms, and create unique social processes. Over the past 20 years, more and more women have started using media production equipment on their own. As new media and communication technologies have developed, women have begun to use them to create and promote feminist media (Zobl & üeke, 2014). Through feminist media, women are able to promote their views and experiences, and connect with others who share their perspectives. This has helped to build a sense of community and solidarity among women, and has contributed to the growth of feminist movements around the world.

Press freedom gives women's voices a platform to be heard, it is essential for feminism. When the media is allowed to report on many viewpoints and experiences, it can support the promotion of better understanding and empathy while also posing a threat to damaging stereotypes. Building a more just and equitable society for all can result from this. This conceptual review will give an overview of the implications and how press freedom can be used to advance the voice of feminism and women's rights.

Press Freedom on promoting Gender equality

It is crucial to think about the progression of the feminist movements in media in terms of press freedom that has an impact for the feminists that shows a main idea for the studies that will be formed. It stated that the media had worked for the impact of the feminists on which shows to highlight their concepts by their studies on what they formed. One way in which press freedom can promote gender equality is by allowing for the dissemination of information about gender-based discrimination and inequality. In many parts of the world, gender-based discrimination remains a major problem, and the press can play an important role in bringing such issues to light. Press freedom can also be used to promote gender equality through the promotion of positive role models. By

highlighting the stories of successful individuals, regardless of gender, the press can help create an image of gender equality and inspire others to strive for the same level of success. By bringing attention to the accomplishments of individuals of all genders, the press can help create a more equal society where everyone feels they can achieve their dreams.

Finally, the press can be used to promote the visibility of female and other gender-diverse voices. By amplifying the voices and perspectives of women and other gender-diverse people, the press can help create a more equitable society. This includes providing a platform for women and gender-diverse individuals to speak out against gender-based discrimination and to share their own stories and perspectives.

The connection between Press Freedom and Gender Based Violence

Press freedom plays a crucial role in combating gender-based violence, which manifests in numerous ways. It demonstrates the effect that sharing information and promoting individuals' freedom of expression may have. Women and girls who experience gender-based violence are unable to speak up because of their fear. It demonstrates that the ability of the press to report on gender-based violence is constrained.

In recent years, a number of initiatives have documented the

different forms of violence, sexual harassment, and related forms of gender-based violence experienced by women journalists and media workers in various countries of the region. Many of them have been led by journalists' organizations themselves, which have done an outstanding job of identifying these different forms of violence that affect journalists and other media workers. (Women Journalists and Freedom of Expression: Discrimination and Gender-based Violence Faced by Women Journalists in the Exercise of Their Profession - World, 2019)

Human rights issues are raised by gender-based violence. The right to life, the freedom from torture and other cruel or inhumane treatment, the freedom from discrimination, and the right to protection and security are just a few of the many human rights that may be violated by gender violence. Similarly, women journalists face significantly greater risks when working, particularly on digital platforms. We observe escalating attacks on female journalists in the internet world, particularly when hate speech and misinformation overlap (Posetti, 2020). The genders in our society will be affected. Although women are more sensitive to the consequences of violence, It also prioritizes the survivor's safety, right to dignity, confidentiality, and protection from retribution or harm, and also considers how a media story could potentially violate any of these core principles

(International Federation of Journalists, 2014).

In this aspect, Press Freedom refers to the ability to express our rights and share our ideas without fear of public criticism. According to United Nations Women (2022). The media industry has an important sphere of influence on how people shape their gender norms. Research shows that news media reporting has a strong role in perpetuating discriminatory gender norms and stereotypes, as well as the normalization of violence. Almost all human rights treaties prohibit gender-based discrimination. Millions of women and girls continue to face discrimination and violence, being denied their equality, dignity, autonomy, and sometimes even a life, despite significant progress made in protecting women's rights throughout the world (OHCHR, 2023). Moreover, the significance of gender in our environment must be shown through gender-based Violence is threatened to the people, especially in our press freedom, which our journalists have no right to report. Our nation must be encouraged to express our rights to empower our voice.

The Impact of Press Freedom on Women's Rights

Women's rights are positively correlated with the advancement of society because women are strong, educated, and financially independent. A strong, educated, and financially independent woman makes a significant

contribution to the enhancement of a family's health, education, and standard of living (Majeed & Kiran, 2019).

It shows that women make a significant contribution to the enhancement of a family's health, education, and standard of living. Better governance is a result of improved government accountability to the public, and press freedom can strengthen advantageous rights by assisting women in speaking up and gaining attention, forcing the government to establish policies that are more supportive of women's empowerment. press freedom contributes significantly to ensuring their social rights. By spreading information and fostering knowledge in a culture, it aids in defending the rights of women (Majeed & Kira, 2020). Women's rights enable them to represent their rights in the media, which can boost their visibility and participation, and also to determine the issues of women's rights that may help to advocate for awareness of their status in the whole nation.

The Difficulties faced by Feminists by Exercising their Rights in Press Freedom

Journalists are at risk and subjected to abuse. Daily threats to journalists include kidnapping, torture, and arbitrary arrest in addition to smear campaigns and harassment, especially on social media. Journalist women are especially at risk. Based on UNESCO analysis, about 73% of the women journalists polled reported experiencing

threats, intimidation, and insults online as a result of their profession. Women journalists' emotional and physical health are frequently impacted by the failure to look into and resolve internet attacks. Informing the public about difficult subjects like climate change and eliminating its fallacies can be accomplished with the aid of the media. By highlighting the gravity of the problem and serving as a conduit between the public and specialists when it comes to climate change, women journalists have the power to inform the public and spur action.

The Access of Press Freedom for the Improvement of Feminists

The use of press freedom to promote feminist causes has grown into an increasingly popular topic of academic study in our society. It will determine the ways on how press freedom can be used to educate and empower women to address the issues that can be concerning against the current biases.

Media organizations and press advocacy groups should put a priority on promoting stricter laws and better attitudes regarding gender equality, both within their organizations and among their audiences. As the proportion of women working in the media increases globally, these brave people are carrying an additional burden that could limit their ability to promote democracy and keep citizens informed.

Media freedom and Internet access together will have an impact on women's rights, and Internet access will determine how effective media freedom is. I test my assumptions across nations and through time, and I discover that regardless of the type of regime, the interaction of Internet access and media freedom has a favorable impact on women's rights. (Bistransky, 2020).

3. CONCLUSIONS

By these all findings, this study shows how press freedom can be effective for the rights of feminists. However, some studies may be presented through the opportunities of the media by addressing the issues faced by women's rights due to harassment. 73% of the women journalists surveyed said they have experienced online threats, harassment, and insults. It is crucial that we use our rights to defend our freedom by standing up for any human rights that might be abused during harassment. It may be presented through the opportunities of the media by addressing the issues that face women's rights. It will give a way to express a voice of feminists that promotes a democracy through their perspectives on every concern in our nation, and the protection of their rights must be a safeguard that depends on our nation. Press freedom has a role that can also help women express themselves, get noticed, and force governments to develop policies that are more

supportive of women's rights. This study aims to determine how press freedom can be effective for the rights of feminists.

4. ACKNOWLEDGEMENTS

We express our sincere gratitude to research adviser **Ms. Marielle C. Balayo** for her support, empathy, patience, and guidance throughout our research. Her skills enlightened this course.

And for my **family and friends**, thank you for giving their time to support and guide us throughout our research. We assure you that your support will be appreciated.

Also, we are thankful to **San Jose Academy** for pointing us to conducting and providing guides for our research. We are very grateful for your feedback and suggestions for improving our paper.

We thank the Almighty God for allowing us to face the many challenges that you have shown for your guidance. We appreciated it for improving our research.

Cyberbullying: Impacts and Causes Towards Students' Behaviors

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Abstract: This study explores high school students' beliefs and behaviors associated with cyberbullying. Cyberbullying happens in real life, and most victims can't defend themselves or fight back because the bigger person sometimes lets it go. This topic will help victims understand what they went through, how it usually starts, how it progresses, and how to fight it. The goal of this study is to learn more about the causes and consequences of online bullying. Also, it's important to know that it has a big effect on the way its victims act and on their relationships with other people. Recent research studies have shown that cyberbullying affects a large number of students, which shows that cyberbullying is becoming a serious problem. Because of this discovery, we need to learn more about cyberbullying. To do this, we need to look at the connections between related variables in social, physical, institutional, and community settings. As a result, this study investigates student perceptions and actions related to cyberbullying.

Key Words: Beliefs, Behaviors, Institutional, Communal Context

1. Introduction

1.1 Background of the Study

Cyberbullying is defined as 'intentionally damaging action carried out by a group or individuals, repeated over time, using modern digital technology to aggressively attack a victim who is helpless to defend himself or herself'. Cyberbullying is also called Internet harassment, online aggression, electronic aggression, and electronic aggression. It's like the kind of bullying that usually happens in schools, colleges, and universities. Previous research has shown that cyberbullying is an act of aggression done on purpose by an individual or group using the internet (Martinez et al., 2019). Most of the

time, the people who are bullied are those who can't easily defend themselves. The list below provides a formal definition for each form:

Flaming—Sending angry, harsh, or profane messages to a person or people personally or through an internet group.

- Harassment—Sending disrespectful communications to a person on a regular basis.
- Cyberstalking—Harassment that includes threats of physical harm or is extremely threatening.

- Denigration (put-downs)— Sending or posting hurtful, false, or vicious remarks about another individual to others.
- Masquerade—Pretending to be someone else and emailing or uploading something that disparages that individual or puts that person in risk.
- Outing and trickery—Sending or sharing information about a person that is sensitive, private, or embarrassing, such as forwarding private messages or photographs. Using deception to obtain embarrassing information that is then made public.
- Exclusion—Exclusion of a member from an online group that is done on purpose. (Willard, 2004b)

Cyberbullying can take place on blogs (interactive Web journals), websites, e-mails, listservs, chat rooms, instant messaging, and text/digital picture messaging via mobile devices. It can refer to racial, religious, or cultural prejudices.

Through the Internet and other communication technologies, young people are socially engaged with others, and these tools have become the new medium for bullying practices. Cyberbullying injures kids emotionally rather than physically, and it is carried out through cell-phone text messages, images put online, cruel remarks on personal blogs, and rumors that spread quicker than ever before via email, instant messengers (IMs), or other such communication devices. Juvonen and Gross (2008) say that the risk and scope of cyberbullying can't be overstated because more and more teens use social networking sites, instant messengers, and mobile technologies.

2. Analysis

Effects of Cyberbullying

Cyberbullying has been shown to hurt people in a lot of different ways, some of which can be very bad for mental health. As was already said, people who are bullied online are twice as likely to hurt themselves and have suicidal thoughts, actions, or behaviors. Because of the rise of digital communication, there is now a new kind of bullying that happens outside of school. Because it frequently follows students home, cyberbullying may be very challenging to ignore or deal with.

Up to 15% of adolescents between the ages of 12 and 18 have experienced cyberbullying at some point. Yet, more than 25% of kids between the ages of 13 and 15 who participated in the 2021 Cyberbullying Research Center study reported experiencing cyberbullying in that year alone. 6.2% of the people who took part in the same study said they had been cyberbullied in the past year. A person is most prone to cyberbullying a peer when they are 13 years old. People who have been bullied online are twice as likely to hurt themselves or try to kill themselves. 56% of young people who identify as LGBTQ (Botarro, 2022). Any kind of bullying can hurt a child's body and mind. Children who are targeted may have problems like anxiety, fear, sadness, low self-esteem, behavior problems, and trouble in school. Yet, cyberbullying might be very harmful. There could be a number of causes for this.

Cyberbullying, for instance, can happen at any time, day or night, and is typically carried out by anonymous sources, in contrast to traditional bullying, Cyberbullying can happen in a public digital space, like a social media post, or in a private one, like a

private message. This means that some kids have to deal with its impact on them on their own. Knowing all of the consequences of cyberbullying can not only help you assist a child you know is being victimized, but it can also make you more alert to warning indicators that require conversation and worry. which is frequently restricted to schools and recognized bullies. As a result, it becomes more unrelenting and frequently more vicious. The intensity of the results of victimization may also depend on the type of victimization. For example, a study found that online images and posts did more damage than texting or calling to harass (Gordon, 2022).

If your child is picked on by a cyberbully, he or she is more likely to develop anxiety, depression, low self-esteem, or even feelings of being worthless. If your child is cyberbullied, their behavior could change in the following ways:

- Avoiding conversation with friends and socializing
- At home, they appear especially quiet or withdrawn, or they isolate themselves in their room.
- Loss of interest in previously enjoyable activities
- unable to focus on schoolwork or homework
- Dropping grades
- Having difficulty sleeping
- Desire to avoid school-related activities or to skip school
- When they look at their phone, they appear angry or upset.

- Secretive behavior regarding what they've seen or done on their phone
- Stop using their phone immediately.
- Drug or alcohol abuse
- Saying things like "life is meaningless" or discussing suicide

Because there is no respite from it when you get home from school, cyberbullying can occasionally be harsher or more extreme than physical bullying. Dr. Eric Alcera, who is the medical director of Hackensack Meridian Behavioral Health, says that online behavior and speech can be rude or insulting. "Also, if a cyberbully decides to spread rumors or post embarrassing photos on social media, the comments or photos can go viral and be seen by a lot more kids in minutes than they would be able to in person." (Alcera, 2020).

Why victims are not sharing/reporting the incidents

According to Pacer's National Bullying Prevention in 2020, there are reasons why victims are not sharing incidents of cyberbullying. First, they are worried about their devices being taken away. Youth have a place to interact with their friends and peers online away from school. Children may be reluctant to share the specifics of cyberbullying with an adult due to the significant role that the online world plays, especially now, for fear that the adult's response will be to restrict their access to technology. Next, they don't view online behavior as cyberbullying. When it occurs online, it can be challenging for some children to distinguish between conflict and bullying. They do not understand that mean behavior that occurs on their phone still qualifies as bullying, so young people may not want to report an instance of online bullying to an adult. And lastly, the victims don't know how

to talk about it. Not every child is capable of following it. It might be challenging to address a sensitive or important matter with an adult. Fear of negative consequences and social embarrassment prevents the majority of victims from reporting the incidents to the authorities (Metri, 2018). While real-life bullying occurs when the victim and perpetrator have a specific time and place to meet, cyberbullying can happen anytime, even after school hours have ended, affecting the student more deeply. Because the offender has a strong influence on social media, victims may be afraid to report cyberbullying for fear that it would be misinterpreted and the tables could be turned. They might want to shield their loved ones from the effects of it. Research has also indicated that pupils are concerned about telling grownups because they worry that things might get worse (Fenaughty & Harre, et al., 2013). They might be afraid that talking about the problem will cause a big social media scandal. They are afraid of reporting the incident because they don't want the issue to escalate and affect their way of life.

Political science and studies of public opinion were the main fields in which the "spiral of silence" theory was used. It claims that when people worry that their opinions don't align with the majority, they tend to keep quiet. The causes behind their silence are their concern for rejection and loneliness. People are more inclined to enter a state of complete silence when they are unwilling to express their ideas, and the longer they are silent, the more inclined they are to do so (Abaida, 2019). The longer the victim keeps silent, the more they think reaching out is irrelevant. Moreover, the underlying idea that children must be tough under trying circumstances persists despite recent advancements in bullying prevention. Many people assume that adults won't help or are afraid that they will be judged negatively by the adults in their lives because of the abuse they are going through. Kids can also think that adults expect them to handle things

independently. As a result, as children age, they become less and less likely to report bullying occurrences, with only 39% of bullied high school students reporting harassment and bullying. On the other hand, kids don't know if reporting bullying will stop it because the bully is frequently faceless or unknown in cases of cyberbullying. Furthermore, many are unsure of how to report the bullying on social media platforms and to internet service providers. More than a quarter of the time, children who experience either fail to report it or believe they have no recourse (Gordon, 2021). For many of the same reasons why young people don't ask for support after being bullied in person, young people don't seek help for cyberbullying. Being a target makes them feel ashamed or embarrassed. They don't want to appear to be snitches and further damage their social standing. They worry about reprisals. They believe it is their duty to take care of it. They fail to perceive it as bullying or as a significant issue. In essence, they don't think it's a big problem, just like adults (Anderson, 2017).

Opinions of Students Regarding Cyberbullying

The review's topics have been broken down into categories, starting with the definition of cyberbullying, roles of those involved, statistics about those who have been targeted, causes of cyberbullying, differences between cyberbullying and traditional bullying, and gender comparisons with regard to cyberbullying. This overview of cyberbullying will provide the framework for developing a program for its intervention and prevention. (Notar, et al., 2013)

And according to the article I read, the results show that teachers think cyberbullying is a problem at their school. They want urgent attention paid to three areas: creating policies, making teams more aware of the problem, and giving parents ways to deal with it (Chrisholt, 2014). Nearly half of the instructors said that

some of their own kids had experienced cyberbullying, and some teachers had also experienced it. It was discovered that the teachers' level of concern about cyberbullying and how trustworthy they thought the school's commitment to taking action was affected by their gender, level of education, and the age of the children they taught. Teachers of younger children and female teachers both indicated higher levels of worry than male teachers (Eden, et al., 2013).

Common Response that Students Execute when Cyberbullying Takes Place

According to stopbullying.gov in 2018, a bystander is a person who observes bullying, whether it occurs in person or online. Bystanders may include close friends, fellow pupils, members of the school staff, parents, coaches, and other adults who work with young people. Even complete strangers may witness cyberbullying. Young people engaging in bullying take on a variety of roles. Being a bystander to bullying is distressing and has an impact on them as well. By standing up against bullying, bystanders have the power to change the course of the situation for the better. An upstander is someone who witnesses bullying taking place and steps in to stop it by interjecting, interrupting, or speaking out. Because there are witnesses who do nothing, bullying victims frequently feel even more alone. The victim of an attack can assume that onlookers are complicit in what is happening if no one steps in to stop it. Even if they think bullying is wrong, there are several reasons why a bystander might not speak up. They can be concerned about getting even or being the subject of bullying themselves. They could worry that participating might have unfavorable societal repercussions. When they see bullying occurring, upstanders intervene.

For someone who is being bullied, even one person's support can make a significant difference. When peers stand up for and support bullied adolescents, they are less nervous and sad than peers who do not. In a bullying situation, a bystander has the power to change things for the better, especially for the victimized young person. Youth who are bullied feel less worried and unhappy when their friends stand up for them (Salmivalli, 2018). Teenagers and young adults who witness bullying occasionally are unsure of their responsibility or what they can do to stop it (Forsberg et al., 2018). We have obligations to respect and defend the rights of others, just as we do our own human rights. A benevolent onlooker will intervene to uphold others' rights. A bystander who is being supportive will say or do anything to assist the victim of bullying. Bullying is more likely to end and the victim of bullying is more likely to recover if onlookers are confident in their ability to support victims in a safe and effective manner. Being a supportive bystander might be challenging, but people respect individuals who speak up for others who are being bullied. Bullying occurs in a variety of settings, including online, at work, and in schools, making it challenging at times to determine how to assist safely. (What You Can Do to Stop Bullies - Be a Supportive Bystander: Violence, Harassment and Bullying Fact Sheet | Australian Human Rights Commission, n.d.)

Why a Person Becomes a Cyberbullying Offender

According to End Cyberbullying, due to the anonymity of cyberbullying, two types of pupils are more likely to engage in it: those on the social periphery who wish to exploit it to

gain popularity and popular youngsters. They often cyberbully because of the anonymity it provides, making them more protected from getting serious consequences. To sum it up, cyberbullying takes place with the intention of causing harm to the victim. With the publication that social media has, humiliation can be easily attracted. One of the reasons why bullies bully could be interconnected with their mental health or childhood, as they could be victims of bullying as well (Arlin Cuncic, 2022). They may feel justified in their actions because they themselves had been tormented in the past. Victim blaming isn't far from the issue either; the bully's intention could be because of the jealousy and hatred they feel towards the victim. In a situation given by a very well-off family, a mean girl could be irritated by the fact that the victim is doing better in academics than her. Power-hungry people aren't off the hook either; they might think that feeding on someone else's success can add up to their own status (Sherri Gordon, 2020). Online crime has increased in frequency as internet usage has increased to around 657 million people worldwide. This type of illegal activity is also known as "cybercrime." Cyberbullying is one of the most recently acknowledged kinds of cybercrime (Marcum et al., 2013). The victim-offender relationship will be examined in the current study. According to the findings, both men and women who had less self-control were more likely to engage in cyberbullying by posting offensive remarks or images on Facebook (Johnston et al., 2014). And also, cyberbullying has become increasingly problematic in academic settings, including universities and colleges. And the unfortunate targets are the people who choose to behave like bullies (Alcera, et al., 2020).

3. CONCLUSIONS

It should take a community effort from schools, families, kids, and society as a whole to combat cyberbullying. Due to the fact that cyberbullying occurs outside of school grounds, some schools may refer such matters back to the parents on the grounds that they are outside of their legal purview. Even if the instances seem to have started on school grounds, cyberbullying might have its origins in the classroom or the other way around. This necessitates that schools think about creating comprehensive strategies to combat cyberbullying, including clear and uniform policies and successful student education initiatives. The suggestions listed below are meant to address the issue.

First, comprehensive measures to fight cyberbullying must be established in schools. These programs should develop strong regulations on both conventional bullying and cyberbullying. Administrators should look into the current acceptable-use policies for technology (such as mobile devices and the Internet) in schools. Telling others, like teachers or family members, about cyberbullying is still a good way to stop it. It is crucial to build simple and flexible reporting methods. In order to allow students to anonymously report concerns or make comments, we could, for instance, set up help lines (such as a phone line), e-mail addresses, or Web links, as well as place boxes or other similar devices in high-traffic areas of schools.

Second, schools should offer parents, students, and staff information regarding cyberbullying and establish clear guidelines for what to do in the event of an incident. Fundamentally, in order for adults—including parents and teachers—to comprehend how adolescents communicate and how cyberbullying occurs, they must keep up with emerging technologies. The findings of this

study suggest that school adults only offer a limited amount of assistance, which may be due to their lack of knowledge on how to cope with cyberbullying. Hence, chances for professional development for school adults must include effective strategies. Schools may offer parents the chance to learn these techniques. Similar to this, strategies for dealing with cyberbullying issues must expand beyond the one-time workshop format for kids and become a regular element of curricular instruction. These lessons can be taught in a variety of school settings, such as classrooms, assemblies, and continuing education courses. For instance, schools can use forums to offer kids the opportunity to learn adaptive skills, such as handling emotional conflict and forming constructive behavioral patterns, in addition to mediating between cyberbullies and cybervictims. These settings foster strong rapport and dependable connections between students and faculty members, as well as within the student body. Also, parents can participate in such activities to increase their capacity for combating cyberbullying.

Students need to learn the obligations that come with using technology because they are a crucial group in the fight against cyberbullying. In order to encourage appropriate conduct at a young age, they should be informed of the effects of technology abuse. Students must be aware of the risks and realize how crucial it is to seek adult assistance when cyberbullying happens. Students should be aware that when reporting instances to responsible adults, they may need to be persistent in order to get the adults to take the situations seriously. Kids can also inquire about the adults' plans for resolving the issue.

We would like to express our heartfelt gratitude to our teacher, Ms. Marielle C. Balayo, for her help and suggestions, which substantially improved the paper. We would also like Ms. Balayo to know that her support, words, and actions inspired and motivated us throughout the time we spent finishing this task. Her guidance to us is greatly appreciated.

Along with our principal, Mr. Rafaek Patrick Pecjo, who provided us the opportunity to conduct this remarkable study on the issue, *Cyberbullying: Impacts and Causes Towards Students' Behaviors*," which has helped us to understand the circumstances and the challenges of each student in SnJA.

5. ACKNOWLEDGMENTS

The Impact of the Personalities of Teachers and Staff to Students' Academic Performance

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Practical Research 1

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Abstract: This study seeks to give readers a quick understanding of how attitudes, particularly those of teachers toward their students, can affect their lives in both positive and negative ways. The major objective of this paper is to identify the potential causes of these negative actions, present proof of their effects, and discuss the traits a teacher might possess in order to be approachable by pupils. The goal of this study is to enhance communication between students and teachers as well as among school personnel. It will also examine how this improvement in communication can help kids express their ideas and worries more freely and fearlessly. It is common knowledge that instructors serve as a child's second set of parents and that school is their second home. When a student has issues that they may not be able to discuss with their parents, it is critical for teachers and other school staff to be viewed as someone they can turn to. This research mainly examines how a student's experience in school—whether it was the best or worst experience possible—would impact their academic performance and throughout their entire lives. A student's ability to learn may be impacted by a teacher's words of encouragement or humiliation because they will be remembered and may have lasting effects. In order to fulfill their aspirations as the years go by, students must remain motivated to study new information. This is feasible if the students work with their professors and if the teachers support and encourage them.

Key Words: attitude; communication; academic performance

1. INTRODUCTION

1.1 Background of the Study

Personality is an important aspect of one's life as it also affects our relationships with others. According to Cherry (2022), personality is an individual's unique and distinguishable

thoughts and feelings. It is how we describe someone's traits that makes them unique to others. These traits could define someone as a person, and they are likely to be present throughout their life. Each individual has a distinctive personality that may alter and evolve as they grow older, an

identifiable mode of emotion, thinking, and doing. The best method to exhibit one's personality is done through interactions with other people, which include emotions, attitudes, and opinions.

Students' education is the direct responsibility of teachers. They direct educational activities in the classrooms. In short, teachers are the ones we run to whenever we need to know something. But why are students hesitant to talk about their academic, personal, and family issues with their teachers? Students must pay close attention to teachers' personalities since it has a significant effect on how well they will succeed academically. Why? In order to be a good teacher and to satisfy his or her students, the teacher must obtain personality attributes such as motivation, patience, cooperation, and leadership. Most people tend to think that a teacher's personality has a big impact on students' results, both academically and psychologically.

The ability of students and teachers to communicate effectively has the potential to enhance learning and foster a healthy learning environment. But, why are students hesitant to talk about their academic, personal, and family issues with their teachers? Teachers frequently struggle to develop entertaining classes and establish one-on-one connections with their students. The teachers' harmful personalities may be the reason why the students don't feel loved, and as a result, they are hesitant to discuss their issues with them. Students usually keep their thoughts to themselves when they communicate, so teachers may believe that a child who

doesn't ask many questions is uninteresting or doesn't have any problems to discuss. We should elaborate on this in order for teachers to be aware of the significance of personality to students' academic performance and to encourage students to discuss their issues with their teachers.

1.2 Statement of the Objectives

The main objective of this paper is to assess strategies that could be helpful for both teachers and students. This paper's goals are:

1. **To determine** the factors of teachers having a pleasant personality towards students
2. **To find more evidences** that an attitude of a teacher could affect a student's academic performance
3. For both teachers and students **to consider many ways** to have an effective school year.

1.3 Significance of the Study

This study will encourage future generations who are having a hard time raising their suggestions and concerns with the authorities of the school to not be afraid of reaching out. It is also a call to teachers, whose attitudes could have a massive impact not only on the student's academic performance but also throughout their lives.

Another added benefit of knowing about their personality is to better understand the people around you whom you work with, interact with, go to school

with, and almost everyone, you have social interaction within the school.

1.4 Scope and Delimitation

The scope of this paper will mostly cover the attitude a teacher must have and a student's possible response to it. This research will assist students who are having difficulty conveying their ideas and concerns to school officials. We took this action in order to assist students who have trouble communicating with their teachers, assist them in approaching school administrators with their concerns, give them the confidence to speak their minds, and assist them in interacting with others at their school without hesitation or fear.

2. ANALYSIS

2.1 Why Students are Afraid of Raising Their Concerns

The majority of students, if not all, experience peer anxiety. These students are embarrassed and fear what their peers will think if they ask questions of the teacher. As students enter their teenage years, making friends and fitting in become more crucial. Some students may be overly shy or even terrified of being singled out in class. Even temporary successes are overshadowed by the fear of failing the next assignment or test. Many students will not speak up in class because they are afraid that other students will judge them if they have the knowledge. Some may suffer from a condition known as "gelotophobia," or the fear that others will laugh at them (Baskin, 2015).

2.2 Advantages of a Teacher's Positive Personality

A good attitude in a teacher is a great help for any student, because the students will be more motivated to improve their studies and skills when it comes to school activities because they have a kind and supportive teacher who will teach them and understand any reason. Having a good teacher is a great help to students because they will be encouraged to study and they will remember what their teacher taught. A good teacher's personality has a big advantage for students; they will focus on studying because they will no longer think of their teacher like others who are grumpy and so on. Many students hope that their future teacher has a good personality so that they can study well. A kind teacher always receives good things from students, family, or anyone else (Pugh, 2021).

Having healthy student-teacher relationships is advantageous for both the students and the teachers. As teachers use strategy to build these connections, they gain better interpersonal and professional skills, which is one of the main advantages for the educator. Positive student-teacher interactions are a prerequisite for the teaching profession because they help educators advance professionally by increasing their capacity for crystal-clear thought expression under time constraints. Teachers need to develop effective stress management skills in order to convey ideas and avoid frustration. Some educators discover that improving their interpersonal communication skills lowers stress and,

in addition to those relationships, promotes the development of positive relationships with parents, coworkers, and students (Gleaton, 2017).

In addition, according to Comia (2019), a calm atmosphere results from pleasant interaction. A strong bond between teacher and student fosters academic success. Teachers that stress the good aspects of their pupils rather than the bad aspects encourage them to engage in positive conduct. A teacher's attitude, whether conscious or unconscious, has an effect on pupils' academic achievement, either directly or indirectly. A pleasant attitude toward students by the teacher is an efficient technique to motivate students to perform well in school. Teachers should be role models because their attitudes and behaviors impact students. Students are motivated to continue their studies when they sense a favorable atmosphere between teachers and them, which is one of the beneficial consequences of teachers' attitudes on students' academic achievement. A teacher's positive approach toward each student is especially vital nowadays, when other pupils are going through a lot and trying everything they can to succeed. The optimistic attitude of the teachers will give the pupils the feeling that they will be guided in achieving their goals.

2.3 Disadvantages of a Teacher's Discouraging Attitude

According to Villaseñor (2023), a teacher's behavior can also have a negative impact on the socio-emotional

development of students. For example, if students believe that their mentors will always bail them out of trouble, even well-intended mentoring can lower the perceived cost of engaging in risky behaviors, increasing the likelihood of these attitudes. Aside from their own stress, teachers' inability to cope with stressful situations in the classroom may have an impact on their ability to manage students' misbehavior.

This negative attitude of the teacher will affect the students' learning and cause less interaction and agreement between the teacher and the learners. The behavior and the reaction of the teacher towards his students are among the most vital factors that can have a considerable effect on their achievements (Maazouzi, 2019).

Lastly, a poor instructor might result in serious setbacks for a pupil or a group of students. By causing noticeable learning gaps, they could make the task of the following instructor more challenging. A terrible teacher can foster a culture of extreme indiscipline and turmoil, creating a cycle that is difficult to break. Sadly, they can also devastate a student's self-confidence and morale. Tragic and permanent consequences may result from this (Lynch, 2021).

2.4 Causes of a Teacher's Negative Behavior

A person's personality can influence the individuals they deal with and those around them. In this study, teachers—who frequently struggle with student discipline—are the main subject of attention. The student would view that particular teacher as someone who

is difficult to approach because they think that they would be irritated at them since they would either be short-tempered or always stressed, which would end in them spilling out their frustration on a student.

There may be a variety of explanations for a teacher's behavior. In an article titled *Stress is Pushing Many Teachers Out of the Profession*, Gomez (2022) noted that one cause of a teacher's stress could be the result of working long hours, which can leave them feeling burned out and frustrated. Furthermore, a disruptive student could increase that tension.

2.5 How a Teacher's Personality Could Affect a Student's Academic Performance

The personality traits of teachers are known to have a significant impact on students' academic achievement, and they also play an important part in academic performance because the teacher is ultimately responsible for putting educational guidelines and values into practice during interactions with the students. The performance of the students is influenced by the teacher's personality, conduct, skill, and teaching techniques. The teacher's approach includes fostering higher order thinking abilities through the skill of assessing pupils and utilizing communication abilities while conveying the subject in a clear or concise manner.

While their instructors served as counselors and classroom managers, prejudice was a prevalent issue that the respondents faced. An expertly written manual for raising pupils' academic

achievement with the aid of the teacher's personality. To advance their knowledge and personalities, teachers should participate in workshops, practicums, performance management, seminars, and other educational activities. They have to cultivate a friendly demeanor with their pupils. According to them, the common problem faced by students that affects their academic performance is that the teacher is biased, so some students are scared to raise their concerns (Jasmin, 2019).

2.6 Positive Qualities of a Teacher that Affect a Student's Learning

Having a positive attitude along with their experience in teaching, creativity, listening skills, and empathy towards students are preferable qualities to have as a teacher, as this could motivate students to learn more about the subject. A teacher who has a positive attitude on life and uses their experiences and creativity to inspire pupils to follow their aspirations in the future can motivate students to do the same. Students will be able to voice their problems more easily because they will feel that their teacher understands them and their circumstances if the teacher has excellent listening skills and empathy (Hanson, 2020).

3. CONCLUSIONS

The researchers came to the conclusion that there are not enough studies related to this study, and it needs to have more in depth research because this would be helpful for future generations. If teachers and students cooperated, they could have wonderful

relationships. Without the students' involvement and the teacher's dedication, passion, and role model-like qualities, the school year would not be a success.

The researchers discovered that teaching and learning have a significant impact on creating a supportive and empowering learning environment for us students. Improving students' relationships with teachers has significant, beneficial, and long-lasting repercussions for our academic and social development. Achievement improvements won't come from merely enhancing the interactions between students and their teachers.

When a teacher has a positive attitude, learning is tranquil, and students can concentrate on their studies as well. When a teacher has a poor personality, students tend to focus on their teacher rather than what they are learning. Enhancing the students' communication abilities and letting them express their feelings will make it easier for them to talk about their concerns with their teachers since it helps the student's confidence and progress to be more engaged and vocal about their thoughts.

3.1 Recommendations

The researchers advise future researchers to focus on this issue since it is relevant and to conduct in-depth research on the significance of establishing a positive relationship between teachers and students.

Mrs. Marielle Balayo, an advisor for Practical Research 1, has received acknowledgement and thanks from us for her assistance with this study. Her aid and encouragement were extremely helpful in getting this research done.

We would also like to thank **San Jose Academy** for giving us the chance to do this research, for encouraging us to do so, and for giving us the information we needed to communicate our thoughts and abilities in writing and conducting a research pa

4. ACKNOWLEDGMENTS

State of the Filipino Fishermen and Domestic Workers in the Philippines

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Practical Research I

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Abstract: This study investigates the relationship between the income and the quality of life of Filipino workers, focusing on wages, salaries, working conditions, and the impact of the COVID-19 pandemic through an in-depth analysis of the factors that influence workers' earnings. Key findings that reveal the low wages and poor working conditions continue to be a significant problem for Filipino workers, such as the lack of mental health resources that affect the worker's quality of life. This study also reveals the significance of income in determining a person's quality of life and the role of government policies in addressing this issue. The findings of this study indicate that improving working conditions can significantly enhance the quality of life for Filipino workers given the current economic challenges brought by COVID-19 and the high and rising inflation rates. While there are extensive studies that support our research, there are limited studies, such as those on the state of workers and their working conditions. This paper provides a relevant insight that can inform policies and interventions aimed at improving the conditions and well-being of Filipino workers.

Key Words: Remuneration, Workers, Environment, Wages, Economic

1. Introduction

Remuneration is the term used to describe an employee's total compensation. It includes not just the base salary but also any commissions, bonuses, overtime pay, or other financial benefits that an employee may be entitled to from their employer. Employee benefits may or may not be included in their salary.

1.1 *Background of the Study*

An on-site gym and an accommodating vacation schedule are amenities, not pay for workers. As an alternative to taxable fringe benefits like the use of a work vehicle for personal use, direct cash payments in the form of compensation are also an option (James , 2022).

1.1.1 • *Labor Manpower of the Philippines*

In terms of employment, the labor force in the Philippines (15 years and older) totaled 40,426,000 in 2012 (64.2% of the population), with 39% of women and 61% of men participating in the labor force. The labor force participation rate ('LFPR') of women significantly increased from 30.6% in 1970 to 50% in 2012. While the LFPR began to decline in 2013, falling from 64.2% to 63.9%, the male labor force saw the decline as being more substantial. (Battad, 2014) The Philippines is reported to pay the lowest salaries in Southeast Asia. Poor working conditions, such as low pay and ineffective management, may lead someone search locally or internationally for better job possibilities. (Mendoza, 2021)

1.1.3 • Wages, The Bloodline of the Philippine Economy

The salary offered by a job is typically one of the most significant factors for most employees. Workers can support themselves through their work thanks to wages. Additionally, it offers incentives for productivity and corporate loyalty. The salaries that people receive fuel the economy more broadly. (Hartman, 2021). Many workers, including fishermen, receive an amount of wages that is insufficient to support their daily expenses. Today, it is important for workers to receive larger pay than usual because the cost of products and services has increased significantly over time.

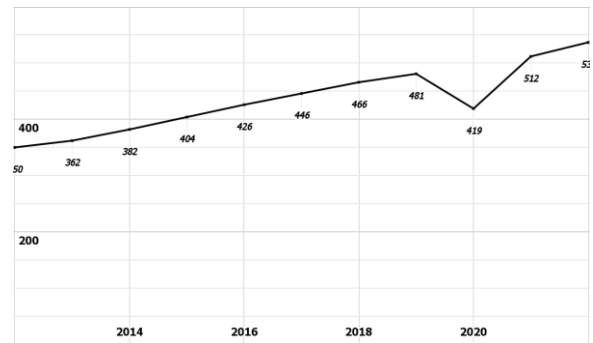


Fig. 1. Wages of Filipino Workers in National Capital Region

1.1.2 • Inflation, Goods Prices, and Wages

Last December 2022, the inflation rate of our country reached 8.1%, making it the highest rate since November 2008. Because of that, the price of goods, especially onions, is affected, causing their prices to increase, which highlights the significance of our wages as we must match the cost of goods and services. According to Jones (2019), "economic risk-sharing is a justification for maintaining salary disparities." This recognizes that employees who participate in profit sharing or crew sharing have higher financial risks than employees who work under a contract. For instance, crew share employees receive nothing if a fishing vessel lands no fish, whereas their counterparts on contracts receive their entire wage. The fact that these arrangements share risk helps to explain why they are most frequently utilized in industries dependent on natural resources, like farming and fishing, where the value of production is susceptible to a variety of external shocks.

1.2. Objectives

The purpose of this research is to gain a comprehensive understanding of the current state of remuneration for Filipino workers and their working conditions, with a direct focus on identifying factors that impact their livelihood and earnings. This research seeks to reveal the vulnerabilities and shed light on issues that impact the lives of Filipino workers. The objectives are as follows:

- Recommend policies and ideas that can improve the lives and earning of Filipino workers.
- Examine government documents and academic literature.
- Analyze the factors and provide insights that affect the earnings and improvement of Filipino worker's livelihood.
- Conduct the research through surveys and worker' interviews.

2. Analysis

2.1 • Experiences of the Filipino Workers

The COVID-19 pandemic crisis caused an abrupt and fundamental change in nurses' everyday lives in healthcare systems, which brought stressful and overwhelming hurdles in their battle against this sickness on a daily basis for frontline workers (Sadang, 2021). On the other hand, the Philippines' mental health specialists also encountered challenges during the pandemic. There is still a lack of information on the actual experiences of mental health practitioners in the Philippines during this extraordinary period of the pandemic. The rise in their client rates over this time period has been reported. (Tee et al., 2020). The majority of their customers (85%), according to the Philippine Mental Health Association, Inc. (PMHA),

sought help because of worries about the pandemic. Of the 20 to 25 calls on average that are received each day, 40% are from people with anxiety disorders and 30% are from people with depressive disorders (Manila Bulletin, 2020). TWith the notable shortage of mental health professionals in the Philippines, the increased workload is a significant challenge. The necessity of coping in the face of the pandemic has re-established the use of both emotion-focused and problem-focused coping strategies, together with the modifications made by mental health professionals.(Morin, 2020) As a result of the pandemic, teachers anticipate greater learning outcomes in work-from-home situations. (Flynn, 2018). Teachers' mental health is the aspect of their daily lives that is most impacted. Due to the new setup, new teaching-learning approaches, and the use of technology, the teachers who were working at home felt challenged, stressed out, and depressed. The responses indicate that they are psychologically exhausted. Also, the advantage of working remotely is addressed. (Steidtman, 2020). The benefits of WFH that had been emphasized included the elimination of a commute, time spent with loved ones, opportunities for self-care, and increased flexibility. Eighty percent of respondents claimed that after the COVID-19 pandemic, their mental health still hadn't changed. (Gijzen et al., 2020).

2.2 • The Influencing Factors of Workers Earning

The FishCORAL Project, in collaboration with the Bureau of Fisheries and Aquatic Resources (BFAR), provides various livelihood programs to fishing households in Barangay Rizal and Libertad,

Esperanza, Masbate, Philippines, such as seaweed cultivation (J.F., 2022). According to a study, income is a significant factor in the decision to live independently, and most workers in Barangay Rizal and Libertad, Esperanza, Masbate, Philippines, rely on seaweed harvesting for their primary source of income, earning a monthly income of Php 123,571.00 (\$2,360.39) and having a pension plan. Age and civil status are also factors that significantly influence their decision to live independently (Lagaras, 2019). Moreover, the paper discusses the potential of certification-supported farming as a form of assistance for land reform beneficiaries who have a strong desire to become landowners. The study focuses on the compatibility of certification-supported farming with diverse activities, highlighting the reality of livelihood diversification among member households of certified cooperatives (Makita, 2016).

3.3 • Government Documents and Records

Fishing is a labor-intensive business, and labor expenditures are one of its main expenses, typically paid through a crew-share system. However, compensation for fishers' labor is often understated in financial records, making it challenging to estimate crew remuneration accurately. Pinello et al., (2018) aim to shed light on how much fishery workers are paid and propose an unconventional approach to estimate crew remuneration in fisheries. Similarly, in the fishing industry worldwide, the majority of fisheries use a share system, where the crew receives a portion of the profits or a portion of the profits less expenses. The share remuneration scheme is one of

the major costs in the fishing industry and has a significant impact on business behavior and economic performance. Guillen and Macher (2015) argue that a share system is more important to consider for vessel owners than a fixed remuneration scheme when evaluating the primary management objectives for fisheries. In the Philippines, the liberalization of the economy has led to an increase in trade in the unregulated sector and an increase in rural to urban migration, resulting in a street-based economy. Women, in particular, have turned Philippine city streets into their new place of business, selling various goods. These exchanges raise concerns about who has access to and rights over street spaces, as they take place in public areas that are not typically used for commercial activity. According to Professor Milgram (2011), female street vendors challenge essentialist categories like informal/formal work, appropriate space use, and legal/illegal practice through their livelihoods, focusing on the expanding street economy in Baguio City, the industrialized and administrative center of the northern Philippines. However, these women face challenges defending their rights, and many of them are unprepared for labor organizing. Nonetheless, through their actions, these vendors have successfully fought for some regulations' concessions, allowing them to consolidate their access to urban spaces and earn a living.

2.4 • Foreign Strategies

Increasing Overtime Pay. In Norway, an employee who puts in extra time at work is entitled to a 40% premium on top of what they would have been paid for similar work done during regular business hours

(Replicon, 2022). Whereas in the Philippines, during regular workdays, the hourly rate is only 25%; on rest days, regular holidays, and special holidays, it is 30%. Direct subsidies for fishermen. In order to safeguard its national interests, Indonesia, one of the emerging nations with significant potential for fisheries and fishery products, is interested in continuing to offer subsidies in the sector. To improve the welfare of fishermen, Indonesia still needs direct subsidies, like specific loan programs for them (Nur, 2019). In the Philippines, fishermen also need some direct subsidies to at least benefit from their work because they are underpaid. The minimum wage should be raised. According to the Minimum Wage Fixing Convention of the International Labour Organization (ILO), the goal of the minimum wage is to provide wage earners with the essential social safety in terms of the minimum levels of pay that are permitted. Also, the minimum wage must be sufficient to cover the worker's basic necessities as well as those of his or her family. Lemos (2009) claims that after researching the effects of minimum wages on developing nations and using Brazil as an example, he came to the conclusion that raising the minimum wage is a more effective strategy for reducing poverty than integrating workers from the informal sector into the formal one (Bersales et al. 2014).

3. Conclusions

Researchers have found that the pandemic has caused difficulties for many Filipino workers, including higher rates of anxiety disorders and depression among those in the medical field and mental health professionals. In addition, teachers working from

home also experienced high levels of stress and depression due to the new setup and use of technology platforms in their teaching. However, there are advantages to working from home, such as spending time with loved ones and improving flexibility. Furthermore, researchers also found out that the FishCORAL Project made significant and effective contributions to the livelihoods of fishing households in Barangay Rizal and Libertad, Esperanza, Masbate, Philippines, through seaweed cultivation and other livelihood programs, workers have been able to increase their monthly income and have access to pension plans. Additionally, the study highlights the importance of considering age, civil status, and income when developing livelihood programs and supporting the decisions to live independently. Researchers have found out that the Philippines is a major source of seafarers for the world's commerce fleet, with Filipino seafarers remitting billions of dollars home annually, making it one of the major costs in the industry. The study proposes an unconventional method that replicates the fishermen's methods and focuses on both the formula used for the calculation of remuneration and the data required. Moreover, researchers have recognized that rising product costs in the Philippines have had a significant impact on the workforce, which puts in a lot of effort but still receives inadequate compensation from a company. We recommend four ideas to conclude this Research:

3.1 • Mental Health Programs

The first study revealed a critical recommendation for support workers. The findings could help healthcare organizations design impactful mental

healthcare programs that are accessible and relevant to the demands of the general public.

3.2• Program Expansion

FishCORAL Project is foreseen to have an effective and beneficial impact on the fisherfolk of Barangays Rizal and Libertad, Esperanza, Masbate, Philippines, with its chances of success. It is highly suggested to expand and intensify the collaboration between organizations in charge of the FishCORAL Project program to reach many fishermen, not just those in Masbate.

3.3• Policies and Regulations

Since street vending is an unregulated sector, as explained in the third related study. It is prone to many negative outcomes that it may cause, such as exploitation, unsafe working conditions, and a lack of social protection. It is recommended that governments need to develop regulations and standards in order to ensure the worker's safety conditions

3.4• Augmentation of Minimum Wages

Policies in Norway such as 40% premium overtime pay, largely benefited the Norwegians; thus, it is recommended to policymakers and employers for their workers to raise their wages to disseminate poverty and is a better approach to decreasing poverty compared to incorporating workers from the informal sector into the formal one, according to Lemos (2009) as cited in Bersales et al. (2014). And providing direct subsidies similar to Indonesia, interested in continuing to offer direct subsidies in the sector.

Researchers would like to express their sincere gratitude to **Ms. Marielle Balayo**, a Practical Research I Adviser for her guidance and support throughout the course of this research. Her knowledge in the field of research has been instrumental in refining this research.

Additionally, the researchers extend their gratitude to **San Jose Academy** for providing and facilitating the resources necessary to conduct this research; the Academy's commitment to nurturing and fostering academic excellence is remarkable.

4. Acknowledgement

The Philippines Ineffective Justice System: Biased Enforcement of Fairness in Rights of the Filipinos

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Abstract: The main goal of this study is to find out how the justice system has changed, how well it works for its own people, and how it affects its own country. The lack of transparency toward the people and justice has a big effect on every Filipino's human rights and, by extension, their ability to get the right and legal justice for themselves and everyone else. We want to show and provide you with the study that proves that the system of justice in our country is not great for anyone, and there are biases that happened inside this system that could be against the law. The government officials use their power to manipulate and hide their own truth from the victims, just to hide something. According to our research, in the past years there have been serious cases that happened, such as rape, hazing, convicting without trial, extrajudicial killings, and other cases that happened profoundly within a short period of time. These cases have been in the public eye, and there are a lot of people that have died without committing a felony and only been killed because of something from the police, and this is something that is against human rights. The government should not repudiate these serious happenings, knowing that there are people who only achieved justice because of their assets, money, and connections throughout their case. This research will teach you about what happens in our justice system and how it works for everyone. The justice system greatly affects the freedom and human rights of every person in our country, and a lot of families are still waiting to accomplish the justice they're serving for. Years have passed and our justice system is still intact, but the unfavorable government should take legal action that covers human rights.

Keywords: Unfavorable Government; Effectiveness; Accomplish; Human Rights.

1. INTRODUCTION

1.1 Background of the study

The Justice System is a public procedure that handles cases along with the country's issues as they prosecute and trial the crime cases towards a lawful decision. However, the Justice System proclaims the integration of each Filipino Rights among the social and lawful rights (Patterson, 2018). Contrary to, the justice system in the country of the Philippines implies to be opaque and biased; one of the major problems here in our country is the intransparent treatment of one another. Since the status of each person is the basis for freedom and to achieve human rights, day-by-day there are persons who are being accused of a certain action or a false accusation and experience red tagging (Tubiasano, 2015). The use of power should be accountable to its own country and people. The Philippines suffers from an inaccessible justice system, countless crimes that haven't been given the rightful justice, and seems to undergo a long waiting period just to gain "justice served."

Filipinos do protest this kind of action because reasoning is an unreliable thing that can't cover up human freedom. Alongside that study, lack of access to justice should also be considered and lifted in the meantime, there are a lot of delayed trial courts and inaccessible studies of cases. But with the aim of this research to emphasize the significance of in-depth understanding in the various sectors of the justice system. This research seeks to provide alternatives to the dysfunctional and flawed Philippine justice system through conducting research on social injustices, law

enforcement, and legal matters in the community (Myers et al., 2021). Allowing everybody to obtain a legal action that can protect the human rights and justice of the country from the unlawful interest of the government, justice can be in any form.

1.2 Statement of the Objectives

With the aim of this Study, the researchers purpose is to identify the things, actions, and to provide a deeper knowledge and understanding to the Ineffective Justice System in the Philippines.

Correspondingly, this research is attempting to deal and determine the following:

- 1.) *To address* the Rights of every Filipino through a relevant Study and deeper understanding to the social impact of its deliberated activities and cases.
- 2.) *To Offer* a substantial investigation throughout the Justice System in the Philippines, and address the fractured things throughout the Legal System.
- 3.) *To Identify* the important relevant things and to provide a significant exploration into the Justice System and Democracy of the Philippines.

1.3 Significance of the Study

The aim of this research is to emphasize the significance of in-depth understanding in the various sectors of the justice system. This research seeks to provide alternatives to the

dysfunctional and flawed Philippine justice system through conducting research on social injustices, law enforcement, and legal matters in the community. As well, to administer research that will enhance a wide range of methods that are beneficial to serve humanity, guaranteeing that they feel safe in their own homes and sustaining society's order with a fair, unbiased, efficient, and effective justice system. Furthermore, this study attempts to function as an enlightenment model for this generation and society, not only for students or young people. This study will be advantageous for future ventures and similar studies for future purposes.

The Current Situation of Justice System in the Philippines

The current justice system in the Philippines has been greatly changing for the past years, the interest to study about the current state of the country and its nature should be primary. In consecutive years the nature of knowing the interest of the justice system for the crimes and victimization happens in more than just a study.

The Justice System based on Human Rights and Freedom

Enhancing human rights and freedoms to obtain them from the justice system, every person in the Philippines, including men, children, and the underprivileged, should have access to

the justice system in the country. All of the people should obtain a transparent and non-biased system for themselves under the law. The LGBTQ Community in Schools should be focused; a lot of students have been harassed, bullied, and experience hatred; alongside this, a lot of students whose identities are gay, transgender, and lesbian are also experiencing maltreatment from the teachers and other students (Human Rights Watch, 2017). With the passage of time, the LGBTQ Community remains hopeful of being accepted by society, particularly the government, and many students face discrimination as a result of their chosen identities. The implementation of letting them wear the uniform they chose should be one of the actions that are needed to be performed, letting them choose their identity, which is one of their rights. The human rights situation in the country is profoundly opaque to most of us. These people should have the urge to choose their identity and be protected by the justice implemented to show respect for human rights. A Freedom to Choose is their Right to Be, promoting the LGBTQ Community to take its place and withdraw from the unfair treatment towards society and government (Human Rights Watch, 2017).

2. ANALYSIS

Extra Judicial Killings against Human Rights

But in 2016, a merciful start happened in the Philippines. Regardless of that, there are 20,000 people killed under the rule of the Duterte administration, and this number has increased from the following years.. The merciful killing happened when the 'Drug War' started, and the police officers have been powerful enough to make killings from time to time. They abuse their power without restraint, and there are people who have been killed without committing a crime and have been defamed as a result of their imprisonment (Johnson, 2018). According to the UN (Schlein, 2021), the extrajudicial killings in the Philippines have been immoral and outrageous, the deaths of journalists and other news writers are alarming, and the harassment has been increasing in the Philippines (Honde, 2022). This shows that all of these people have been killed because of the power of the government to intend to kill its people and violate the Human Rights Act itself. The freedom of each Filipino to be trailed, jailed, and killed ends in slaughter even though they did not fight against the police (Honde, 222)

The Justice System and Delayed Justice for the Victims

Years ago, many lives were taken from the families of the people who had been assassinated and killed because of

political conflict between two candidates in the city. This case is intact because of the justice system of the Philippines and the inaccessible use of their power to provide the lawful justice that happened 10 years ago in a massacre that shocked the public under the rule of former President Benigno Aquino III. Due to this massacre, a lot of family and friends are still waiting for the rightful justice to be served. On November 3, 2009, a catastrophic event happened in our country, and many lives were taken in a massacre (Gregorio et al. 2019). The 'Maguindanao Massacre', also known as the 'Ampatuan Massacre', happened in the southern Philippines in Ampatuan Town, and 58 people have been executed from the massacre, including 32 journalists (Corrales, 2022). They were killed by hundreds of gunmen that were hired from a powerful opponent also known as "Ampatuan" (Corrales, 2022). Among the suspects are the sons of the late clan head or leader of the Ampatuan Clan, the brothers Andal and Zaldyn Ampatuan, and other members that are suspected of doing this massacre (Santos, 2019). After this massacre, 10 years later, they're still waiting for full justice for what happened. This shows that the justice system in our country is not that reliable to everyone, even though it's a big case to study, because there are not enough judges, not enough evidence, and not enough law to be applied towards the people with blameworthy crimes (Syjuco, 2017).

This shows how the justice system has been delayed for a long time; even now, political dynasties still hold sway, especially in rural regions like Maguindanao. President Rodrigo Duterte's administration has done nothing to address the corrupt and ineffective nature of the police. The delayed justice of this is still now indicted against the families of the victims; many years have passed and there is still no proper and acceptable justice to be served (Honde, 2019).

Justice for the People in Poverty

Poverty in our country has risen dramatically, with many people suffering from hunger, a lack of income, a lack of housing, and poor health management on a daily basis. About 25% of the population and around 26 million experience poverty here in the Philippines (Platino, 2022), the financial crisis that the country is facing is still ongoing, and the inflation of items and especially foods has greatly increased (Jimenez, 2022). The poor people are the ones who are greatly affected by the corruption that happens in our country; the budget that should be allotted for them is being hijacked from the government fund, leading to no savings for the poor. Confidence in the nation's prospects for achieving inclusive growth has improved as a result of the robust economy and promises to enhance governance (Gonzalez, 2021).

3. CONCLUSION

The researchers do conclude that the justice system in the Philippines has been unequal and opaque, especially to the poor or unprivileged. And there has been neither enough nor lawful action taken in the past years; the justice system in the Philippines is inaccessible to the public and to most of its citizens.

However, justice can be served in any clear case involving discrimination, bullying, poverty, corruption, harassment, or other practices that violate human rights and freedom. But other than that, justice should be the source of humanity; equal treatment should be shown towards others. With that the Researchers studies could also showcase the following cases; cases of crimes and serious acts that are against the law are also intact with this study. And as a result of this, the researchers are intended to study and identify the capacity of this topic and what are the things that are needed to be considered throughout the process. The researcher will study the human rights of its own country and what are things that the government does that prove that there is social injustice and inequality in access to justice for all. By all results and findings of the conducted studies and investigations. The researchers concluded that there are a number of issues to contend with in the Philippine justice system. Furthermore, the country's law enforcement must be strengthened and enhanced. However, conducting several studies, the researchers

concluded that the numerous concerns of the nation's justice system can be aided by continuing legal awareness campaigns that could help fulfill the social responsibility of not only the professionals but also of the whole society by raising their understanding of the challenges affecting the country's poor justice system.

4. ACKNOWLEDGEMENT

The researchers are pleased to show their appreciation to Ms. Marielle C. Balayo, the term paper adviser, for providing wonderful guidance, support, and attention and for showing her assistance and supervision to us throughout the time.

The researchers would also like to thank the San Jose Academy for providing a good opportunity and ensuring the knowledge we are gaining. And for letting us develop our skills and minds throughout this opportunity

The Societal Implications of The Distorted History of Martial Law in The Philippines

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Abstract: The study aims to provide a comprehensive understanding of the history of Philippine Martial Law, allowing students to view it through the eyes and perspectives of Filipinos who experienced the event. Martial Law under Marcos is regarded as one of the darkest events in Philippine history. Historical distortion regarding Martial Law is a political phenomenon that involves disinformation and lies to alter our history. Historical distortion happens when the context of history is changed to suit a personal agenda. It distorts facts and has evolved into a political tool for controlling and influencing the decisions and behaviors of those Filipinos it reaches. Using historical analysis, the study aims to provide a deeper understanding of the event by addressing the following objectives: 1.) refine and expand studies on "The Societal Implications of the Distorted History of Martial Law in the Philippines." 2.) determine the methods of recognizing, understanding, and combating historical distortion by fortifying and addressing the learning gaps that exacerbate the educational endemic. 3.) identify the importance of promoting effective resistance to combat historical distortion in the digital age of fake news and networked propaganda. Thus, the results revealed that there is a direct relationship between awareness, the ongoing effort of historical distortion, flawed educational approaches, and institutional responses to combat this phenomenon. Furthermore, it not only served as a reminder for everyone but also allowed them to view the past from various perspectives and critically analyze it with the necessary supporting evidence to fight disinformation and historical denialism about the events that happened during Martial Law. This study persists as a timeless truth of our country's bloodshed history that the current generation must never forget. "Never Forget" is the public outcry of Filipinos who witnessed our country's darkest history; therefore, it must never be forgotten.

Key Words: Historical Distortion, Martial Law, Marcos, History

1. INTRODUCTION

1.1 Background of the Study

The historical distortion of Martial Law

is a political phenomenon in the Philippines. Historical distortion occurs when historical records or narratives are changed to suit a personal agenda. To change history, disinformation, and lies are used (Cristobal, 2019). Historical distortion distorts facts, causing Filipinos to be confused in the age of fake news and online disinformation. It has managed to evolve into a political tool for controlling and influencing the decisions and behaviors of the Filipinos it reaches. A few examples of how historical distortions affect our society today manifest in anti-intellectualism (smart shaming), attacks on information integrity, human rights advocates, democratic institutions, and the media. (Ramos, 2022).

Because there has been a lack of nationwide discussion regarding Martial Law among Filipinos, common misconceptions have allowed prevalent distortions to emerge. Historical distortion allows false narratives to fester and grow even more, and it perpetuates wrongdoings such as plunder and infringements of human rights. It disenfranchises Filipinos, reshapes public opinion, and catalyzes individuals to take dangerous action. (Austria, 2020). Ultimately, it invalidates human suffering and legitimizes oppressive regimes, and their abuse of power (Ramos, 2022).

Behind the steady deterioration of social memory is a flawed historical educational approach, particularly the fixation on mere enumeration and memorization in schools across the Philippines. Tirol (2022) from Ateneo de Manila University (ADMU) explains that memorization is insufficient because the Filipino culture of forgetting and forgiving is deeply entrenched in society. Teaching to conduct one's own

research is important for catching these distortions, as is questioning the source and reliability of a claim. Thus, educational institutions must act to fill big shoes in addressing learning gaps that exacerbate the educational endemic.

1.2 Statement of Objectives

For the stated purposes, this research study provides direction for investigating the societal implications of the distorted history of Martial Law in the digital age of alternative facts in the Philippines.

Respectively, the study seeks to address the following objectives:

1. **Refine** and expand studies on the societal implications of the distorted history of Martial Law in the Philippines.
2. **Determine** the methods of recognizing, understanding, and combatting historical distortion and its detrimental effects by fortifying and addressing the learning gaps that exacerbate the educational endemic.
3. **Identify** the importance of promoting effective resistance to fight historical distortion in the digital age of fake news and networked propaganda.

1.3 Significance of the Study

The significance of the study will be beneficial to the following individuals and groups:

Students. This research will provide a more in-depth understanding of the societal implications of Martial Law in our society today. The findings of this study will aid the students in becoming more analytical and knowledgeable about the truth and horrors of Martial Law in Philippine history.

Social Studies and Araling Panlipunan Teachers. This study will serve as a guide for Social Studies and Araling Panlipunan teachers as they discuss what motivates a growing number of people to believe in the lies about the Martial Law era (1972-1986). This study will also empower them to teach Martial Law at a more in-depth level using various educational approaches and strategies, as well as high-order thinking skills (HOTS).

Future Researchers. This study will help future researchers who are interested in investigating and combating current conflicts concerning disinformation, fake news, and knowledge acquisition pertaining to the horrors of Martial Law and the deliberate distortion and social dilemmas orchestrated by the Marcoses.

1.4 Scope of the Study

This qualitative research uses historical analysis as its research design. This study covers the methods of recognizing, understanding, and combating Martial Law's historical distortions and its societal implications. In response, this

study will help the beneficiaries develop into effective and active members of society.

2. ANALYSIS

2.1 The Societal Implications of the Distorted History of Martial Law in the Philippines

Any attempt to write history brought on by personal agendas causes harm and danger. Governments and individuals utilize historical distortion as propaganda to push blatantly partisan objectives rather than for the common good of the nation and its citizens (Whitman Wire, 2017). Considering that information can spread quickly in the age of cyberspace, where social media platforms allow users to share anything without having it verified or fact-checked by platform administrators, Enrile (2018) argues that this deliberate rejection of transgression among Filipinos is dangerous.

Historical distortions began in traditional media such as television, newspapers, and books, they have now permeated the digital space, particularly Facebook and YouTube, which reach 45 percent of the Philippine population. With the majority of Filipino internet users having Facebook accounts, internet trolls supporting Marcoses easily reach audiences and spread disinformation (Ramirez, 2022).

According to Lalu (2022), nine (9) out of every ten Filipinos (86%) believe that fake news is a problem in the

Philippines. The vast majority of Filipinos in the country (90%) have read, heard, or watched fake political news on the internet or social media. Most Filipinos (58%) regard social media influencers, bloggers, and/or vloggers as peddlers of fake news about government and politics. Most of the time, trolls are actual people who disseminate provocative false information. According to Paté-Cornell and Trammell (2019), there is strong evidence that the young, the elderly, and those with lower levels of education are highly susceptible to fake news. However, in the broadest sense, the more strongly a person believes their beliefs, the more strongly confirmation bias pulls them in that direction.

Its varieties include misinformation, which is created information with the intent to mislead; disinformation, which is a sensationalized type of media that resembles mainstream news; and malinformation, which is the truth but is misapplied to result in hate speech. Even though the Internet provides archives, short-form, and long-form content creators alter the reality (newspaper clippings, reports, court cases, books, etc.). People's attention spans are constantly decreasing, as is the reliability of the information. Confirmation bias comes into play. People become selective with knowledge and only recall what supports their "beliefs." Even when supplied with facts and sources, they dismiss them as fake. Countering them with manipulated data

and dubious sources. When confronted with research-backed alternatives, they feel personally 'attacked,' despite the fact that no malice is meant (Guinhawa, 2022).

This deliberate distortion of history is facilitated by a demographic structure in which about half of the country's electorate, aged 18 to 41, have never witnessed the crimes of the Marcos regime. This demographic is the most vulnerable to misinformation on social media. However, the issue is more complex than demographics. Historical amnesia is more than just intentional disinformation by political partisans. When current governments fail to improve the lives of the middle and working classes, many democracies tend to forget the past of violence (Kuhonta, 2022).

The diversion and tension in last year's election were created by historical distortions of Martial Law. Historical distortion protects a few's claims to power. In the process, it erodes democratic and electoral processes, further excluding and disenfranchising more vulnerable groups (Ludovice, 2022). As an example, consider the political turbulence in the Philippines that resulted in a diversion during the 2022 elections. This diversion enabled politicians to take action to make it harder for some individuals, primarily minorities, to vote. Our nation has been divided as a result of historical distortion. It undermines not only our cultural identities but also the struggles

and sacrifices made by those who fought in the past.

Furthermore, it has deeply created our educational system's learning gaps. Due to the highly ingrained culture of forgetting and forgiveness in the Philippines, educational institutions face the challenging task of strengthening the country's weak collective memory and memorizing. To improve the fight against historical distortions, it is proposed that the subject of Philippine history be laddered.

2.2 Learning Gaps in Teaching the Philippine Martial Law

One of the difficulties that academics and educators of Filipino history encounter is that progressively more people learn incorrect information about the Martial Law era and the Marcos regime. Anti-intellectualism has flourished in recent years with the rise of populism, which is typically founded on the mistrust of elites and the fundamental belief that intellectual pursuits are elitist or exclusive (Ludovice, 2022).

On the other hand, Motas et al. (2018) conducted a study on how Ferdinand Marcos and the Martial Law era are portrayed in the Department of Education approved Araling Panlipunan 6 textbooks in private and public schools in Laguna and Batangas City. According to their study, only 7% of textbooks, or 2-3 out of 33 chapters, are solely devoted to discussing and addressing the Marcos and Martial Law eras. All of the

textbooks included in this study's analysis were found to support Marcos' narrative.

Behind the steady deterioration of social memory is a flawed historical educational approach, particularly the fixated habit of memorization and enumeration in schools all over the Philippines. Tirol (2022) from Ateneo de Manila University (ADMU) explains that memorization is insufficient because the Filipino culture of forgetting and forgiving is deeply entrenched in society. Teaching to conduct one's own research is important for catching these distortions, as is questioning the source and reliability of a claim.

2.3 The Importance of Effective Resistance to Fight Historical Distortion

Pante (2022) contends that to effectively combat distortion, we must use every tool at our disposal. We can never win the battle on our own. To combat organized crime, such as disinformation, organized resistance is required. Regarding personal involvement, Pante emphasized the importance of simple conversations with family members and other people in close proximity. Moreover, Pante (2022) proposed the idea of organized resistance in several ways, including through enhancing informal education and engaging with others on public and personal levels. Pante contends that education is not limited to what we learn in the classroom, in our textbooks, or what a teacher tells us. Utilize non-formal education sources like movies, social

media, and more. Thus, educational institutions should fill big shoes in fortifying collective memory and addressing the learning gaps that exacerbate the educational endemic (Tirol, 2022).

3. CONCLUSIONS

The societal implications of the distorted history of martial law are wide-ranging. First, it reveals that the public perceives and absorbs facts about the Martial Law era based on information on the internet. One of the angles to capture and observe is the relationship between the machinery used in disseminating fake news and how academic and professional institutions carry out the knowledge dissemination process.

Second, the Department of Education (DepEd), the Organization of Social Studies Teachers in the Philippines (OSSTP), the National Historical Commission of the Philippines (NHCP), the Commission on Higher Education (CHED), the Philippine Historical Association (PHA), and other professional organizations should develop initiatives and programs to stop the spread of historical distortions by creating reliable, engaging online sources and platforms. Given that the Philippines is a multicultural nation, it is important to consider the approaches used in the creation of the source materials in order to serve all individuals regardless of socioeconomic status, ethnicity, level of education, and religious affiliation. Administrators in

the technology sector must create regulatory solutions. Disinformation must be defined and punished, and legislation is being passed to stop this contemporary crime.

Third, history as a subject and as a study will continue to be more important than ever. In the 21st century, the study of history in the classroom is crucial because it prepares students to live in a connected world without falling into the hands of online disinformation. History is ultimately a storytelling discipline that looks to the past to understand the present and attempts to find meaning in the face of the meaningless void of the internet. History has never been or is meaningless or just gossip (Ramos, 2022). Quoting the philosopher George Santayana (1905), “Those who do not remember the past, are condemned to repeat it.” The potential for Martial Law to repeat itself emerges if the historical distortions prevail and remain unresolved. Join discussions rather than giving objective claims. It is our civic duty to always remember the past and draw lessons from it.

4. ACKNOWLEDGEMENTS

The researchers would like to thank their term paper advisor, **Ms. Marielle C. Balayo**. We acknowledge and deeply appreciate her guidance in completing this study; she worked with all of us persistently, providing us with adequate knowledge to strengthen our research paper.

The researchers are extremely grateful to the whole community of **San Jose Academy** for giving them the chance to express their freedom and ideas which were primarily used during our research. This study was made possible with the assistance of faculty teachers, classmates, and the whole members of the school community. For their kindness, encouragement, and support,

the researchers will continue to strive and prevail with the utmost joy.

Finally, but certainly not least, the researchers want to express our gratitude to our **families and friends** for their support during these trying times and for their love and efforts throughout. Without their guidance, the researchers wouldn't have made it this far.

Laws Criminalizing the Poor Prolonging Poverty

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Practical Research 1

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Abstract: The growing number of homeless people and poverty urge the authorities to criminalize or illegalize them forcefully. Thus, our research presents them with numerous information for addressing this issue with the help of articles and reports consisting of proper practices and conventions. We relied on our data on the most practical and effective practices used by different institutions and organizations. We found several similar studies stating that poverty is rising and is affecting our society. They all dispute criminalizing poor people because practical and lawful help exists. They aim to provide housing, incentives, financing, and even hygiene support to help the poor. Based on our findings and on what we can experience nowadays, many homeless people and other individuals who experience poverty are still criminalized by the laws that we have rather than getting all the help they need. Our study also shows that some of them are committing crimes out of their will to survive.

Key Words: laws; criminalization; poverty; poor; homeless.

1. INTRODUCTION

1.1 Background of the Study

Being poor or living in a condition of poverty makes us criminals. Stealing food to survive, driving a car without insurance and having to pay fines levied, abetting mendicancy by giving alms to beggars in the streets, and living in the streets can make you a criminal. We have rules that restrict people's ability to access the essentials for human survival. The fact that these acts of self-preservation are illegal should make us wonder about the fairness and morality

of the law itself. The Philippines is home to poverty. Many beggars live in the street, panhandling and waiting for someone to give them food or money. The reported poverty rate in the first semester of 2019 was 23.7 percent, according to the Philippines' Statistics Authority (2019). The anti-mendicancy law suggests that giving money to panhandlers is prohibited by law. The Department of Social Welfare and Development warns people to stop giving money to beggars and street people, yet, many IP or indigenous people are still ending up in the street because their lands were taken away

and because of migration. These regulations disproportionately affect those who are subject to social exclusion and prejudice due to their status, such as LGBTQ+ people, informal traders, sex workers, those who are homeless, and people affected by corruption in the country.

The Penal Reform Organization (2022) claims that at least 42 African nations still retain laws against acts of vagrancy and idleness that criminalize those who lack a means of support and are unable to "give a good account" of themselves and permit police to detain them without a warrant, and in many countries, the penalty for such vagrancy can be up to 6 months to 2 years imprisonment. In the Philippines, it is stated in the Revised Penal Code under Article 202 that vagrancy is considered a criminal act; These bylaws may prohibit sleeping in any public place generally or may set restrictions on sleeping and sitting in particular locations, excluding homeless people from public spaces. (Sagbisal & Mangubat, 2019) As a culture, we have shied away from providing real answers to the root problems that lead to poverty. We even pay little to no attention to investing in postsecondary possibilities for postsecondary education, reputable career paths, better public education, affordable housing, and health insurance. Instead, we have devoted our resources and faith to putting the destitute behind bars (Penn Law, 2000). Replacing unlawful criminalization tactics with necessary support can save homeless people. Some ethical practices and conventions can protect them from the challenging conditions of unsheltered living and reduce the possibility of losing their dignity, which

is always taken from them. However, even though there is no simple cure for homelessness, effective practices are implemented to alleviate this issue. The United States studied community responses and worked with federal organizations. They developed seven guidelines to address encampments with the help of the Interagency Council. Encampments of homeless people pressure the authorities to arrest them. Hence, the created principles will move them off the streets. The goal is to show the populace that the rules that uphold this level of disparity are incompatible with both the ideals of this nation and the global community, which has an impact on all of us.

1.2 Statement of Objectives

The major goal of this investigation is to learn the untold, unexplored truth regarding the criminalization of the poor by the law.

The different goals include:

1. Elucidate the impact of authority's unequal treatment of the poor and homeless people.
2. Identify the incoherent laws criminalizing the poor and deteriorating our country and society.
3. Present the decriminalization tactics of different governments and organizations worldwide that alleviate this issue.
4. Determine the possible barriers to decriminalization hindering different governments' and organizations' successful implementations of tactics worldwide.

1.3 Significance of the Study

This study aims to help identify the gaps in the legislation and offer amendments to stop the criminalization of the poor. The results of this investigation will also help the incoming lawmakers find any problems and fix them. This will reverse the tendency toward seeing poverty as a kind of crime. Because there are so many exploited poor people, this study will also examine how the government may help the underprivileged and spread awareness. As a result, only the government can alter or improve these laws to serve the interests of the general populace rather than simply those of the wealthy. This study will contribute to the corpus of knowledge about laws that discriminate against the poor and may serve as a model for future research.

1.4 Scope and Delimitation

The study focuses on the connection between enacted laws and poverty, which persists and poses a concern for the next generation. The significance of decriminalization is also discussed in this paper, as is its potential to stabilize the situation and provide long-term remedies.

The study also limits itself to other contributing causes of poverty and will not attempt to measure this variable by other means; as a result, it will only focus on laws as the main factor and exclude all other factors.

2. ANALYSIS

Law Criminalization of the Poor

According to penal reform, around

the world, the poorest and most marginalized members of society continue to be overrepresented in prisons and criminal justice systems. Many countries continue to enforce laws that lead to imprisonment for acts associated with poor people and survival with little connection to public safety. This unnecessary overuse of imprisonment continues to drive up national prison populations and overcrowding

Some impoverished people are criminalized when state and municipal policy options trap them in the criminal legal system for performing actions to survive, such as driving without a license, being forced to sleep outside, or being unable to pay outstanding fees. And some poor often become criminals because of their state in life, and others do not have the ability to pay properly because they do not have enough skills, that's why sometimes end up being a criminal that results in imprisonment because they cannot be paid of money of their violations

It is not new to all of us that we often feel or hear about the unequal service between the rich and the poor. Service based on your life status will not stop if other policies are biased. They do bad things even though they may look dangerous just to provide for their daily needs. They have no choice but to continue what they are doing because they are not finished studying or don't have the ability to provide for their daily needs.. They're trying to make money and meet on a daily basis. They may turn to illegal activities that appear to be needless. In the end, you may believe that the only option to escape poverty

and homelessness is to make money through criminal activities if you are unable to pay and meet your needs. But we need to understand that being poor is not a crime, sometimes they have no choice but to commit such a violation, and they do bad things because of their status, like being homeless and lacking financial support for everyday needs.

Law Criminalizing Poverty Cases in the World

Homelessness and poverty are often discussed yet rarely addressed and understood. The statistics on homelessness make it extremely difficult to determine which country has the highest rate of homelessness. It is because the data is poorly collected worldwide, and they have different identifications of whether a person is truly homeless or not. While one country may provide 2020 statistics, another may only offer 2005 statistics, making it difficult to compare globally. Nevertheless, this study determines the rate of homelessness by contrasting the daily average number of homeless persons to a country's overall population.

First and foremost, the United Nations attempted to take a global survey of people that were homeless in 2005, and it resulted in an estimated 100 million people. However, as of 2021, the World Economic Forum estimated that 150 million people were homeless globally. To categorize the countries with the highest rate of homelessness per continental region, In Europe, Ukraine has the highest homeless population of 734,240 but a homelessness rate of 1.68%. In Asia,

Syria has a population of 6 million homeless people out of 17.5 million. Yemen, however, has a total population of 29.83 million but a homeless population of 3 million, giving the country a homelessness rate of 12.9%, quite higher than Pakistan.

Meanwhile, Nigeria has the largest homeless population in Africa, with 24.4 million homeless people out of 216 million citizens, giving them a homeless rate of 11.3%. Honduras has the highest homeless population in North America, with 1,235 people for every 10,000 people, equating to around 12.35% of the population. In South America, Colombia has the region's largest homeless population, with around 4.9 million homeless people out of 55.8 million citizens, obtaining a homeless rate of 8.9% of the total population. At last, Australia is the country with the biggest homeless population, with around 100,568 people per night, or approximately 0.5% of the population. Second to Australia is New Zealand, with a homelessness rate of 0.12%.

To summarize, Syria has the highest percentage of homelessness globally, with 37% of the population. However, with 24,400,000 inhabitants lacking adequate housing, Nigeria has the biggest number of homeless people. We should remember that the comparisons of homeless data are rarely accurate because various countries frequently have different identifications of whether a person is genuinely homeless or not.

Law Criminalizing Poverty Cases in the Philippines

The best illustration of laws in the Philippines that criminalize the poor is anti-tambay and anti-begging legislation. These laws make bogus claims that illegal activities such as drinking in public, without wearing a shirt or smoking outdoors are illegal. They are merely an example of the country's laws adversely affecting the poor. Another law that unfairly favors the poor in the Philippines is Executive Order No. 1563, which criminalizes mendicancy. Either a fine or a jail term is permitted under this decree. 1978, while President Ferdinand Marcos was in office. According to the law, a "mendicant" is someone who "has no apparent legal means of securing support or a job" and is physically capable of working, yet fails to put forth any effort instead of using begging as a means of getting to any legitimate calling of "living.". Mendicants could face a 500 Peso fine or even jail time for up to two years, although the maximum fine is 1,000 pesos, and a maximum four-year jail sentence was increased for "regular mendicants." (Blimkie, A., 2019).

From Ermita, 17-year-old Mary Grace Pulido. She resides there now, having been born and raised there. There, she even discovered her man. But she lives a life on the streets. In Ermita, a neighborhood famous for its bars, clubs, and restaurants frequented by international tourists, Mary Grace and her family are just a few of the hundreds of people who live on the streets. According to the authorities, these tourists unintentionally bring beggars to this city.

Many beggars frequent Ermita,

according to Superintendent Rogelio Rosales, head of Manila Police District Station 5, since visitors would prefer to provide a few pesos than to be jostled or harassed. A popular strategy used by beggars, especially young children, is to follow a passing tourist in small groups until he pulls out some change. Visitors have reported to the police that adolescent gangs had surrounded and robbed them. (Refugees, U. N. H. C. for. (n.d.). Refworld | Manila Faces Street-Dwellers Dilemma. Refworld.)

Contributing Factors of Law Criminalization

Laws that are against moral or legal standards but can sometimes be made to benefit certain groups or individuals. The criminal justice system in the United States is an example of this, as it puts a disproportionate number of African Americans and Latinos behind bars, even though they make up only a fraction of the general population. This happens because of things like racial profiling and harsher drug penalties (The Sentencing Project, 2021). This means that communities of color are unfairly targeted and treated differently.

Another element that might lead to the formation and application of illegal laws is a lack of oversight. Without strong checks and balances, those in power could misuse their power and enact legislation that limits fundamental liberties or human rights. This is particularly true in authoritarian systems where dissent is not tolerated and laws are utilized to punish resistance. For instance, there have been several claims of human rights abuses as

a result of the violent force used to suppress recent protests in Belarus against President Lukashenko's reelection (BBC, 2020).

Sometimes, even with the best of intentions, creating a law causes problems because of a lack of oversight. For instance, during the Black Lives Matter rallies, certain US states established laws to restrict protests; however, it turned out that these laws infringed on people's First Amendment rights, which was not the intended outcome (ACLU, 2021).

It can be very difficult to understand the justifications behind making and applying illegal laws. Laws that break the rules and aren't fair or ethical can result from political interests, a lack of oversight, and unintended consequences. People must keep a close eye on those in authority and hold them responsible in order to ensure that laws are just, fair, and do not violate human rights.

Decriminalization

According to The Commonwealth Institute for Fiscal Analysis (TCI) which paved the way for justice in Virginia by advocating public policies that are designed in partnership with people most impacted and shaped by credible, accessible fiscal and policy research, replacing the ecosystem of policy with new, inclusive systems of justice and opportunity, "decriminalization of poverty refers to ending laws that punish poverty and exacerbate racial disparities in the criminal legal system.

To combat the criminalization of the poor, there have been proposals made by human rights groups for a number of actions for 2021, including the repeal and reform of any laws that make it illegal to sleep, eat, or perform other personal hygiene tasks in public places, as well as the review of sanctions policies that subject people living in poverty to disproportionate fines, particularly for begging, using drugs, and other life-sustaining activities at a national, federal, state, or local level. (The United Nations Human Rights Office, 2021)

This decriminalization initiative also aims to eliminate the inequalities that disproportionately impact migrants, the LGBTQ+ community, people with disabilities, informal traders, drug users, and members of racial and ethnic minorities. Due to the usage of violations like touting, loitering, begging, having outstanding debts, and being referred to as a "rogue or vagabond," which can result in lengthy detentions while awaiting trial and punishment, there is practically a two-tiered legal system (Penal Reform Organization, 2022). The absence of decriminalization severely results in the stigma and marginalization associated with incarceration, which can make it harder for people to find work after they are released from custody. It also has serious health repercussions, particularly in overcrowded prisons with subpar healthcare services, and many other things that can significantly exacerbate the poverty that we are trying to address but are having the opposite effect due to the existence of these laws.

3. CONCLUSIONS

Given all of their power and influence, authorities have a significant impact on the poor's unequal treatment. If the authorities were abusing their power over the poor, the poor wouldn't be able to stand up for themselves against them. Some laws criminalize the poor, as this topic points out, and since those in power are the ones who draft laws, authority has a significant impact on inequality. If we're talking about factors that lead to unfair treatment of the poor, the power structure is also very likely to be a factor. The maximum fine for mendicants is 1,000 pesos, and the maximum jail term for "regular mendicants" was increased to four years from the previous maximum of two (Blimkie, A., 2019). This illustration merely serves to highlight the fact that unfair laws may exist when authority is abused. Although it has been established that authorities often discriminate against the poor, we can currently see no overt efforts to address this problem, or if there are, they are insignificant.

The findings of the incoherent laws that criminalize the poor—leading to the deterioration of the world—prove that such inhumane laws indeed exist. Incoherent legislation passed in cities and states globally, especially those stated in the study, was identified as an indeed blot on our world and society. Criminalizing their humane and normal acts and penalizing them for the circumstances of their homelessness does not alleviate nor solve homelessness and poverty. As stated in our paper, the fact that these acts of

self-preservation are illegal makes us wonder about the fairness and morality of the law itself. Understanding the justifications behind making and applying such unethical and unfair laws is complicated. Even with the good intention of creating it, it causes a problem because of a lack of oversight.

The research has demonstrated that in order to stop criminalizing the poor, governments must employ a range of tactics. The assumption that prevention is more financially advantageous than treatment for homelessness underlies all decriminalization strategies, which may change depending on the nation. If we are talking about the decriminalization strategies they used, the American Bar Association's Commission on Homelessness and Poverty made a resolution in which they stated: "resolved, that the American Bar Association opposes the enactment of, and supports the repeal of, laws and policies that punish persons experiencing homelessness for carrying out otherwise non-criminal life-sustaining practices or acts in public spaces, such as eating, sitting, sleeping, or camping" (ABA, 2007). They started aiding in the legalization of homelessness in 2019, and they'll keep growing and changing until 2022, with great expectations to further the changes.

We have determined barriers to discrimination, including the lack of consistent and adequate funding and resourcing, draws low-income individuals into the criminal justice system rather than expanding their

chances for success, People are more likely to end up back in jail or homeless when they return to their communities because of impediments to working and housing, and poor people, Indigenous people, and people of color are disproportionately harmed by the unfair system. These are some of those identified as possible obstacles to decriminalization that hinder the successful implementation of the tactics of different governments and organizations around the world. If the self-governing of our country is an obstacle to our success in overcoming and eradicating poverty, poor people and homeless people cannot escape and get out of laws that keep them in situations that make them suffer.

This is one of the problems that must be eradicated, particularly for those stuck in poverty. They need to know their rights and how they can get out of poverty without breaking the law.

4. ACKNOWLEDGMENTS

We would like to express our sincere gratitude to **Mrs. Marielle Conde-Balayo**, our instructor for Practical Research I, for providing us with the opportunity to complete this project on the topic Laws Criminalizing the Poor that Linger Poverty. She also assisted us in conducting extensive research, and we learned a lot of new information, including about this prevalent social issue addressed in the research. She took the time to walk us through the process of building our study step-by-step, and she was

available to us at all times with project-related inquiries. She also believed in us, our abilities, and the individuals this research may assist.

Second, we want to acknowledge the support provided by our **parents and friends**, who helped us finish this project within the allotted time by assisting with our mental demands. We were able to build my project and make it a wonderful and pleasurable experience solely because of them.

This project is being done not simply for academic credit but also to educate the general population about this matter that's affecting us all.

Entering the “Real World”: A Study of Students’ Satisfaction with Life

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The underlying issues that need to be looked at in this study are ones that most young people today are dealing with. This lockdown and pandemic have taken a big toll on teenagers’ mental health for the past three years. Everyone is eager to socialize and go out again, though it’s not possible due to the health restrictions of the law. Teenagers and young adults are locked up in their own homes, which causes stress and terrible psychological effects. The youth have anxiety and mental health problems because of how unpredictable life is. The feeling of having no one to talk to and communicate with is already a major invitation to anxiety that may eventually lead to depression. There is no way to know for sure that anyone could be sane after being alone for a long time. As a result, many struggling teenagers felt overwhelmed by the Department of Education's sudden changes in policy. People were confident that this online class would take more of the year than they could imagine. In 2022, the government officially declared the opening of face-to-face classes. Mixed reactions were received to this abrupt news. Some of the factors mentioned in this issue are the fear of commuting and making the students’ way to their school again. If we dig a much more profound meaning into this, some have already enrolled in schools far away from their homes due to the reliance on online classes still being held. Now, face-to-face classes are strictly mandatory. Though the virus is dormant, safety measures are still possible with COVID-19 protocols. From 2020 to date, the adolescent depression rate has increased by 20.5% to 25.5%. The majority of the reason for these

soaring digits is stress due to isolation.

Key words: anxiety; isolation; adolescent; depression; commuting

1. INTRODUCTION

According to the Pelagia Research Library (n.d.), anxiety is a psychological and physiological condition that includes aspects that are social, psychological, cognitive, and physiological. Feelings of worry, dread, and unease are all signs of anxiety. It can also be a normal reaction to stress. In our country's modern time, some schools still experience hybrid classes. Hybrid classes combine traditional face-to-face

learning with web-based online learning. Due to this, anxiety has become more and more recurrent, and students have been stressed out.

The discovery of COVID-19 and its rapid dispersion worsened the people's mental instability. The deaths of Filipino people caused by the virus have sent more people feeling anxious than before. In the year 2020, we had our first encounter with COVID-19 here in the Philippines. Humanity suffered a great loss under it. People lost important things and sentimental people in

their lives. In 2021, many years after the pandemic, the Philippines got their first

vaccine against COVID-19. This made it less likely for people to get the virus. However, you can still get COVID-19 while having the vaccine. COVID-19 was the reason why we had hybrid classes again. Some people still get anxious about this because they think they might still get the virus. In the first place, having the vaccine doesn't guarantee your safety from acquiring the virus.

Also, the researchers set up a study to raise awareness about the psychological reasons why teenagers in our country miss school now that face-to-face classes have started up again. Some students experience anxiety when commuting alone due to many factors, such as feeling alone, being scared of getting lost, and going to faraway places. The goal of the researcher is to do this study and dig deeper to find out the real reasons why this happens to students in our country.

An Alteration from the Usual

According to the Journal of Chemical Education 97 (9), 2866–2870 (2020), teachers have had a hard time making the switch to online teaching during the COVID-19 pandemic in the Spring of 2020. Instead of coming up with a whole new way to teach online, the authors used what they already knew about interactive whiteboards and

videos to create synchronous sessions and videos that were recorded ahead of time for general chemistry courses. Similarly, regular face-to-face exams were modified to include online assessments. Given how stressful the situation was, this paper also talks about the authors' experiences with compassionate teaching and learning situations that may have helped keep a healthy environment during the pandemic.

The Modern Filipino Commuting Culture The traffic in Metropolitan Manila, Philippines, which is the worst in the world, has an effect on commuters and has shown the world what the modern Filipino commuter culture is like. Commuting is the activity of traveling regularly between work and home. A commuter is someone who uses public transportation to go somewhere from a destination on a daily basis. In a Boston-based report commissioned by the ride-sharing company Uber, it was said that individuals commuting to Metro Manila spend the third longest time stuck in

traffic every day in Asia, at 1 hour and 6 minutes, according to the MATEC Web of Conferences, 272, 01032 (2019).

A detailed report from the Japan International Cooperation Agency (JICA) in 2014 shows that the Metro Manila traffic problem cost the economy 2.4 billion pesos last year. Despite the history and the subsequent solutions from the government, the crisis still

exists. Under the Build, Build, Build program, the Philippine Administration has already started working on road and rail projects for Metro Manila. When the projects are done and the results are seen, they are expected to have long-term effects. Still, nowadays, the traffic crisis still resides as it influences Filipino commuters. A problem like this has also made it harder for people to get around Metro Manila in general.

A University of the Philippines-based study Busina, filed interviews with people who commute in Metro Manila on a daily basis. The answers show that instead of complaining about how bad traffic is getting, commuters are more interested in the past and other things. Resilience and patience are common among Metro Manila commuters, especially during rush hour periods. In a speech that was quoted by Talabong (2018), Videnik, a professor at Harvard University's Graduate School of Design (GSD), said that Metro Manila commuters have accepted traffic as part of their culture, even though they should have better public transportation options. For those who have grown accustomed to it, the Manila traffic has become the norm.

Also, as some of the main conclusions of research done in Australia by Bissell (2015) show, commuters have an effect on the culture of commuters in Metro Manila today. It was emphasized that commuting alters the commuter's lifestyle, his relationship with the place where he commutes, and how deeply tied his commutes are to the rest of his everyday routines.

Even though there is prevailing

literature related to the research's focus, it's still not enough to epitomize what is known as the "modern Filipino commuting culture.". All in all, Metro Manila may be one of the 'worst' in the world in the matter of traffic management, however, there are still lessons that an individual must learn and put into practice that can be gained from this study.

This leads to the main goal of this study, which is to recognize and justify the traditions of the modern Filipino commuter culture affected by the Metro Manila traffic crisis and its neighboring issues, such as the prevailing concerns on public transportation and infrastructure.

2. ANALYSIS

Adjusting to Change

The International Journal of Computing Sciences Research (2022) asserts that institutions and educators may better understand their students and their needs by conducting sentiment analysis (SA) of students' online learning experiences. It assists in evaluation and the development of effective learning opportunities. The objective of this research is to comprehend students' learning experiences a year after the COVID-19 pandemic, as per Education Sciences 11(5), 248 (2021). The study's findings here include: (1) college students' mental health had improved since the pandemic's beginning; (2) an overall positive learning experience and a sense of belonging to their learning community; (3) high satisfaction with student support; and (4) the main

challenge in the online learning environment was the lack of interactions. Hybrid was the most effective learning mode during COVID-19; (5) a relationship between family income and perception of the learning community was found; (6) on-campus students perceived more student support than off-campus students; and (7) students from low-income families felt more of a role in the learning community.

Locus of Control

The passage discusses anxiety as an emotional state that arises from different life situations, including day-to-day chores, responsibilities, and stress.

Anxiety can also be specific, such as test anxiety or speech anxiety. The level of anxiety can affect an individual's performance in different contexts. Students with high anxiety levels often struggle to recall previously learned knowledge, split their attention between different learning tasks, and demonstrate negative self-efficacy feelings. The state of anxiety is a temporary emotional response characterized by subjective feelings of distress, fear, and irritability. It occurs when the person has a subjective perception that a certain stimulus or a specific situation will be threatening to him or her. On the other hand, the trait of anxiety is characterized by relative stability and does not vary within the same individual but varies across individuals according to their previous knowledge and past experiences.

Distant Learning's Exploration of

Anxiety Factors

Anxiety is a fundamental human emotion that comprises fear and uncertainty and customarily occurs when an individual believes that the event is a warning to themselves or their self-esteem. Depending on the length of the anxiety, it can either be a condition or a characteristic. It suppresses regular cognitive processes. Everyone experiences the human feeling of anxiety. Learners experience problems during their studies and worry when taking examinations or making crucial life decisions. There is concrete proof in the literature that there is a negative link between anxiety and the realization of crucial cognitive and emotional results in distance education (Jegede et al., 1990). The obvious difference between traditional face-to-face and distant learning, along with accompanying environmental factors that affect distant learners, makes the impact of anxiety on distant learning more probable. Gibbs et al. (1989) put it concisely: anxiety causes learners to consistently underperform. Anxiety among distant learners stems

mainly from their life experiences and the assumptions they make as a result. The distant learners tend to fear failure because of their high, even nonviable expectations of themselves. They might have had negative experiences with education in the past and assume that distant learning may provide the same demoralizing learning environment as that experience.

In contrast to traditional face-to-face instruction, numerous studies have been conducted to assess learners' attitudes, dropout rates, and academic performance in distance education. Compared with face-to-face traditional learning, there are many factors recognized in distant education that contribute to poor outcomes and high dropout rates: dull courses, financial difficulties, lack of response and motivation, isolation, a lack of encouragement, dissatisfaction with rules and regulations, and changes in career goals (Bernard, 2004; Fozdar & Kumar, 2007). Saddington (1992) noted that the expectation of disempowerment is one of the main issues in feelings of anxiety and poor self-esteem. The

criticized and evaluated, subordination, shame, mortification, and misery leads to evasion from assembly activities where different types of people are present. When distance learners realize they must present an oral report while integrating contemporary technologies such as multimedia presentations, etc., anxiety becomes a major concern.

3. CONCLUSION

All in all, a hybrid setup can have both positive and negative effects on learners. Many students are pleased that traditional face-to-face learning is back. However, commuting alone to school is a challenge for students, especially those who have anxiety.

What's more, the researchers have

discovered that some students prefer face-to-face learning to online learning because some of them are having a hard time adjusting to online learning, and not all students have the ability to keep up with other students who are fast learners. On the other hand, several students find it hard to travel from home to school because of the traffic jams that are happening in the country. Not only does this consume so much time, but it is also stressful; they are having anxiety for fear that they might be late, mostly those who live far from school. Also, many students are not comfortable enough to socialize with other students again.

The characteristics and configurations that would best serve the learners should be taken into account by the educators. A program for reducing traffic in the country must be developed by the government. The administrators of the schools should establish a program that can encourage students to connect with one another. Also, the parents must support their anxious children. Knowing that someone is with you through ups and downs helps lighten your mood. It can improve your mental health because you know that there is a compassionate person with you and you will get through it together.

The COVID-19 pandemic extremely changed the students' mode of learning. The researchers came to the conclusion that the hybrid setup really affects many students; it is a challenge for everyone. However, every one of us should be persistent in order to achieve our goal.

4. ACKNOWLEDGEMENTS

The researchers are pleased to convey their heartfelt appreciation to Mr. Jojie B. Juanerio, Head of the Finance Office at San Jose Academy and our term paper advisor, for his exceptional collaboration, priceless assistance, and supervision.

The researchers would also like to thank Ms. Melanie A. Signa, an alumna of San Jose Academy and a current architecture student at Mapua University, for providing the researchers with knowledge about the topic and for her insightful suggestions and helpful remarks. This research would not have been conducted without her.

The researchers would also like to express their gratitude to San Jose Academy for its program of research, its strategy implementation for research enhancement, and for accelerating the growth of research skills among learners.

Finally, but not least, the researchers thank our Heavenly Father for helping us throughout this research. For His guidance, His never-ending grace, His protection, and His unconditional love for us. Without Him, this research wouldn't be done.

A Study on Effect of Early Exposure of Students to Adult Content in Social Media

Jam Sevillano ¹, Faith Delapaz ², March Quijano ³

Abstract: In our case today, children are now exposed to modern technology. They can easily access games, videos, webpages, and apps that catch their attention, and adult contents online are not an exception. At a very young age, they already develop curiosity about these things, and in previous studies, it was shown that a lot of children already have an idea about sexual behaviors and activities, mainly because of the internet. We can describe the Internet as an open book. You can now search for whatever you want by just typing in some keywords and phrases. It's accessible. Therefore, the researchers wanted to dig deeper into how early exposure to sexual contents on the internet affects the children's physical and mental aspects. Children's minds are not yet fully developed, so trauma, intimacy disorders, and other complications can be caused by the inappropriate contents they see on the internet. The researchers will also look at how this affects the people around them, parents should be aware of what's happening to their children's online activities. Especially toddlers, they need guidelines and protection from them so that it can help to keep the children's surroundings in a friendly environment. Parents' awareness of this kind of issue can prevent their children from doing dangerous things. They should be their role models and set a good example for their children, as we all know that kids are still reliant on their parents. Recommendations and suggestions for the parents, as well as guidelines and restrictions on the internet for the children's safety, are needed.

Key Words: Children; Adult Contents; Internet; Parental Control; Online Safety

1. INTRODUCTION

As we move on to the next generation, it is inevitable for children to have access to electronic devices. Most experts recommend waiting until a child is at least two years old. They believe that it is best for a young child to spend time exploring the world around him and play with real objects that he can hold and feel (Arun Sharma, 2022). But

a study has been done that 65% of the children started playing electronic devices before they turned three which has even more rapidly increased due to Covid-19 (Amelia

Teng, 2013). Considering children's trait of curiosity without proper supervision, they might come across adult contents scattered throughout the internet.

In this study, the researchers aim to inform and teach parents and guardians

about the children's early exposure to indicates that children are using the sexual contents on the internet, internet at younger and younger ages. supervise children's online behavior, and For example, a 2005 survey of parents in somehow inform parents about using member countries indicated that 34% of parental control.

Our target sample is only Children ages 5-12 years old excluding high schoolers because the

researchers take into account that high schoolers are being taught "Sex Ed" and are somewhat mature. Another factor the researchers consider is that children ages 5-12 are not mature enough and do not take this kind of thing seriously.

Almost Identical Research in Another Country

In a previous study in Croatia about the exposure of children to sexual content on the Internet, 2,880 children and youth aged 10-16 who identified themselves as Internet users were included. At that time, 70% of the children already knew about sex. It makes us researchers wonder if it has increased as technology has improved and is more easily accessible now. Is this a variable we need to account for if it is about the ramifications of child and adolescent sexual development. In this research, they included adolescents, which is not part of our study, but our main concern is if it is higher in the Philippines considering we are technology inclined and known throughout the world as "keyboard warriors".

2. ANALYSIS

Children's Internet Usage

Research over the last decade

6-7-year

whereas the equivalent 2008 survey found that 42% of 6 year olds and 52% of 7 year olds used the internet (European Commission, 2006, 2008). Over the last five to six years, there has been a substantial increase in internet usage by children under nine years old. This increase is not uniform across countries but seems to follow usage patterns among older age cohorts. In countries where more children overall use the internet, they also go online younger. But that may vary across different countries. For example, in 2010, internet access for households with children in the EU ranged between 50% in Romania and 99% in the Netherlands and Finland (Eurostats, 2010). Video-sharing sites are popular with Children in this age group and are one of the first groups that very young children visit. As such, the ease with which children can access inappropriate video content is of Concern. Never before have young people had such easy access to uncensored images of adult

contents through a variety of mediums (television, music, pornographic websites and magazines). However, the most common forms have changed in recent years, from magazines, videos, television, and books to the internet. The existence of the internet has resulted in young people being able to watch adult content at any time and in almost any place.

Dangers of Internet Physically and Mentally

According to the National Center for Missing and Exploited Children's (NCMEC), there is an increasing report of possible online sexual exploitation of children in the Philippines, increasing from 1,339,597 in 2020 to 3,188,793 in 2021, the second highest in the world behind India.

With the internet being so easily accessible and almost all of the people owning smartphones and computers, with the use of the internet, we can talk to other people and socialize online from afar. While the internet can be used to help us humans rapidly exchange information across the world and use that information or knowledge for the better, it can also be used to exploit people, especially children. According to a pilot study conducted in 2016 in the Philippines, Filipino children are vulnerable to certain risks online, including cybersex and exposure to sexual content and predators online. In the study, 114 children aged 9 – 17-year-olds disclosed that they have been exposed to cybersex and sexual contents online through social media sites, group chats, sexual games, and sexual images sent as jokes, while some even engage in sexting, or sending sexual messages, pictures, or videos to each other.

Parental Control

With the drastic rise of smartphone usage, there have been

many apps that appeared like VPN, Ad Blockers. but there is a feature in most apps that many people disregard, and that feature is Parental control. Parenting has never been easy. But the increasing use of smartphones and the rise of social media have introduced a new challenge to parenthood. There are many parents who worry that their child is having too much screen time. With Parental control they can limit online activities and even monitor their child. While some smartphones do not have the parental control feature there are many apps that do the same. In a study on parental control, 59% of 75 apps were free for download (Brooke Auxier et al. 2023). Through digital monitoring parents 75% of the parents check the websites or apps their child visits or uses.

3. CONCLUSIONS

As a result of the findings of this research, the researchers concluded that as the rate of children that have access to smartphones increases continuously, so do the children that will encounter inappropriate content. And growing up in a place where things like this are the norm will eventually put them in danger. As a suggestion to this issue, we researchers encourage parents to monitor and have parental controls if they wish to give devices to their children. As the researchers conclude this research, they have learned that there are more active cases of this study in teens and adolescents, and they have

only seen through the perspective of a parent, so we have failed to perceive the perception of the children on this problem and solution.

4. ACKNOWLEDGMENTS

The researchers would like to express our utmost gratitude to MR. JOJIE B. JUANERIO, Finance Office Head of San Jose Academy. For his guidance throughout this research work.

The researchers would like to thank SAN JOSE ACADEMY for giving us an opportunity to participate in this event and for the trial to develop our research skills.

Understanding the Laws and Rights of Indigenous Communities against Infringement of Domains

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Abstract: This term paper will study the rights and situations of indigenous tribes in the Philippines, assuming that awareness will be raised in the society to eliminate marginalization among indigenous people. Many ethnic groups are encountering unjust treatment by society. For instance, most of their ancestral domains were being grabbed illegally, which means there were no agreements conducted before demolishing them. This study found that many Indigenous peoples' rights are being infringed, even though the National Commission on Indigenous People exists to shield them in this kind of situation. This paper will also tackle different correlated literature that will prove how crucial it is to value, give care to, and protect our Indigenous communities that aided the country's tradition, culture, and development. Moreover, this term paper will discuss different situations that will show how crucial it is for the government to be adequate in managing ethnic groups in the Philippines because proper compensation must be acquired by them when the government claims their properties for the country's improvement. Lastly, this term paper is important, crucial, and beneficial because many Indigenous tribes will be studied in order to provide a concrete paper that will open the minds of others to new perspectives about ethnic groups and what is really happening between the Indigenous communities in our country and the government administration. With that, several rights like social justice, human rights, and cultural integrity will also be addressed in order to dispense a much more knowledgeable and informative term paper. Key Words: Indigenous; Ancestral Domains; development; compensation; marginalization

1. Introduction

1.1 Background of the study

As time goes by, many ethnic groups in the Philippines are expanding.

According to the International Work Group for Indigenous Affairs (IWGIA 2018), there are approximately 10-20% of the

country's population was made up of Indigenous people, which estimates put

at 102.9 million. Even now, it is clear that they are still keeping their traditions, their pre-colonial culture, and their social institutions. However, most of them still lack access to their basic needs, including education and political participation. In line with this, they still do live in

geographically isolated areas, wherein many of them are facing infringement of their ancestral domains because of the demand needed for the country's improvement. Recently, the Kaliwa Watershed Forest Reserve in General Nakar, Quezon, was planned to be constructed as the Kaliwa Dam Project to address the water crisis in nearby provinces. According to Metropolitan Waterworks and Sewerage System (MWSS) Administrator Leonor Cleofas, the Indigenous people have signed a memorandum of agreement, which gives them the signal to go for the continuation of the said dam (Rivera, 2022). Although many of them signed, there are still indigenous communities that believe that the contract was invalid, and many of them were left in the dark, particularly those who are averse to the project (Santos, 2022). With that being said, laws were signed and implemented in every indigenous community in the country. In accordance with the Indigenous peoples' rights act (Republic Act No. 8371), they will be served and protected by the law regarding their rights in their ancestral domains, self-determination, invigorating their traditions in the community, etc. (Official Gazette, 1997). Understanding how the law is being applied to them will greatly affect the perceptions and knowledge of others about how Indigenous communities are being treated in society. Currently, policies are being properly embedded by the government in order to serve the rights of the indigenous people in their land territories. So far, there are still failing agreements among indigenous people in their domains because some are being grabbed illegally. It is the researcher's interest, therefore, to know and uphold the rights of the Indigenous

people in their ancestral domains and how some are violating them because of certain circumstances that lead to many problems that affect Indigenous people in our community. Many people are oppressed, in which case it is crucial to understand, learn about, and study the lives of many in order to raise awareness among the community and help each other through new discoveries.

1.2 The Indigenous Peoples Rights Act of 1997 (IPRA)

The Indigenous Peoples Rights Act of 1997 embodies the importance of 'ownership' by the Indigenous communities over their traditional territories and ancestral domains, which consist of land, bodies of water, and all other natural resources. Moreover, this act enabled them to give a title to their lands through the issuance of Certificates of Ancestral Domain Titles (CADT). One of the principles of IPRA is "self-delineation", which means the identification of ancestral domain claims to their possessors. On the contrary, in the three years since the establishment of the National Commission on Indigenous Peoples (NCIP), not a single CADT has been issued as a result of mining projects that lack the legal authority to proceed under the IPRA. In line with this, the office of the president investigated NCIP for this case and found out that the agency was ill-equipped, the staff was poorly trained, and it lacked cultural sensitivity. With this in mind, it is relevant to be aware and conscious in these situations to avoid misconceptions (De Vera, 2007).

1.3 Statement of objectives

This paper aims to raise awareness about

the experiences of indigenous communities in the country regarding their ancestral domains. It is crucial to put an end to this kind of infringement because this violates their rights not just as an ethnic group but also as human beings.

1.4 Significance of the study

This paper will benefit students, indigenous communities, and future researchers. For students, it will benefit them by raising awareness about what is happening in the world of Indigenous people and how their rights are being violated unjustly. For indigenous communities, it will benefit them by educating them about the rights and privileges they have acquired since becoming part of their ethnic groups, which will help them protect, fight, and fortify their properties. For future researchers, it will benefit them in advocating for the generation they are in because we must not forget this side of society where infringement and transgression usually happen.

2. Analysis

2.1 The boundaries set for 'Kayasan' Indigenous cultural community

The ancestral domains claimed by the Kayasan Indigenous community portray their ethnolinguistic tradition and recognize both cultural markers. However, some of these boundaries led to exclusion that affected the resources. Many ancestral domains were being protected and preserved because this examined their nature, which is a symbol of their tribal group. Moreover, as the Kayasan terrain was claimed, it explains how ethnic nor culture serves as the basis of legitimate access to land and.

This embodies how cultural domains are crucial to their possessor, and they do have the right to claim them all the time since it is believed that they were once owned by their ancestors. In line with this, the Tagbanua Indigenous people connected with the Kayasan community to ensure the fair and just use of their resources. Many have believed that the concept of their life is an egalitarian concept because it is important to maintain equality and have just treatment in their community, in which the Kayasan and Tagabanua aided each other for the good of the community and their ancestral domain resources (McDermott, 2000).

2.2 The adequate compensation of the Canadian government to Inuit people

According to a special report from the United States Institute of Peace (USIP), the Canadian government agreed with the Inuit of Nunavut in exchange for their own territorial government, monetary compensation, and control of their land for development. The Inuit community was freely allowed to access resources like harvesting marine and terrestrial wildlife in national parks. This explains how important it is that Indigenous people be credited and compensated accordingly when their territorial lands are taken for the community's improvement. They served as the owner of that land; therefore, it is a must to respect, give value to, and protect their ancestral properties. Likewise, some of these lands were the source of their income to sustain their families. So, they need to be able to get and keep it all the time. Also, it shouldn't be taken without their permission or with fake proofs,

because that could lead to misunderstandings and fights with Indigenous communities in our country. This would be a violation of their rights as an ethnic group and as people (Tumines, 2005).

2.3 Struggles and realities faced by Indigenous people in acquiring their rights in CADT

There were many factors in issuing the CADT and titling their ancestral domains. Some of them were negative, indigenous and some were helpful. The Department of Environment and Natural Resources requires the Indigenous communities a certain documents and proofs to legitimately claim their designated Ancestral Domains. Many requirements are asked before making the issuance successful. For instance, a sketch map of the Ancestral land is one of the requirements. Also, many hindrances occurred when the Indigenous People are stimulating the process because these territories are eventually needed for the country's growth and development. With that, the government administration can oppose the issuance of certificates for their ancestral domains (Vargas, 2008).

3. CONCLUSION

3.1 Summary

The indigenous communities in the Philippines should be taken care of and given value because they are still part of the society that is built for the country's development and growth through time. To conclude the paper, the researchers have witnessed the façade

truth about the projects built for the country's improvement, wherein many Indigenous people are encountering illegal land grabbing without an agreement, consent, or adequate compensation. Indigenous people and society are still marginalized, and this is clear because many IPs are not heard, and discrimination, racism, and violence are used against many IPs. In line with this, their ancestral domains belong to them because they were once owned by their ethnic group's ancestors. With that, it is crucial to nurture them and let them control their own territories without an executive's power over them.

3.2 Recommendations

To sum up, it will be very helpful if we advocate for people to know how this ethnic group lives in our society. Also, it will aid society's problem with IPs with their ancestral domains if we manage to share and raise awareness of cultural sensitivity and how this aspect of life is crucial in our everyday lives.

4. Acknowledgements

The researchers sincerely express their deep acknowledgment and a sense of gratitude to Mr. JOJIE B. JUANERIO, Finance Office Head of San Jose Academy, and term paper and class advisor.

Also, the researchers would like to thank SAN JOSE ACADEMY for tasking us with this valuable research that may lead to new discoveries, treasures, and knowledge throughout the century.

A Study on the Social Anxiety of Students Brought About by the Pandemic

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Abstract: The main goal of our paper is to help the students who are experiencing social anxiety get some help from people who understand their situation. The majority of the senior high school students are getting low grades on their academics because of their condition. They are having a hard time adjusting to others and finding their comfort zone. The pandemic had a huge impact on students. They didn't get the experience they

needed to be ready in senior high. They are being pressured by others because they are afraid of being left behind. So that we should give some consideration to the students so they can have more time to get along and adjust to others. Social anxiety got a much bigger percentage after COVID-19 because of the issues and because people didn't get the lessons they needed to learn. Some of the students are addicted to social media, and this is also one of the main reasons why they have social anxiety because of the issues, toxicity of others, etc. The students experienced several changes in their daily lifestyles when COVID-19 began. Many Senior High Students now lack

the experience to socialize because the epidemic began in 2019. The students in grades 11-12 are in their second or third year of high school, and new learning has already begun, nearly changing the majority of students.

Key Words: Social Anxiety;

COVID-19; Awareness; Senior
High Student; Mental Health

1. INTRODUCTION

1.1 Background of the Study

The majority of San Jose Academy's senior high school students experience anxiety related to both personal issues and academics, because they were under pressure from their instructors, parents, friends, and classmates. Our topic's major goal is to raise awareness of other individuals while also assuring the pupils that they are being watched. The most prevalent anxiety via the senior high kids in SnJA is through schoolwork. The specific cause of this is that there are too many classes and activities for us pupils to complete since they are difficult to comprehend and require special talents.

The Philippines has experienced several changes in daily life since COVID began in the year 2019, particularly in terms of student education. Alongside new education, SHS students have encountered a fresh issue as a result of COVID's shutdown. Because of certain children' and adults' social anxiety, schools are closed as a result.

Several senior high school students, according to our study and experience, struggle with anxiety because they lack the experiences they need to successfully navigate their final year of high school. The epidemic is to blame for the majority of the issues causing concern among kids.

This study aims to clarify the root causes of social anxiety and how the pandemic influences anxiety disorders in the majority of students. It will be decided what the root causes of mental health problems, particularly social anxiety, are by reviewing earlier studies and research. It seeks to understand the reasons behind the pandemic's effect on students' mental health. In the study, social anxiety was highlighted.

The objective of this paper is to inform and educate people about social anxiety and related issues with the intention of influencing their attitudes,

behaviors, and beliefs towards the achievement of a defined purpose or goal. Public awareness is important to increase

enthusiasm, support, and action.

Due to the fact that social anxiety is so common, researchers will continue to work on this to reduce the stigma and misperceptions of those who experience it and to help people avoid feeling ashamed of it. This should help students realize that having social anxiety is nothing to be ashamed of.

The State Of Mental Health in the Philippines

The Republic Act No. 11036, which was enacted on June 21 as the country's first mental health law, has been formally signed into law. It offers a law on mental health based on human rights and a thorough framework for putting the best mental healthcare in the Philippines into practice. The Mental Health Act of 2017's guiding concepts, specific legislation, and effects on mental healthcare in the Philippines are discussed. The Philippine Mental Health Act, which is one of its components, ensures patients' legal rights as follows: "a right to freedom from discrimination, protection against torture and other cruel, inhumane, and degrading treatment; access to rehabilitation and aftercare; full disclosure of psychological and clinical studies; among others, the right to counsel, informed or evidence-based consent, participation in the development of the treatment plan, and others.

In their qualitative study,

Tanaka et al. (2018) hypothesized that three types of common beliefs about mental health conditions contributed to this stigma: First, there are familial concerns, when a family rejects or disowns a member who has a mental health condition because they believe it may be hereditary. The second is an incorrect optimism or pessimism about the severity of the illness, which implies that either the mentally ill will be able to manage any psychological anguish on their own or will surely have substantial functional impairment. The oversimplified chronic way is the last but certainly not least; in this approach, people without mental illnesses treat those who are ill using the same paradigm as an acute illness and anticipate a speedy recovery.

1.2 Significance of the Study

This term paper will benefit students, parents, people who have anxiety, and future researchers.

For students, it will benefit them by raising awareness about social anxiety and allowing them to understand things from multiple perspectives.

For parents, it will benefit them to understand their children and people who have anxiety that they are

feelings and emotions are valid reasons to feel them, and they also allow them to be prepared to help identify such problems and help them get the appropriate care they need.

For people who have anxiety, it will help them to reduce confusion or shame, and it will explain to them that

anxiety is a common and normal experience that can be managed successfully.

For future researchers, it will benefit them to be aware of and knowledgeable about social anxiety. It would help them to be a better analyst, and it can be helpful as a reference for more studies in the future.

2. ANALYSIS

Social Isolation and Loneliness

Governments have adopted disease-containment strategies in response to the COVID-19 pandemic, including home quarantines, social gathering, and school closures. The physical separation of the children and teenagers from their friends, instructors, and peer groups has persisted for a long time. Adults who are quarantined frequently have negative psychological repercussions such as disorientation, rage, and PTSD anxiety. Negative psychological effects seem to be more likely to occur when there is a long quarantine, fear of infection, boredom, frustration, a lack of supplies or knowledge, financial loss, and stigma (Dr. Loades, 2020). There may be an increase in social isolation and school closings as a result. Youth and children already have mental health issues, greater likelihood of mental health issues developing in comparison to adults during a period when they are also feeling fearful about dangers to their health as well as jobs/income for the family.

Closing of schools and social alienation are potential outcomes. increasing levels of loneliness among kids and teenagers whose disease containment techniques limit regular social interactions. An unpleasant emotional experience of a gap between real and desired social connections is

loneliness.

School Closures and Social Anxiety During the COVID-19 Pandemic

In the midst of the global 2019 new coronavirus disease (COVID-19) pandemic, Loades et al.¹ recently released a comprehensive study on the potential impacts of social isolation and loneliness on kids and teenagers. Both longitudinal and cross-sectionally, they discovered that there is evidence linking loneliness in kids and teenagers to an increase in depressive and anxious symptoms. The majority of children and adolescents clearly fall into this category, although this is not always the case.

They also agreed, according to Dr. Morrisette, that the 2019 coronavirus pandemic, the COVID-19 pandemic, ought to give more consideration to young people who experience social anxiety. After the start of the new school year, many children and teens who had not previously experienced social anxiety began to worry in social situations (Loades et al. 1, p. 1). They also asserted that a number of mental health issues, including social phobia, are expected to get worse when more kids return to school. To halt the spread of the sickness, politicians and medical professionals in many countries urge people to restrict their physical contact with others and stay home rather than travel.

Therefore, those who suffer from social anxiety disorder are rewarded for staying away from the precise situations that psychological therapy would advise exposure to. When schools reopen and attendance is required, socially anxious kids and teenagers are also likely to

experience acute instability since avoidance reinforces itself by acting in a negative way. Loades et al.¹'s work appropriately addressed the limitations of extrapolating existing findings to the present-day situation. Digital interventions could make therapy easier for kids and teenagers who are experiencing social isolation, according to (Loades et al.¹) The COVID-19 pandemic has created a set of circumstances that are truly unusual since there are few possibilities for social contact and there are components of both positive and negative reinforcement for avoiding exposure.

In reality, virtual care technologies are increasingly being employed by healthcare professionals across a range of specializations to cut down on the amount of face-to-face interactions between patients and physicians and stop the transmission of contagious illnesses. Dr. Morrisette observes that if anxious kids and teens haven't been exposed to their worries, then those worries are probably reinforced and have gotten stronger. The prospect of an invisible infection and the accompanying public health advertising may have sparked or intensified fundamental ideas, such as "the world is unsafe." The mainstream media's public health messaging and coverage may have drawn more attention to physical symptoms and, as a result, raised concerns about children's and parents' health and wellbeing. (Loades. et al.)

Social anxiety and technology: Face-to-face communication versus technological communication among teens

In accordance with a study by Tamyra Pierce (2009) that teens use socially interactive technologies, like online sites, web sites, online games, etc., and that will cause us to have social anxiety in how they communicate to

others. Tamyra Pierce made a survey on
Presented at the SnJA Research
Festival 2023

280 high school students from a large western city. That comes out. 35-40% of teens communicate with cellphones and social media sites between 1–4 hours a day; 24% reported using instant messaging tools; and 8% used email to communicate with others. Females have the most percentage of using cell phones, social media sites, and other communication tools more than males to spend time.

Poor Academic Performance Caused By Social Anxiety

According to Erin Tayag and Leea Gonzales (2021), social anxiety can have a consequential effect on students that will affect academic performance. Many students have several anxiety levels. There are students that got affected by their social anxiety. By specific activities that include their confidence. Social anxiety continues to increase, which is why many students have difficulty with social skills as well as academic performance. Some of them have graduated due to their anxiety.

The Influence of the COVID-19 Pandemic on Social Anxiety: A Systematic Review

As claimed by Kindred and Bates (2023), The COVID-19 pandemic has had a detrimental impact on mental health outcomes around the world, and its effects on interpersonal relationships and social interactions are probably seen in troublesome social anxiety. This systematic review qualitatively

combines information from research that looked at how the pandemic affected social anxiety. Thirty-three studies met the inclusion criteria after a thorough search of the Web of Science Core Collection, Embase, PsychINFO, Scopus, EBSCOhost, the Cochrane Central Registry of Controlled Trials, and Proquest Central—Dissertations and Theses. The findings imply that the epidemic has increased social anxiety in the whole community, with women and low-income earners being more at risk.

3. CONCLUSION

As a result of the studies our researchers were able to compile, it is generally acknowledged that social anxiety affects the majority of seniors in high school. That means that individuals ought to advocate for

initiatives for college students who struggle with

The Study on the Advantages and Disadvantages of the Reinstitution of the Reserve Officers' Training Corps (ROTC)

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Practical Research I

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Abstract: This research seeks to explain the history of ROTC in the Philippines and how it aids youngsters. Here, it is demonstrated how young people may be harmed by the new technologies of this generation. Several young people have already expressed their displeasure when Vice President Sarah Duterte announced the stunning news of making ROTC mandatory for those who are 18 years old. They are unaware of how ROTC operates and what impact it has on our everyday lives. Many people contest the idea that, given that we are currently in the midst of a pandemic, youth in contemporary culture are sensitive to how the environment flows, which has an impact on both their mental and physical health. The World Health Organization (WHO) reports that the covid virus is difficult to eradicate; as of January 2, 2023, there were 5,060,187 verified instances, implying that despite the protocol's modification, the covid virus hasn't actually disappeared. The teenagers claim that the basis for their complaint is that it shouldn't be required. Some claim that whether a person wants to go or not, it is against their will. In this study, we'll determine whether the ROTC organization will make it voluntary for individuals who still want to participate in the ROTC or whether it will be confirmed as mandatory.

Key Words: Mandatory, youth, ROTC, mental health

1. INTRODUCTION

ROTC training in the United States dates back to our colonial days. During the British invasion of the Philippines in 1762, the University of Santo Tomas

gathered 200 students to assist the Spanish soldiers in defending Manila. The local contingent was later professionalized, and the cadets were given access to military training.

However, the Philippine Constabulary

arranged the first military training at the University of the Philippines in 1912, which marked the official start of ROTC in the country. The program's leadership was handed over to the Philippine National Guard, which was dissolved after World War I.

On July 3, 1922, the University of the Philippines' Department of Military Science and Tactics founded the first ROTC unit. Other universities and colleges followed suit, including the National University, Ateneo de Manila, Liceo de Manila, and Colegio de San Juan de Letran. However, ROTC would not be required until 13 years later, when President Manuel Quezon signed Commonwealth Act 1, also known as the National Defense Act of 1935.

The National Defense Act of 1935 also founded the Philippine Military Academy. (PMA).

The regular armed forces totaled around 30,000 by 1941. With war looming, President Quezon stepped up the ROTC program. ROTC units were maintained at 33 colleges and universities. Around 100,000 cadets supplemented the regular military. With the outbreak of World War II and Japan's occupation of

the Philippines, the ROTC units were summoned to arms in 1942.

Along with ROTC students forming guerrilla units, other patriotic and

pro-freedom Filipinos also organized resistance organizations to fight the Japanese. One of them was the "Hukbong Bayan Laban sa mga Hapon" (Poor People's Army Against the Japanese), also known as HUKBALAHAP. The HUKBALAHAP was established in 1942 by Luis Taruc and was intended to be a part of a broad frontal resistance to the Japanese occupation. After the war, the country could not afford to keep a large military force without draining its resources, so the ROTC units were disbanded and demobilized.

President Ferdinand Marcos, a product of the ROTC program, class of 1937, was a soldier during WW II. He restored the ROTC as a mandatory program in 1967 with Executive Order 59. Amendments were implemented when he signed Presidential Decree 1706, the National Service Law. From around 60,000 troops, the regular armed forces grew to some 270,000 personnel.

With many issues plaguing the program in the 1980s and 1990s, ROTC became optional when the National Service Training Program Act of 2001 was enacted into law.

In 2006, Alfredo Lim sponsored Senate Bill 2224 and Representative Eduardo Gullas sponsored House Bill 5460, seeking to make ROTC mandatory again. In June 2013, Department of National Defense Secretary Voltaire Gazmin aired a proposal to make ROTC once again mandatory for college

students, a move ardently protested by progressive youth groups such as Anakbayan.

2. ANALYSIS

2.1 - The law and confirmation of the ROTC

Senators believe that the Republic Act (RA) 7077, also known as the Citizen Armed Forces of the Philippines Reservist Act, will guarantee that the Reserve Officers' Training Corps (ROTC) measure that is now being advanced in the Senate will cover all Filipino students.

This is in response to a concern raised by the Senate Subcommittee on Revitalised ROTC Act during a hearing on Wednesday that students enrolled in less than two-year vocational programs or those who chose to begin working right after graduating from high school would not be eligible to join the ROTC program. National ROTC Alumni Association (NARAA) Board Member Virgilio Garcia said they will be covered by RA 7077 which mandates all male citizens between the ages of 18-25, who are not reservists, to register for military training.

Yet the authorities from the Armed Forces of the Philippines' (AFP) Reservist and Retiree Affairs stated RA 7077, which was passed in June 1991, have not been adequately implemented due to conflicting requirements with the Local Government Code.

2.2 - Effect of this program on students

Many students are afraid of this program because they do not have the physical strength to handle a program that's meant for soldiers. They fear that

this mandatory program would only make their sufferings worse than it is for the students, who are already struggling with their schoolwork, and they expect them to train to protect their country and at the same time be productive members of it.

2.3 - Issue of the past mandatory ROTC

Mark Chua, who was subjected to hazing while undergoing ROTC training, is a well-known figure.

There are numerous ways to prevent this from happening, but the government chooses to disregard the individuals in the ROTC, which led to Chua's death. The government expects us to protect the country, but they can't even protect one innocent person.

They not only damaged one person's life by cutting it short, but they also betrayed the family's confidence. The majority of people consider it unforgivable that they lost a son, a brother, and a grandson.

ROTC can teach our youth leadership, discipline, respect for authority, and service to the country"

adding "it will better prepare them to take on

challenges that are bigger than themselves

4. ACKNOWLEDGEMENTS

We really appreciate Mr. Jojie Juanero, the director of the San Jose Academy's finance department, for helping us with this project and serving as our full-time paper adviser. Also, we would like to express our gratitude to the San Jose Academy for its generosity and

dissemination of information that can encourage students to work harder or affirm their aptitude for future initiatives.

3. CONCLUSIONS

. Implementing the ROTC program for senior high school students, it envisions instilling discipline, and a sense of purpose, respect for the laws and the authorities, and obedience to rules and regulations to students in a military training environment while they are still young. Indeed, along with the sense of discipline and patriotism that one gets from active involvement in ROTC is the readiness to fulfill the ultimate responsibility of defending the Philippines from foreign aggression, considering that defense of the state is the duty of everyone. The idea, which President Duterte broached early in his presidency, is an excellent one. ROTC will definitely benefit young Filipinos. To be sure, ROTC will teach them patriotism. It will inculcate in their minds and hearts a deep love for our country. It will condition and mold them into being disciplined and respectful. Defense Secretary Delfin Lorenzana exclaimed, "One good way to instill and nurture a love of country is through the ROTC program in our school system. They believe that

THE EFFECT OF PARENTAL ABSENCE TO STUDENTS ON THEIR ACADEMIC PERFORMANCE

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Practical Research I

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Abstract: The purpose of this study is to show that the lack of parental guidance has an effect on students, and it is presented here that one of the causes of the lack of guidance is parental separation, which is one of the factors affecting the child's thinking and one of the reasons why academic performance is not good. This paper also states what exactly parental absence is. Because sometimes we focus on many things and we don't notice that the absence or lack of parental guidance has a big impact on children, it can be seen in this paper that it turns out that not only the grade of education of the parents was affected but also the passing of the children in their lives. It is also presented here that there is a great possibility that the children will be prone to abuse, but it is also shown here that the department of education has a law for the protection of students. It was also stated here that not only in our country there are cases of parental absence but also in other countries, I hope this will be one of the ways to make our minds aware that we should focus more on children and give them what they deserve parental guidance and love because the relationship between parents and their children is important, because parental guidance is what children will never forget

Key Words: Parental Absence; Academic Performance; Students; Left

Behind Children

INTRODUCTION

1.1 Background Of The Study.

Early parental care is one of the most important things that helps children develop their skills. Lack of parental involvement throughout early childhood has a negative impact on children's development in terms of their health status, everyday behaviors, and

especially academic performance.

In addition to having poorer academic exams and being less likely to attend school, we find that left behind children also do worse on other measures of development. This involves their cognitive thinking, meaning the ability to think about and learn specific skills, as well as their mentality—the ability to reason and the attitude to respond to certain situations. When parents are uninvolved, their child loses the opportunity to learn how to be strong and deal with situations tactfully. They become emotionally involved in every situation, especially when under stress at school.

Parental Absence

Parental absence is characterized as when a parent and child do not live in the same home, the child migrates out of the home without the parent, or the parent moves out of the home without the child. (Gaydos, 2015)

Parental Absence and Effects on Children.

Moreover, this may be caused by a mental illness, a personality condition, or other different factors like a job, a career aim, or an educational objective, among others. (Tabitha Mwai, 2018) The reasons may range from being avoidable to unavoidable, such as divorce, loss of parental rights, abandonment, negligence, etc. This can have a substantial effect on the psychology of the child at a young age and will greatly affect their academic performance in school. (Moshene, 2019)

This research will show how impactful parental absence is to our students and how this affects their academic performance and wellbeing.

The Study from China

There was a study conducted in China about Parental Absence, as they noticed that there were left-behind children because of it. Since they implemented the reform and opening-up policy, it has forced people to leave their children behind in order to relocate to large urban centers with employment opportunities as they were unable to move with their families due to the institutional segregation between rural and urban areas, as well as because of their own financial constraints and the fact that they couldn't support the idea of living with them in the said urban centers. Using the long term study that was published in September 2020, the number of left-behind children ranging from young and teen years due to parental migration was approximately 25.4% at the end of 2015. ("Mingzhi et al., 2020)

Risk Factors for Child Abuse:

Quantitative Correlational Design

According to Merav Ben-Natan RN, the aim of her research is to identify the risk factors for different typical types of suspected child abuse reported at the hospital. According to the study, it was based on 114 cases of children whose abuse had been reported. The majority of the reports are of physical abuse, as most of the victims of sexual abuse were female, and the majority of the cases of physical abuse were committed by their parents. Some of the cases are identified inside the emergency room by the nurses. Children around 10 or older are more prone to child abuse the actual number of parents during meetings or

any school activities is just about 30%. Lastly, most parents are not interested in getting the report cards of their children. There is no communication between the teachers and parents, and this is why some students have remained a problem in school without receiving proper remediation or intervention regarding academic performance. (Julieth Valenzuela Leander et al., 2020)

The migration of parents affects not only their own lives but also those of their families, especially their children left behind, putting them at risk of bad influences and jeopardizing their safety and overall well-being. Bakker and Elings-Pelsand Reis (2009) have pointed out that the reality is that children are significantly affected by parental absence. They can suffer from depression and low self-esteem, which leads to behavior problems, poor academic performance, and possibly making themselves drop out of school entirely. (Jingle S. Navarez et al., 2017)

DepEd Child Protection Policy

According to DepEd Order No. 40,S.2012, parental guidance in learning is critical, as is parental trust in the school. Beginning in 2012, the school will protect its students from bullying, violence, discrimination, and other forms of abuse. It is important for parents to ensure that their child is protected in his studies because not all parents want to leave their children, and there are parents who are forced to leave their child so that he can have a good life. Even if the impact of a lack of parental guidance on children's learning is large, the Department of Education is

still doing its best to protect and provide quality education.

3 CONCLUSIONS

2. ANALYSIS

The Study from Philippines

A study was conducted here in the Philippines as well, due to the influence of parents who underestimate the importance of parental involvement. There is real evidence in schools about what happens when parents don't get involved and how that happens. There are testimonies from the teachers saying that every time they call the attention of the student's parents, they use the "Call Slip form" from the guidance office issued by the said teachers more often, as parents don't show up because they are busy working too much in their businesses. It is shown that out of the 40 class numbers,

The researchers have concluded that it is important to comprehend the various causes of why parents fail to guide their children in an appropriate way, and this research demonstrated how children's academic performance as well as thinking styles are affected.

Also, the researchers have found a lot of factors that make it hard to see how parental absence hurts a child's ability to learn. As a result, this exploratory investigation allowed the researchers to ultimately discover the various problems and difficulties and create an activity that, under the guidance of the school, will encourage others in coping with similar circumstances

4. ACKNOWLEDGEMENTS

The researchers are sincerely thanking Mr. Jojie B.

Juanerio, the head of San Jose Academy's finance office and our full paper advisor, for his exceptional

collaboration, invaluable advice, and supervision. Last but not the least, the researchers would

like to express their gratitude to San Jose Academy for

this agenda , emphasis on research invitation, and for speeding up the growth of research abilities among students.

The Effects of Information Technology (IT) in Medical World

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Abstract: The benefits of health information technology (IT) include improved communication among health care practitioners, improved drug safety, tracking, and reporting, and promoted quality of treatment through improved access to and adherence to recommendations. The medical field has been transformed by information technology, which has improved patient care, increased efficiency, and reduced costs. Information technology has enabled medical professionals to diagnose and treat patients more quickly and accurately, from electronic health records and telemedicine to artificial intelligence and robotics. This paper looks at the various factors that influence information technology and how they affect the medical world. It will also examine the challenges and importance of information technology in our society. This paper will provide us with more information about information technology and how it affects the medical world, as well as allow us to determine which aspects of information technology are harmful to people. By using this method, the advantages of certain variables will be prioritized more frequently, while the disadvantages of others will be overlooked.

Key Words: medical field;
health technology;

information technology; HIT;
technology

1. Introduction

1.1 Background of the study

What was once unimaginable and simply a movie fantasy is now a reality thanks to technology advancements. Whether it is in the business world, the educational field, our household, the

medical field, or any other aspect of our lives, technology has a remarkable impact. This article will examine how developments in technology have affected the healthcare sector in particular.

According to the International Journal of Advanced Computer Science and Applications, "Health information technology (HIT) consists of a set of

technologies with a great diversion for transmitting and managing health care data for the use of all stakeholders. Stakeholders of health information include payer, providers and all other groups having interest in health and health care systems”.

health professionals can collaborate more easily when distance is a factor. Historically, HIT applications were used for administrative and financial purposes rather than assisting and delivering health care.

1.2 Statement of the Objectives

HIT refers to the use of a computer in the form of a physician, digital assistance, electronic health records, and computerized Physician order entry system used by doctors, patients, and hospitals

This study aims to inform on what are the effects of Information Technology (IT) in the medical world that will apply for our country (Philippines). It can also encourage healthcare organizations to use updated technologies that may help us in the future.

Laboratories, x-ray facilities, and all other stakeholders are included. Health Constantly, information technology is a vital component. The changing environment of the health-care system. With the use of HIT, health-related information can be effectively communicated. can be used in an evidence-based decision-making process. HIT benefits include reduced paper work in the hospital environment, which results in fewer medical errors; it is simple, user-friendly, and ready to use; and it is well integrated. Customization capability, as well as the possibility of tracking and alerting. Last but not least, automation backup is required to ensure that no Data loss is possible.

How Health Information Technology (IT) prevents Medical errors?

1. What would happen to the medical world if information technologies are ignored?
2. What are the effects of security and privacy problems in health information technologies?
3. How Health Information Technology (IT) prevents Medical errors?

1.3 Significance of the Study

It also helps to reduce the repetition of medical tests, which has an impact on health-care costs. Evidence-based practices are critical to the quality, outcome, and efficiency of health information systems. The health-care system can be improved if timely and accurate information is available for evidence-based decisions at all levels. Proactive use of information technology in the health sector empowers consumers and retrieve patients' data and lessen the of health services by allowing them easy possibility of medication errors. access to health information as well as decision-making tools, and by using HIT, some suggestions in solving the issue and

first is to understand how information technology (IT) in the medical field affects people just like us students. This study will also be conducted to find out the possible solutions to this situation. We can also discover here what can be a guide to the problem we have.

Medical Professionals are benefited thereby; they will have an idea of the outcomes, if there are information technology that will help them to store in the health sector empowers consumers and retrieve patients' data and lessen the of health services by allowing them easy possibility of medication errors. Furthermore, the findings will provide some suggestions in solving the issue and

come up with a good result.

Hospitals are also one of the beneficiaries of this study because nowadays many hospitals ignore Information Technology. This can inform them that information technology can be really beneficial for the technologies that they use in the hospitals.

For Students: students are beneficial for this study due to the betterment of knowledge in terms of Health Information Technology.

Parents benefit from this study by which they will know the usefulness of having information technology in the medical field, now in the modern world, which will be really beneficial. It can also help them to know how to properly use information technology in this field.

Future Researchers will be benefited in this study in a way that may serve as the basis of their future study. They can be able to adopt thoughts and ideas that will be suited to their study.

2. Analysis

2.1 Advantage of Information Technology in Medical World

Information technology, or HIT as it is also known, has many advantages in the healthcare industry. Technology firstly makes it possible for medical professionals to save and access information about a patient's medical records. Additionally, it improves the dissemination of patient data in a clear and accessible style. It consequently lessens the possibility of medication errors. Last but not least, it facilitates the retrieval of patient data from a database without the need for fresh

health checks. The commonality among the aforementioned healthcare technologies is that they all enhance patient safety and health.

Using medical technology tools helps to protect patient safety. The first are medication warnings, flags and reminders, reports on consultations and diagnoses, and the simpler accessibility of patient data. Alerts in particular might support someone in following prescribed treatments and regimens. Also, the electronic recording of data can promote consistency in practice across all medical professionals. According to prior research, using an electronic health record can enhance the care given for common conditions.

It is indisputable that technology in healthcare is a recent development. From the most serious medical cases to the most straightforward medical cases, like breaking a bone, we use medical technology. Indeed, technology is continually advancing, from plaster to robotic surgery. Yet, the patient is the primary consideration underlying all medical techniques.

2.2 Barriers of Information technology in medical world

There is considerable pressure on the government and the healthcare sector to transform the state of Philippine healthcare. A growing and aging population is the primary driver of demand. People are beginning to spend more on healthcare as the middle class expands and incomes rise. The Department of Health (DoH), which

includes the Philippine Health Insurance Corporation (PhilHealth), received P167.9 billion in fund allocation in 2017, a 12.3 percent increase over 2016. However, access to quality and affordable healthcare, as well as a shortage of healthcare personnel and outdated technology, continues to be a daily challenge for the majority of our citizens.

2.3 Importance of Information technology in medical world

The advantages of information technology in healthcare, also known as Health Information Technology, are numerous.

To begin, information technology allows health practitioners to store and retrieve data from a patient's health records. It also improves patient communication by providing a legible format that anyone can use. As a result, the possibility of medication errors is reduced. Finally, it simplifies the retrieval of patient information from a database without the need for new health checks. All of the healthcare technologies mentioned above have one thing in common: they improve patient health and safety.

The use of medical technology tools protects the safety of patients. First, there are medication alerts, flags and reminders, consultation and diagnosis reports, and improved patient data availability. Alerts in particular can be beneficial.

3. CONCLUSIONS

The medical field has been transformed by information technology, which has improved patient care, increased efficiency, and reduced costs. Information technology has enabled medical professionals to diagnose and treat patients more quickly and accurately, from electronic health records and telemedicine to artificial intelligence and robotics. It has also made it possible for medical researchers to gain access to and analyze massive amounts of data in order to better understand diseases and develop new treatments. In short, information technology will continue to have a significant impact on the medical field.

4. ACKNOWLEDGMENTS

I'd like to express my gratitude to Professor Jojie Juanerio, who enabled me to complete this work. Throughout, his friendly guidance and expert advice have been invaluable. all stages of the work. I would also like to thank my group mates for sharing their parts of this paper, and also my friends who guided me while I was doing this paper.

The Effects of Sports Activities in the Academic Performance of Students

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Abstract: This paper contributes to the effect of having extra-curricular sporting activities in the academic performance of a student-athlete. It can be positive or negative, like eustress and distress. Stressors can impact one's performance depending on their capabilities and management. We examined selected student-athletes of San Jose Academy to have their thoughts about things that may occur when having extra-curricular sporting activities while studying via questionnaire and survey. We Recommend seeing sporting activities as eustress and relaxant.

Key Words: student-athlete; extra-curricular; academic performances;

1. Introduction

1.1 Background of the Study

Student-athlete is a person who is studying and proficient in sports and other forms of physical exercises. A student-athlete must fulfill the responsibilities of both a student and a young athlete. In other words, they must be enrolled in and attend their classes or courses while participating in a competitive inter-school sport. Being a student-athlete requires good time management and self control. They need to improve their skills in game while maintaining their grades. They also represent their school by competing in sporting activities.

Most of the schools and

universities require a good grade and at least an average grade. The term student-athlete was coined in 1964 by Walter Byers, the first executive director of the National Collegiate Athletic Association (NCAA). The term is also interchangeable with the synonymous term "varsity".

As a student-athlete, you can receive athletic scholarships from your college or university to help you pay for your tuition, books and other expenses. Most of these scholarships are regulated by the National Association of Intercollegiate Athletics (NAIA) or the National Collegiate Athletic Association (NCAA). By Jacob Imm, 2021

They give rights to student-athletes, Determine the advantages of being a 10676 titled Act Protecting the Amateur student-athlete.

Nature of Student-athletes in the Philippines by regulating the Residency requirements and prohibiting the Commercialization of Student-athletes, otherwise known as the student-athletes protection act. By the City of Dasmariñas, Administrative Assistant III.

Extracurricular activities are defined as activities that are not part of the academic curriculum but are an essential aspect of the educational environment. Sports, singing, music, debate, dancing, theatre, social services, and so on are examples of extracurricular activities. Schools should play an important role in channeling the energy of both normal and physically challenged kids into healthy personality development through extra-curricular activities.

Extracurricular activities help students develop their talents. It trains a student to think critically, manage time wisely, and be intelligent. It also assists the student in achieving social goals and in interacting with and developing stronger connections with members of the community.

1.1 Statement of Objectives

For the stated purposes, this study aims on how participating in sporting activities affect the academic performance of Senior High School Student-athletes of San Jose Academy.

It also sought to answer the following statements: 1. Determine how sporting activities add loads to the works of a student-athlete.

2. Clarify what type of pressure a student-athlete may feel when having school work and schedules of training. 3.

1.3 Significance of the Study

The purpose of the research is to look into the impact of extracurricular activities on the academic performance of SnJA Senior High School Student-Athletes. The study showed that there is a crucial need for the development of extracurricular activities and orientation programs for students. Extracurricular activities have a good impact on students' lives by improving their conduct, academic performance, higher test results, more regular class attendance, and a positive self-image, all of which contribute to the students' success. Therefore, the research recommends that the government promote the implementation of extracurricular activities in all schools by allocating specific money, appointing special trainers/teachers, and paying them the same as other subject teachers.

1.4 Scope and Delimitation of the Study

This study included the selected Senior High School Student-athletes of San Jose Academy, who contribute in their school, being physically fit at the same time making their parents proud with their multitaskings. Lastly, survey form was used to assess the perceptions of the subjects regarding how sporting activities affect the academic performance of a student.

2. Analysis

Studies have shown that students who participate in extracurricular

activities have higher grades and test scores than those who do not. For a long time, sports have been viewed as a way to stay healthy and in shape, but their importance goes much further. As a matter of fact, playing sports teaches life lessons like discipline, responsibility, self-confidence, accountability, and teamwork. Studies have shown that exercise increases blood flow to the brain and helps the body

build more connections between nerves, leading to increased concentration, enhanced memory, stimulated creativity, and better-developed problem solving skills. In short, playing sports helps your brain grow and makes it work better. From a social standpoint, sports are a powerful tool that brings people together and creates a sense of community.

Playing college sports has some serious benefits. Besides just being fun, sports can help you perform better in school, relax more and worry less, deal with setbacks, work better with others and increase your energy — all of which helps you balance school and everything else going on in your life.

3. CONCLUSIONS

Academic performance can benefit from sports activities as well because they help us learn, experience, and grow as people. Students that participate in more sports had higher levels of self-esteem, according to our research. We find out that having a strong degree of self-esteem will encourage students'

emotionally, mentally, physically and financially fulfilled. They are also delighted with their school, San Jose

Academy, to participate in this event and learn outside of their comfort zones. It broadens the researcher's

motivation and perseverance, which will raise their academic accomplishment. The holistic development of children and adolescents is aided by participation in sport and physical exercise, which have a lots of benefits and lowers the chance of acquiring chronic diseases like heart disease, stroke, and diabetes, improves mental health and mood, among other things.

We all have skills, and sport activities into academic performance is crucial because it helps the whole child in numerous ways. In terms of mental, emotional, and physical health, as well as social, cognitive, and other research. Also, it helps the pupil develop self-control, responsibility, self-assurance, and accountability. Lastly, we want to investigate how extracurricular sport activity affects high level students' academic performance. We aiming that the integration of sporting activities into academic performance will aid the student's growth in a variety of ways because it is crucial to address and be interested in this topic. It is also proven that sport activities help in different ways like, physical skills, academic, self-regulatory, and general life skills.

5. ACKNOWLEDGMENTS

This study would never have been effective without the individuals who never failed to encourage and guide. The researchers would like to thank heavenly Father for being their provider and allowing them to be

creative and critical thinking abilities.

The researchers would also like to thank their teachers who have been there from the beginning. Mr. Jojie Juanero, in particular for helping them to conduct this research. The researchers would like to acknowledge their adviser Ms. Sienna Mendoza for the guidance she has given throughout this study. Regardless of the fact that they were experiencing she patiently influenced and mentored them until the end.

The researchers are also grateful to their friends for providing them with hope and happiness, allowing them to cope and ease our minds through the process. Last but not the least, the researchers would like to recognize themselves and each other for their magnitude and bond." Two heads are better than one ". Without efforts and perseverance, this study became their life's achievement.

The Power of Music: A Study on the Effectiveness of Music as a Stress Reliever for Students

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Abstract: This paper talks about music's capacity to reduce stress. In today's world, stress is a prevalent issue that can harm people's physical and emotional health. Research has indicated that music listening may help reduce stress, with some studies showing that music may trigger the body's natural relaxing response. Also, studies have demonstrated that music therapy is useful in lowering stress and anxiety in a variety of populations, including cancer patients and people with mental health conditions. The data suggests that music can be a useful tool for managing stress and boosting mood, even if further research is needed to better understand the mechanisms underlying music's stress-relieving benefits and to identify the most effective genres of music for stress reduction.

Key Words: Music; stress; stress relief; musical genres; pop music; stress management;

1. INTRODUCTION

Music as a Universal Language:

Music is regarded as having the greatest widespread appeal and acceptance of all the arts. However, this universality does not imply that music lacks a distinct character. Every region has a distinct genre of music that captures the entire experience and collective awareness of its citizens. Consequently, music

is the culmination of a certain person's musical ability.

This is the case with Philippine music, which is recognized today as a special fusion of two illustrious musical traditions—the East and the West (Hila & KITE E-Learning Solutions, Inc., n.d.). Being naturally musical, Filipinos have absorbed these traditions from ancient times to the present and have integrated them into their own musical

creations. Philippine society has experienced the evolution of music over time as it has taken on various forms and artistic subtleties. (Folk Music Project, n.d.; Yamio, 2011).

Music affects all people in their own way, regardless of their gender, nationality, ethnicity, range of age, etc. As young as a toddler, they listen to a specific genre of music, which is children's music or kid's music. (e.g., Twinkle, twinkle little star, the ABC song, and Humpty Dumpty.) Music ignites all areas of child development and skills for school readiness, including intellectual, social-emotional, motor, language, and overall literacy. It helps the body and the mind work together. With this, music has helped people in their adolescence cope with their stress, with specific musical genres affecting the following variables: sex, age, and strand. This further addresses and explains the knowledge and depth of the issue.

The Power of Music: Coping with Stress and Anxiety through Different Musical Genres in the Philippines

Multiple studies have shown how music and different musical genres have helped people cope with stress and anxiety. Every culture has its own set of urban legends regarding the ability of music to control and alter emotional states. Search results for "music and stress" promise a variety of music genres created specifically to help people manage stress. Music therapists are experienced in applying various stress-reduction strategies to various

populations (Yehuda, 2011). Stress has been shown to have numerous negative effects on the body, including increased heart rate, blood pressure, and cortisol levels (McEwen, 2000). When an individual experiences stress, their body's "fight or flight" response is activated, which can lead to a cascade of physiological changes designed to prepare the body to respond to a perceived threat (Chrousos & Gold, 1992). However, chronic activation of this response can have harmful effects on the body, including an increased risk of cardiovascular disease, a weakened immune system, and impaired cognitive function (Sapolsky, 2004; McEwen, 1998). These physical indicators are also a factor that contributes to people's stress and anxiety.

In the Philippines, multiple musical genres have different implications for the public's profiles. The most famous of them is pop music, which originated in its modern form during the mid-1950s in the United States and the United Kingdom. Artists that make pop music have affected Filipino adolescents in an enormous way. The majority of these artists' fan bases are adolescents, which implies how dependent teenagers are on music. Similarly, K-pop has also become a rising musical genre that is popular among Filipinos under the influence of Korean groups. Lastly, with our very own OPM, or original Pilipino music, and its distinctive characteristic that is comprehensible among Filipinos, studies have shown that OPM has grown

exponentially because of how dependent Filipinos are on it.

So far, there have been no local studies on Filipinos on how music and different musical genres affect the following variables: sex, age, and strand as a stress reliever among teenagers that are most affected by the said mental issue that is very prevalent. The effectiveness of music and its various musical genres as stress relievers among adolescents is consequently of interest to the researcher. or by simply speaking it out loud (Young & Donovan, 2020).

Moreover, this paper aims to find out how music becomes a stress reliever for students, determine the impact of music on a student's mood and brain, and assess the psychological effects of music on students.

This research has significant benefits for the education field because it focuses on student stress management. Plus, this will benefit some groups, like students who are stressed out and having struggles, since they often turn to music to help them cope. Additionally, this will benefit us all because everyone now has access to high-quality music, not just older people. Lastly, this paper can serve as related literature for future researchers who plan to explore the same topic.

2. ANALYSIS

The Therapeutic Benefits of Music for Stress Management among Students: Understanding the Potential Influence on Actions, Emotions, and Thoughts

Students are a subset of society that faces extreme stress on a daily

basis. One of the most common forms of coping with stress is listening to music. (K. Pisarczyk, 2018) Many students use music as a stress reliever. As reported by K. Cherry (2022), research confirms that it is the most effective for stress management for the reason that it can give you pleasure and contentment as well as relax your mind.

Furthermore, the concept has the potential to influence your actions, emotions, and thoughts. Stress is common in society; however, few people experience extreme stressors that negatively impact their physical and psychological well-being. There are numerous approaches to stress management in which music plays an important role, according to the Australian Journal of Music Education (2022). These methods can be based on biological as well as psychological stress manifestations. Because music is therapeutic, it is effective for relaxation and stress reduction. (W. Pennington, 2015) The melody and beat that synchronize with your brain can also help improve your mood. Music has been shown to have a positive effect on brain chemicals like dopamine, which is associated with pleasure, and oxytocin, also known as the "love hormone," as well as evidence that music can significantly lower levels of the stress hormone cortisol. S. Adler and his associates (2020).

Music in a Psychological and Physiological Perspective

A study conducted by M.V. Thoma, et al. (2011) investigated the

interrelationship and potential mediating mechanisms between various aspects of habitual music-listening behavior and physiological and psychological functioning. Specifically, by measuring habitual music-listening behavior, emotion regulation, stress reactivity, and physiological and psychological functioning. The researchers found that the average duration of music listening and subjective relevance of music are not related to physiological and psychological functioning. However, reasons for listening (especially "reducing loneliness and aggression" and "arousing or intensifying specific emotions") are significantly associated with physiological and psychological functioning. Thus, these direct effects were mediated by distress-augmenting emotion regulation and individual stress reactivity. Additionally, habitual music-listening behavior becomes a complex behavior that is further influenced by dispositions that are not typically related to music listening. Furthermore, the result shows that habitual music-listening behavior has no direct relationship with physiological or psychological functioning.

M.V. conducted a study. Thoma, et al. (2011) looked into the interrelationships and potential mediating mechanisms between various aspects of habitual music listening behavior and physiological and psychological functioning. Measuring habitual music listening behavior, emotion regulation, stress reactivity,

and physiological and psychological functioning, to name a few. The average duration of music listening and subjective relevance of music, according to the researchers, are unrelated to physiological and psychological functioning. However, listening motivations (particularly "reducing loneliness and aggression" and "arousing or intensifying specific emotions") are significantly related to physiological and psychological functioning. Thus, distress-enhancing emotion regulation and individual stress reactivity mediated these direct effects. Moreover, habitual music-listening behavior evolves into a complex behavior that is influenced by dispositions unrelated to music listening. Lastly, the result shows that habitual music-listening behavior has no direct relationship with physiological or psychological functioning.

3. CONCLUSIONS

In conclusion, music is a universal art that has distinct characteristics in every culture, and the Philippines has a special fusion of East and West musical traditions. Music affects people of all ages and can help with intellectual, social-emotional, motor, language, and literacy development. It has also been shown to be an effective tool for coping with stress and anxiety, which can have harmful effects on the body if chronic. In the Philippines, various musical genres have different implications for the public's profiles, with pop music, K-pop, and OPM being the most popular among

Filipino adolescents. However, there have been no local studies on how music affects stress among teenagers in the Philippines. Therefore, understanding the effectiveness of music and its different genres as stress relievers among adolescents is of interest to researchers. Overall, music has a significant impact on people's lives and can be a powerful tool for promoting well-being and mental health. Students are a subset of society that experience extreme stress on a daily basis, and music is a common and effective way for them to cope with stress. According to research, music can provide pleasure, contentment, and relaxation, and it can also have a positive effect on brain chemicals associated with pleasure and stress reduction. However, a study by M.V. Thoma, et al. found that while habitual music-listening behavior is not directly related to physiological and psychological functioning, the motivations behind music listening can significantly impact these aspects. Thus, the relationship between music and stress management is complex and influenced by various factors. Nonetheless, music remains a valuable

tool for students and others seeking stress relief.

There are numerous studies being done to find a stress-relieving material. Not all stress-relieving methods, however, have been found. Researchers in the future may yet find a variety of stress-relieving methods, some of which are fresh and more potent compared to others for managing our daily stress. Even more research can be done on music's efficiency as a stress reliever in our daily lives.

4. ACKNOWLEDGMENTS

The researchers would like to extend my sincerest gratitude to **Mr. Jojie B. Juanerio**, the Finance Office Head of San Jose Academy, for his invaluable assistance and support during the course of this project. His guidance and expertise were instrumental in the successful completion of this undertaking.

We would also like to express my appreciation to San Jose Academy for providing me with the opportunity to conduct this research. The resources, facilities, and support extended by the institution were essential in ensuring the accomplishment of this project

The Level of Awareness Among Consumers on the Proper Use and Impact of Eyeglasses

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Abstract: Eyeglasses have become an instrument used by mankind to aid in their eyesight needs. These instruments have undergone different changes that conflict with their functionality or fashionability. However, despite the many differences in the forms of eyeglasses as well as the rapid advancements in technology, many consumers still experience inconveniences in the comfort and function of the instruments they need in their everyday lives. While these inconveniences are small, it is still in need of change. Therefore, there has become a growing market for attachments that can be used to further improve eyewear experiences. However, the market cannot grow and see its full potential without the dissemination of information regarding the importance of eyeglasses, the importance of the attachments, why these attachments exist, and how to properly use eyeglasses. Our study found that the low level of awareness of consumers regarding their eyeglasses is mostly because of financial restraints. While many forms of services regarding customizable eyeglasses are on the market, many cost a lot to manufacture and that is why most consumers disregard this opportunity and instead resort to purchasing frames that are mass-produced and do not fit their facial structure most of the time. In addition to financial restraints, many groups believe in false information regarding eyeglasses such as believing that wearing eyeglasses worsens eyesight. This, in turn, hinders slowing down the worsening vision problems of a person and also makes it difficult for them to see at different distances. After these findings, we concluded that the government should provide funds to the health department to fully disseminate information about eyeglasses and their importance as well as a program to help consumers from the lower social class to start engaging in eyeglasses by providing them with free eyewear services.

Key Words: eyeglasses; importance; proper use; history; design

1. INTRODUCTION

1.1. Background of the Study

Myopia or near-sightedness is a condition in which people find difficulty in seeing distant objects clearly. High myopia is associated with an increased risk of other more serious eye conditions such as glaucoma and cataract that may later lead to vision impairment or blindness. As of 2020, over 51% or 4 billion adults in the world are myopic. Among them, 64% wear eyeglasses (www.reference.com). According to Madarang (2019), it is found that nearly 40% of the Filipino population is myopic. According to the Department of Health, most of the eyeglass consumer population comes from children in developed cities such as Metro Manila and Cebu due to parents encouraging the use of electronic devices to keep their children busy. While there is no cure for myopia or any other vision problems, modern medicine has come up with strategies to restore distance vision through LASIK surgery. However, the other factors outweigh the benefits and these procedures are restricted to children because they may hinder the development of children's eyes. Due to this, many resorts to wearing eyeglasses in order to slow down and work around their myopia.

Eyeglasses are used to correct vision problems by changing the trajectory of the light to the retina, which turns blurred sight into clearer ones. They were invented in Italy in the 13th century by Salvino D'Armati, but have evolved since then, with frames made with better materials and shaped to match the faces of their wearers (Buensuceso, 2021). However, the intrusion of fashion has caused minor

inconveniences such as eyeglasses falling off of the noses of certain nasal nose races, the nose pads becoming too slippery to stick onto the faces of its consumers, and the temples not serving many purposes in keeping the glasses in place during movement. Consumers are finding ways to work around these inconveniences, such as purchasing additional accessories for their eyeglasses to better suit their needs. Social media has taught them that these inconveniences unionize them and that there are a number of ways to get through them. The proper use of eyeglasses is significant to the public, as they can maximize the potential of the instruments they use to see and provide more comfort for their users.

As of 2019, 25.3% of children in the world wear glasses, of which 35.3% are aged 12-17 years old. This gap in research regarding the awareness of the proper use and importance of eyeglasses creates an imposing problem for children especially when it is said that it will rise by 2030 (Madarang, 2019). The lack of awareness limits the potential of these instruments to fully aid in the vision of its consumers until they are ready for surgery, and it also imposes discomfort for those who need them all day. Current studies fill the gap by

Presented at the SnJA Research Festival
2023 San Jose Academy,
Navotas City

March 13-17, 2023

vaguely providing the importance and proper use, but are not able to give light on the growing market for accessories that aim to help in the comfort of eyeglass consumers.

For the stated purposes, this study aims to determine the level of awareness of senior high school students to the importance and proper use of eyeglasses as well as, the strategies on how they can eliminate minor inconveniences in the use of eyeglasses without providing much financial burden to its users by giving light to the available tools and accessories in the market. Specifically, this paper aims to address the following questions and objectives:

1. To determine why people lack awareness of the impact, importance, and proper use of eyeglasses.
2. To determine why there are design flaws in modern eyeglasses despite the presence and power of modern technology.
3. Identify and enumerate how consumers currently work around the design flaws of their eyeglasses.
4. Create a strategy in order to spread awareness of the impact, importance, and proper use of eyeglasses.

This study aims to spread

awareness of the impact, importance, and proper use of eyeglasses to its users. It also aims to create a new impression that glasses can help people not only match the average but become better without the inconveniences of history. Additionally, it will provide a baseline on what kind of information adolescents, specifically senior high school students, retain through social media. For students and adults, this study will serve as a guide in order to inform them of the functions, importance, and proper use of eyeglasses. This is especially true for those who experience inconvenience due to their eyeglasses' design. For future researchers, this study will serve as a baseline for the population of eyeglasses consumers as well as a baseline on the level of awareness of the consumers to information about their eyeglasses.

2. ANALYSIS

The Importance and Parts of Eyeglasses

As of 2019, 40% of the people in the Philippines experience myopia. The population of people with myopia continues to rise by 50% by 2030 (Madarang, 2019). Eyeglasses are frames that are generally fixed to hook above the ear and have lenses that are worn in front of the eyes to aid in defects in vision (www.britannica.com). Eyeglasses are not meant to cure myopia and other vision problems, but it does aim to help in slowing down the progression of these defects, especially

for children who are restricted from getting surgery due to their eyes still being in development (www.youreyesite.com). Apart from slowing down the vision problems' progression, eyeglasses are able to help in returning the distance vision of a person making it essential for different environments such as classrooms, work environments, or generally in going outside. It is advised that eyeglasses should be changed every one to two years depending on the prescription given by the optometrist. Changing of glasses should be done together with an updated prescription through a new vision exam, this is in order to adjust the lenses to the current condition of the consumers' vision (www.nvisioncenters.com).

According to Porter (2017), eyeglasses contain 9 parts that can be distinguished by their function. First are the rims which fully surround the lenses with metal, plastic, or polycarbonate frames to keep them in place. Second, are the endpieces; these are the small parts that connect the lenses to the temple by extending outward. Third, is the bridge; this is the part that rests on the nose and holds the two rims together. Fourth are the hinges; these allow the temples of the glasses to fold inward. Fifth are the lenses, these are the ones crafted to fit within your prescription in order to let someone see clearly.

According to www.wisconsinvision.com, there are 6 types of lenses, each differs depending on the vision it aims to aid; there are single-vision lenses, these lenses are best for correcting myopia (near-sightedness)

and hyperopia (far-sightedness) as it possesses one prescription on the whole lens, this is the most commonly used prescription for lenses; there are bifocal lenses, which are for correcting both near and far-sighted vision; trifocal lenses are made for near, far and presbyopia, which is being unable to focus in the middle distance; progressive lenses are for bifocals and trifocals since it corrects vision no matter the distance without any visible transitions; toric lenses are used to correct astigmatism by adding cylinder correction; and finally, prism lenses which are used for people with heterophoria, or the inability of the eyes to look at the same direction at rest.

The sixth part is the screws that secure the end piece to the temples. Seventh is the nose pads, these are plastic pieces that sit on the nose, and they aim to secure the fit comfortably. Eighth is the pad arms, they extend from the rims to hold the nose pads in place. Finally are the temples, which are long arms on the side of the frame that fits over the ears.

The Effect of the Conflict Between Fashion and Function in Eyeglasses

A part of the culture of wearing eyeglasses is being unionized by the minor inconveniences brought by the unawareness of the consumers to the adjustability of the part of the eyeglasses. Since consumers are not informed of the flexibility of the adjustment of parts of eyeglasses, some have learned to live with it. However, there has been a growing market for accessories or attachments dedicated to

specific situations, a most known example is the eyeglass chain, which is used to keep the eyeglasses accessible to the wearer. According to www.warbyparker.com, there is a growing market for more attachments that can further assist in providing comfort to eyeglass users such as; temple tips and nose pads. Temple tips or earpieces are attachments that can be slipped on the temple to avoid the eyeglasses from slipping, this is done by having the temple tip hook onto the back of the ear. While nose pads already exist in commercial glasses, their function remains temporary especially if the nose pads are made of plastic. Repetitive use and an oily face can cause remove the function of the nose pad. For these situations, silicon nose pads can be replaced with the original plastic variety (Jonathan, 2019).

In history, fashion, and function have always been in conflict. An example of this is the invention of the pince-nez in 1876, pince-nez were spectacles that were clipped to the nose by a spring located where modern nose pads are attached (www.merriam-webster.com). It became a way for individuals to wear glasses but not show them off, this is because eyeglasses were stigmatized as only being used by elderly clergymen. The pince-nez then became a vanity rather than a tool to see, as well as a status symbol because of the attention it gathered from the wealthy (www.2020mag.com). However, the height of the pince-nez was short-lived. They began to fall flat as younger generations chose to live more active

lives, therefore needing a more stable vision aid rather than just something that sticks in the bridge of their noses. In addition, more people were being diagnosed with myopia due to the improvement in medical technology which required doctors to prescribe eyeglasses styles that were more functional than fashionable (www.eyeglasseswarehouse.com). By then, glasses became more functional and durable due to the invention of plastic lenses (www.salus.edu).

The Level of Awareness on the General Information on Eyeglasses

Despite the advancements, medicine has made in terms of technology, most are still not informed of the importance and proper use of eyeglasses. A 2021 study found that persuading people from lower classes, is not enough to only share the possible health risks, and related knowledge regarding eyeglasses is not enough to convince families to seek out care not only because they lack the information regarding glasses, but misinformation also played a key factor to incompletion of families to eyeglasses, even if it is free (Zhang et. al., 2021). Ultimately, finance becomes a factor in the lack of awareness of consumers to the importance and proper use of eyeglasses, and even if free vision aid services were to be given, misinformation from baseless beliefs tend to keep consumers from the lower classes to participate in getting glasses.

3. CONCLUSIONS

All in all, eyeglasses serve as a

visual aid for those with differences in seeing different distances. Throughout history, conflicts between fashion and function reign over which designs eyeglasses possess. But through technological advancements, eyeglasses are able to become fashionable and functional. People can choose to customize the parts of their glasses to fit their faces and to bring comfort, but most prefer to pick from the cheaper commercial variants of eyeglass frames. This in turn sparked a growing market for eyeglass accessories such as silicon nose pads and temple tips. However, many people still do not realize the existence of customizable frames or the existence of eyeglass accessories. This is due to many factors including but not limited to financial capabilities, and baseless beliefs. In order to combat these problems, education regarding the importance and proper use of eyeglasses should be disseminated throughout the youth, whatever their social class may be. This is so that we are able to raise awareness of the growing population of myopia-affected vision and also to raise awareness on the possible solutions to work around and stop the progression of blurry vision. Along with free education, it is best that there will be free service given to those in the lower classes. Because despite the countless pieces of information and pieces of evidence that are presented to them in the education about eyeglasses, financial instability enables them to invest in getting eyeglasses. The solution to this is giving them aid by free eyeglass services, even if the frames used are commercial and mass-produced.

Education regarding the general importance of eyeglasses and the benefits it brings are not the only things

the youth needs to hear. It is also necessary to bring light into the education of the proper use of eyeglasses in order for the youth to utilize the eyeglasses to their full potential. Not only that, maintenance is necessary in order to avoid the further progression of their worsening vision. With this, free education on the different aspects of eyeglasses such as; proper use, maintenance, when to change glasses, and the accessories that can aid in providing them more comfort is an imminent topic to be disseminated to the youth. The growing population of people affected by myopia may be inevitable. Therefore, topics such as the ones mentioned above will begin to grow in need as many more people invest in eyeglasses. Non-government agencies are beginning to take part in trying to aid in the education of the importance and proper use of eyeglasses, but without any proper funding, they tend to fall short in the long run. Therefore, we recommend the government take action in aiding the growing population of eyeglass consumers and raise programs that would help in disseminating these types of information, and utilize the people's money to nourish the visions of our future.

5. ACKNOWLEDGMENTS

The researchers sincerely express their gratitude to Mr. Jojie B. Juanerio. Finance Office Head of San Jose Academy, and our term paper advisor, for his cooperation, guidance, and unwavering supervision.

Finally, we would like to thank San Jose Academy for the opportunity to grow, innovate and develop research skills among its students.

Typical Challenges and Opportunities of food business in Navotas City Towards the Development of a Business Stability Program

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Abstract: This research study determines the typical challenges and opportunities o

food business in Navotas City towards the development of a business stability program. Correlational-quantitative methods were used as the research design, this study used a survey questionnaire consisting of brief responses and a five-point Likert rating scale administered using Google Forms. The survey questionnaire was divided into three categories: Respondents Demographic Profile, Challenges that affect food business stability, and Opportunities of a food business. This paper concludes that “Purchasing of health equipment” is the most encountered challenge during the pandemic, and “adapting to international trends” is the most common encountered opportunity of a food business during the pandemic. Therefore, the researchers suggest that food business owners should use the findings of this study to aid their businesses in growth.

Key Words: Challenges; Opportunities; Business stability program

1. INTRODUCTION

1.1 Background of the Study

The COVID-19 pandemic severely impacted the business community. Due to the government’s quarantine protocols, various forms have faced difficulties, leading to the instability or closure of their business. The pandemic has had a significant impact on labor markets, economies, and business, as well as worldwide supply chains, causing

significant commercial disruptions. The World Bank surveyed 13 878 firms between November 26 and December 10 to see how the pandemic had affected them. As a result, 21% of businesses have chosen to close, and 7% have done so permanently (World Bank,2021).

The COVID-19 pandemic’s long-term effects go far beyond overcrowded hospitals and significant travel restrictions. The difficulties owners of small companies in the Philippines continue to encounter in keeping their doors open are particularly severe for

those in rural areas. With the World Bank projecting a 52% job loss in the construction sector and an even more significant number of employees in small companies like laundromats, hair salons, and other roadside stores in 2020, business owners were compelled to let go of a significant portion of their personnel (Anna Gravois, 2020). The finding was supported by research by the Philippines Institute for Studies, which states that the crisis may cause the Philippines to experience economic losses ranging from P276.3 billion to P2.5 trillion (Abrigo et al., 2020).

In the city of Navotas, Calderon (2020) stated that lockdowns disrupt urban life and threaten the food supply chain, so Navotas City grows its food from the ground up. As COVID-19 exposes how flimsy and unstable the food supply chain is from rural farms to dining tables in the city - vertical farming offers a new perspective in finding a new model to address hunger. Four vertical farms already exist in the backyard of the resettlement area in Navotas, a crowded city among the top 15 coronavirus-infected areas in the Philippines. The city of Navotas Pandemic recovery assistance program, City Ordinance No. 2021-63, was approved by Mayor Tobias Tiangco. According to the regulation, those who pay their taxes on time and are not in default will receive discounts when they settle their 2022 taxes. Except for the barangay business clearance and fire safety inspection costs, which must be paid directly to the barangays and Bureau of Fire Protection, Navotas will offer a 5% reduction in all real estate taxes, business taxes, and other expenses. The Navotas Pandemic Recovery Assistance Program also exempts marginalized navoteños from paying business taxes, fees, and other regulatory expenses and service charges.

The combined effects of the global

pandemic are hazardous for the food industry. It is more important than ever to protect economies since COVID-19 has an impact on economies all around the world. However, some entrepreneurs find opportunities in the upheaval caused by the outbreak. For instance, the pandemic has driven businesses to online platforms. Numerous companies had to shift their focus to a business that would result in innovations or concepts that had yet to be considered.

The different challenges and opportunities will aid the business in stability and success. This study aims to

determine what kind of problems and opportunities food businesses in Navotas City usually encounter and how they affect the stability of their food business.

2. METHODOLOGY

2.1 Research Design

This study utilized the correlational-quantitative method to determine the typical challenges and opportunities of a food business in Navotas city towards developing a business stability program. It is correlational in that two variables were observed to create a statistically significant relationship between them using the acquired data.

2.2 Research Population

The study's respondents are composed of food business owners in Navotas City. The sampling design that the researchers used was purposive sampling. This sampling method is a non-probability sample in which the researchers will choose suitable respondents for the study. There are one hundred fifty-three (153), eighty-nine (89) female and sixty-four (64) male food business owners in Navotas city

experienced different challenges and opportunities that affected the business's stability.

2.3 Research Instruments

Data were gathered by the researcher using a survey questionnaire, and before the survey's launch, the researcher acquired valid consent. The respondents

were asked to complete a questionnaire by the researchers. Various considerations led to the preference for using a structured questionnaire, including a.) challenges that affect the stability of the food business; and b.) opportunities for a food business. The survey questionnaires were divided into three sections that the owners of food businesses could respond to. The purpose of the first section of the questionnaire was to get the respondents' profiles. The questionnaire for the business owner asked about the owner's age, gender, highest level of education, type of food business, and typical business hours.

Using a five-point Likert rating scale, respondents were asked to rate a statement's effectiveness:

Strongly Agree - 5

Agree - 4

Neutral - 3

Disagree - 2

Strongly Disagree - 1

The respondents' responses have been recorded and are used as the study's data. After collecting data, researchers recorded and transcribed the reactions they had gathered. The data was then evaluated and analyzed by the researchers.

2.4 Data Gathering Procedure

The researchers had committed significant time, effort, and teamwork to create questionnaires that would be

useful to the intended respondents. The researchers formally wrote a letter to Ms. Niña Z. Cincollagas, the Komunikasyon/Philippine Politic and Governance teacher of Kaunlaran High School for survey questionnaire validation. The validator finally approved the survey questionnaire on November 12, 2022. In the questionnaire, a likert scale was used to determine whether respondents agreed or disagreed in a statement. After the questionnaire was approved, researchers conducted the survey on November 12, 2022 using Google Form. Following that, with the help of different forms of social media, the questionnaires will be distributed to 200 food business entrepreneurs in Navotas City through messaging their page and posting online. Participants were given approximately 5-10 minutes of their time to respond.

After gathering the data from the research instrument, the researchers tallied and computed the gathered responses. The data was then analyzed and interpreted by the researchers based on the items checked by the participants.

2.5 Method of Data Analysis

Frequency and percentage were utilized in the first step of data analysis to define the demographic profile of the respondents in terms of age, gender, and educational achievement as well as their obstacles and possibilities.

The calculation of means for each of the 28 questionnaire items made up the second stage. This was calculated for the entire sample of Navotas food

owners respondents. The central tendency of the respondents' responses in terms of the stability of the food business was also determined using average rating.

Lastly , purposive sampling was used to compare the three sections of respondents' significant thoughts about the sustainability of the food business. Meanwhile, a five-point likert scale administered using a Google form was utilized to assess the significance of differences in the respondents' perceptions of the typical challenges and opportunities.

3. RESULTS AND DISCUSSION

Table 1: Descriptive of Common Challenges

	Mean	Standard Deviation
1. Purchasing of health equipment	2.30	0.925
2. If the business competitor offers the same product	1.98	0.907

3. Inability of customers to visit establishment	1.98	0.087
4. Unemployment rate	1.97	0.835
5. Unusual buying habits of the customer	1.88	0.755
6. Increase in food business tax	1.87	0.864
7. Government protocols and current pandemic situation	1.79	0.740
8. Lack of supply	1.73	0.735
9. Inflation rate	1.69	0.763
	1.91	

The table represents the common challenges a food business encounters during the pandemic. This data indicated that "Purchasing of health equipment due to the pandemic is the most encountered by food business owners (M= 2.30, SD = 0.925).

Table 2 : Descriptives of Common Opportunities

	Mean	Standard Deviation
1. Adopt to international trends	2.47	1.130
2. Withdrawal of Competitors	2.33	1.031

3. Chance to improve owners and manager skills	1.93	0.926
4. Chance to grow its potential customer	1.90	0.849
5. Adopt to new technology	1.89	0.957
6. Effects of customers' cravings	1.80	0.836
7. Chance to improve owners product and service	1.78	0.850
8. Home-based production	1.72	0.782
	1.98	

This table represents the common opportunities a food business encounters during the pandemic. This data indicated that adapting international food trends is the most encountered opportunity for food business owners ($M = 2.47$, $SD = 1.130$).

Table 3 : Significant Difference between the opportunities encountered by food business in terms of Educational Attainment.

One-Way ANOVA (Welch's)				
	F	df1	df2	p
Mean_Opportunities	4.27	4	257	0.009

One-Way ANOVA (Welch's)				
	F	df1	df2	p

4. CONCLUSIONS

The following conclusions were drawn by the researchers based on the findings of the literature review and the respondent survey:

- The business owners chose "purchasing health equipment" as their most encountered challenge during the pandemic. This implies that the respondents were obligated to obey such regulations due to the dangerous health situations food consumers or communities face.
- The business owners rated "adapting to international trends" as the most common opportunity they encountered during the pandemic. This signifies that amid the health crisis, foreign food or cuisine immensely influences Filipino customers' food choices, providing enormous opportunities for food business owners to adopt the current trends. On the contrary, food business owners considered "home-based production" the slightest opportunity during the health crisis
- There is no statistically significant difference between the challenges and opportunities experienced by food business owners in terms of age and gender.
- There is no significant difference in the perceived challenges encountered by food business owners regarding educational attainment, food business type, and average operating hours in a day. However, food business owners with non-formal education will most likely experience challenges in terms of education attainment. The results of the survey also imply that "type of food business" and "average operating hours in a day" have no significant effects on the challenges owners encounter.
- There is a statistically significant difference between the opportunities encountered by food business owners in terms of educational attainment and type of food business. Food business owners who graduated through informal education perceived many opportunities in the food business. In terms of food business type, "Home-cooked meals" had a higher average mean score of opportunities.
- There is no significant difference between the opportunities encountered by food business owners in terms of average operating hours in a day.

5. ACKNOWLEDGMENTS

First and foremost, praises and thanks to the God Almighty, for guiding us throughout our research. We thank him for his showers of blessings and strength that aid us to surpass the challenges that we've encountered in conducting this research

The researchers would also like to express our deep and sincere gratitude to our research adviser, Mr. Rafael Patrick M. Pecjo, for guiding and supporting us during the course of our research study.

To Mrs. Toni Rose C. Conception, for assisting us in distributing our survey questionnaires to her co-food business owners.

To our respondents who willingly helped and cooperated for the success of the study. We would also like to give thanks for the time and information that you have given to us to conduct this study.

Last but not the least, to our dearest family for their deep consideration and unending support through the making of the research study.

Satisfaction Survey of JHS and SHS Students from San Jose Academy for E-Commerce Applications' Improvement Program regarding Discounts and Promotional Offers Towards

Customers' Loyalty

Year 2022 - 2023

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Abstract: This study aims to discover the satisfaction of JHS and SHS students from San Jose Academy for E-commerce Applications' improvement program regarding discounts and promotional offers towards customer's loyalty. When surveys were employed in the earlier stage of the research to learn more about consumers, it was found that girls responded to them better than boys and that practically all the respondents were in senior high. Their allowances and salary are frequently deducted to pay for the goods they are buying using this different e-commerce application. Also, the most frequently purchased products were health and personal care items as well as apparels. Additionally, the survey's findings showed that many consumers routinely utilize the TikTok app to buy either wants or needs. As the results show that most consumers only deduct the goods sold from their allowance, it is suggested that sellers should consider on giving more discounts or promotional offers to improve their business. They should also think about offering discounts on items like apparels, which are the most popular items purchased by customers, as well as on health and personal care products. Overall, the researchers advise retailers to focus more on providing discounts and promotional offers as the customers are highly satisfied with it.

Key Words: E-Commerce's Discount; E-Commerce's Promotional Offers; Students' Loyalty in E-Commerce; E-Commerce Improvement; Satisfaction E-Commerce

1. INTRODUCTION

1.1 *Background of the Study*

Due to the rising number of COVID-19 Virus outbreaks, e-

commerce—the transaction of products and services over an electronic network—is quickly becoming a global phenomenon. In the Philippines, e-commerce sales are anticipated to reach 264 billion Philippine Pesos in 2021 and climb by more than 15%. Students in particular are easily drawn in by promotional offers and discounts, which benefit both customers and business owners. Businesses could take advantage of discounts and promotional deals to get rid of excess inventory, sell new items, or attract customers.

Customers can get more of the things they need and want while saving money due to these reductions. To surpass their competitors, e-commerce startups must inspire and persuade customers to shop at their site. According to research, greater customer satisfaction promotes greater customer loyalty, a better lifetime value, and a more positive brand image.

2. METHODOLOGY

2.1 Research Design

The objective of this research is to illustrate the survey method, which enables researchers to get data that cannot be achieved by systematic observation by asking questions about a range of topics. Through quantitative research, the researchers turned this study into survey research. It is important to understand how satisfied San Jose Academy's junior high and senior high school students are with the services provided by its e-commerce applications in order to progress the improvement of those applications.

2.2 Research Population

939 students from San Jose Academy in Navotas City's junior high and senior high schools made up the responses. For the JHS, a sample of 125 pupils was selected from Grades 7 through 10, and for the SHS, Grades 11 through 12. The researchers applied stratified random sampling to select our sample. To acquire the precise number of students, the researchers called the school registrar for assistance.

2.3 Research Instruments

To obtain the needed data, the researchers will conduct a survey consisting of 4 parts using questionnaires. The first part contains the background and demographics of the surveyee. Questions related to age, grade, gender and source of the savings are included. The second part contains on how frequently they used the following e-commerce applications such as Shopee, Lazada, Facebook etc. The third part is about the respondent's satisfaction on promotional offers and discounts, that can be tally through Likert-Scaling.

It has 3 parts of scaling, the first part, we scale through how frequently they used the given statement.

Always	-	5
Often	-	4
Sometimes	-	3
Rarely	-	2
Never	-	1

The second part, the researchers scale their satisfaction to the given statement.

Highly Satisfied	-	5
Satisfied	-	4
Neutral	-	3
Dissatisfied	-	2
Highly Dissatisfied	-	1

The third part is the researchers scale on how much the respondents like the given statement.

Definitely	-	5
Probably	-	4
Possibly	-	3
Probably Not	-	2
Definitely Not	-	1

The tool that the researchers used to obtain the data was through Google Forms. The links will be distributed in respondents' Messenger accounts.

2.4 Data Gathering Procedure

Questionnaires won't be the traditional papers, but rather than through Google Forms, the reason for that is the advantage of the survey method that is accessible, less time consuming, and beneficial to both researchers and respondents. For the researchers, it will be easier for them to track their respondents and distribute the questionnaire, and for the respondents, it will be easier by typing rather than writing anything; they will

be more productive to answer rather than becoming tired of it.

Survey Questionnaire distributed mid November to the students of San Jose Academy from Junior to Senior High School and answer it as much as possible or within the day, 12 respondents in a section will be answering the survey as the overall target student is 273. Once the target will be reached, data that has been gathered will be combined by the researchers to know how the students are being satisfied on promotional offers and discounts towards customers loyalty. And the results may help to improve e-commerce applications.

2.5 Method of Data Analysis

Frequency and percentage were bought online in the initial data processing stage to describe the age, gender, and other characteristics of the respondents in each student's status, e-commerce that they used and the source of their savings. The entire sample of the students of San Jose Academy was computed for respondents. The central tendency of the data was also determined using the weighted mean of the survey. In terms of the obstacles to parental involvement, with 273 respondents' responses.

To assess the significant differences between the respondents regarding the T-test using Jamovi application for independent samples was applied to determine the effectiveness of Promotional Offers and Discounts Towards Customers' Loyalty and Improvements of an E-Commerce by answering the satisfaction survey. In the

meanwhile, in order to assess the relevance of variations in the perceptions of the survey when categorized by respondents' opinions of the most successful Promotional Offer.

In conclusion, student discounts are a part of identity marketing, a method of relationship-building centered on acknowledging the customers' valuable individual qualities. By providing a special discount, the brand gives customers a unique experience and a token of appreciation for just being students. Exclusive promotions encourage purchases and subscriptions year-round, not just when the student consumers are in school. They set the stage for a committed brand engagement that might persist for many years.

3. RESULTS AND DISCUSSION

Table 1. Summary of the Mean Frequency of use of e-commerce applications

Descriptives		
	Mean	SD
Lazada	2.87	1.36
Shopee	4.21	1.17
Facebook	3.06	1.62
Tiktok	3.22	1.69
Instagram	2.73	1.71
Shein	2.26	1.38

Based on Table 1, Shopee (M=4.21, SD=1.17) and Tiktok (M=3.22, SD=1.69) are the most preferred e-commerce applications due to its frequency of use.

Table 2. Summary of the Mean Type of Product Frequently bought on e-commerce applications

Descriptives		
	Mean	SD
Apparels	3.38	1.262
Mobile & Gadgets	2.54	1.323
Health & Personal Care	3.47	1.168
Mobile & Accessories	3.13	1.218
Make-up and Fragrances	2.68	1.360
Babies & Kids	1.67	0.896
Groceries	2.59	1.437
Sports & Travel	2.62	1.343
Camera	2.20	1.289
Pet Care	2.61	1.475
Others	3.23	1.398

Table 2 represents the type of products that customers frequently buy in e-commerce applications. Health & Personal Care (M=3.47, SD=1.168) and Apparels (M=3.38, SD=1.262) are the types that are most often bought.

Table 3. Summary of the Mean Discount and Promotional Offers Preference

Descriptives	
	Discount
Mean	4.09
Standard deviation	0.741

Table 4. Group Descriptives: Satisfaction Level on Promotional Offers When Grouped by Gender

Group Descriptives						
	Group	N	Mean	Median	SD	SE
Satisfaction	Female	79	4.10	4.17	0.503	0.0565
	Male	46	3.97	4.00	0.690	0.102

Table 5. Group Descriptives: Satisfaction Level on Promotional Offers When Grouped by Grade Level

Group Descriptives						
	Group	N	Mean	Median	SD	SE
Satisfaction	Junior High School	32	4.21	4.17	0.503	0.0889
	Senior High School	93	3.99	4.00	0.596	0.0618

Table 4. Group Descriptives: Satisfaction Level on Promotional Offers When Grouped by Source of Savings

One-Way ANOVA (Welch's)

	F	df1	df2
Satisfaction	2.16	2	3.48

4. CONCLUSIONS

The study seeks to ascertain the satisfaction of San Jose Academy senior high school and junior high school students with promotional offers and discounts in e-commerce applications. In the previous chapter of the research, surveys were used to get to know shoppers, which resulted in girls being most responsive being in the survey as well as almost all of the respondents are from senior high. The money they are being used to purchase from these various e-commerce applications is frequently taken from their allowances and salaries. Moreover, the survey also resulted in revealing that many shoppers frequently use the TikTok application to purchase either wants or needs.

The products that are being bought the most from these various e-commerce shops are coming from the apparel section. Statistics were used during the previous chapter to know if the consumers still expectations have even if they want discounts or promotional offers. One-way Anova test resulted in knowing that the satisfaction level of a consumer differs according to their gender. Moreover, along with the gender, the test also revealed that besides the gender, grade level and savings were also factors affecting satisfaction level of a person.

5. ACKNOWLEDGMENTS

For the people who give support and effort to have this wonderful research to be effective and reliable.

The first is to the All-Powerful God for bestowing upon the researchers who carried out this study his grace of wisdom, knowledge, and diligence. What is described in this research paper won't succeed without this grace.

Also acknowledged the authors of the works cited in this paper and the researchers themselves. Our decision to conduct this research has been greatly enhanced by relevant literature. We also appreciate the help of the other students and classmates as they've been a greatest contribution as our respondents. We couldn't finish the survey or gather the data we needed without these people.

The whole researchers in this paper are really appreciate our teacher, Mr. Rafael Patrick M. Pecjo, for his assistance and direction. We would not have been able to complete this research correctly if it weren't for his tremendous help and patience beginning on the first day of making this report.

We are incredibly appreciative of the help from our relatives. They have given us the resources and time we need to do this research effectively. We owe you a debt of gratitude for guiding us and providing us with part of the funding our research required to be successful.

Once more, we want to express our gratitude for your assistance and efforts

The Relationship of Social Anxiety and Learning Styles of Senior High School Students of San Jose Academy Towards the Development of Awareness Program

Nicole Panaun, Gio Escoto, Faye Federico, and Abigail Puod (10 pt. Century)

Abstract:

The global prevalence of anxiety and depression increased significantly in the first year of the COVID-19 pandemic, leaving young people at a 'disproportionate' risk of suicide and self-harm. In the Philippines, 3.6 million Filipinos, including students, are experiencing mental health problems such as depression and social anxiety. A survey with 1879 participants found 28.8% of respondents had moderate to severe levels of anxiety. This study examines the connection between social anxiety and academic achievement among students in senior high school at San Jose Academy. Although research casts doubt on this strategy, it is often assumed that students learn best when their preferred learning method is used.

Keywords: social anxiety; learning style

1. INTRODUCTION

1.1 Background of the Study

Mental Health concerns have become widespread due to the COVID-19 pandemic, with some people groups impacted more than others. In the Philippines, students have experienced mental health illnesses due to the abrupt switch to online classrooms. Anxiety disorder is an extreme form of regular anxiety, and the global prevalence of anxiety and depression increased significantly by 25% in the first year of the pandemic. DOH estimates that 3.6 million Filipinos, including students, are experiencing mental

health problems during the lockdown. A survey conducted during the COVID-19

general, papers will have sections for the introduction, methodology, results and discussions, acknowledgements and conclusions. However, authors may exercise some flexibility in organizing the content of their papers. The paper should be formatted with 1-inch side margins, 1.5-inch top margin and 1-inch bottom margin in standard letter size (8.5" x 11"). The whole paper should be single-spaced and justified.

The introduction should give a brief background of the study, describe relevant developments in the literature to date, and describe the objectives and

scope of the study. Indent paragraphs by 0.5-inch.

1.2 Review of Related Literature

Social anxiety disorder is a severe and incapacitating mental health condition characterized by its onset before or during puberty, chronic course, impairment in social and occupational functioning, and decreased quality of life. It is a long-term problem, affecting the majority of university students. People suffering from SAD experience intense anxiety and discomfort when they are embarrassed, humiliated, rejected, or looked down on in social situations.

Social anxiety disorder is the third most prevalent mental health issue among college-bound students, with a high rate of students dropping out of school due to it. Research has shown that social activities such as public speaking, oral reporting, asking questions, and participating in extracurricular activities have weakened students' social interaction leading to avoidant behaviors and increased dropouts. Additionally, college students who are socially anxious have a negative self-evaluation in social situations, which can lead to impairments in their functioning and well-being. Anxiety and gender have important correlations, with women performing better than men on

standard anxiety items and self-reported anxiety tests.

Social anxiety is a feeling of fear of being judged or criticized, and can be managed with therapy, medication, counseling, and lifestyle changes. Coping is essential for mental health, as it helps people to lessen or increase the effects of traumatic life events.

Social anxiety disorder (SAD) is a persistent and pervasive fear of social contact and/or circumstances where embarrassment might occur. It hinders people from engaging in typical interactions and relationships, and can cause physical symptoms such as nausea, shaking, sweating, or blushing even in "normal" social circumstances.

Learning styles are a person's way of making sense of new information, typically done through sight, touch, and sound. The most popular learning style invention is VARK, which is categorized as Visual, Aural, Verbal (reading or writing), and Kinesthetic (Chick, 2016). Research has shown that learning styles influence pupils' academic performance, and that students' awareness of their learning styles and abilities can be improved by learning about them and how to use their abilities. Visual learning styles include visual learners who can learn through explanations and prefer to be shown demonstrations. Aural/Auditory

learning styles involve speaking and listening, reading and writing text, and kinesthetic/tactile learning styles.

Visual learners are color-oriented, have an excellent sense of proportion and alignment, and can visualize imagery with ease. Aural/Auditory learning styles involve speaking and listening, reading and writing text, and kinesthetic/tactile learning styles involve actively participating in activities, field trips, and role plays in the classroom.

Lower socio-economic status (SES) is linked to poorer academic achievement and lower test scores due to lack of educational opportunities and a higher dropout rate.

1.3 Objectives

The study aims to determine the effects of social anxiety of the Grade 12 Students of San Jose Academy on their learning style. Specifically, it aims to answer the following questions: (1) What is the profile of the students in terms of the following: (1.1) Strand: (1.2) Gender: (1.3) Socio economic Status of Parents: (1.4) Religion. (2) What is the level of anxiety of the respondents? ; (3) What are the common factors that trigger social anxiety?; (4) Is there a significant relationship between the level of social anxiety and learning style of the respondents?: (2.1) Strand: (2.2) Gender: (2.3) Socio economic Status of Parents: (2.4) Religion:

and (5) What Implication can be drawn from the findings that can be used towards the development of an awareness program?.

This study focuses on the relationship between social anxiety and learning style, helping teachers understand how to interact with socially anxious students and individuals gain knowledge about how to reduce their social anxiety and enhance their social abilities.

1.4 Scope of the Study

The research is limited to the Senior High School respondents from the San Jose Academy-Navotas that will represent the primary source of the research data. This will include ABM Strand, HUMSS Strand, GA Strand, and STEM Strand with the age of 16-18 years old, both men and women, as long as they have access to social media. This will help the researchers to concentrate their ideas as well as the data gathering since the primary target of this research is to analyze the effects of the social anxiety that affects the student's learning style.

2. METHODOLOGY

This chapter discusses the research techniques used by researchers when conducting a study. It includes the research design, study population, development of the research instrument and establishing its validity and reliability, data collection techniques, and the appropriate statistical

treatment of the data. The research population was 150 Grade 11 and 12 Students in San Jose Academy, selected through random sampling. The purpose of the study was to determine the Relationship of Social Anxiety and Learning Styles of Senior High School Students of San Jose Academy. The study used a quota sampling design to select one-fifty two (152) senior high school students in San Jose Academy.

The research instrument was a survey questionnaire in the form of a Likert Scale, divided into three parts. The first part of the questionnaire asked respondents about their demographics and learning style preferences, while the second part contained 10 items from the American Psychiatric Association to determine their level of anxiety. The tool was validated by Mrs. Hiyasmin C. Silva and delegated to the researchers the PDF Format of the validation rubrics. The survey questionnaire was distributed to Senior High School students of San Jose Academy from November 15, 2022 to November 24, 2022. It was administered through Google Form and took around 10 minutes to complete.

The data collection aims to learn more about the relationship between learning preferences and social anxiety. The Administrative Council and Board of Trustees must approve and adopt the program before it is presented to the school community. The responses of the participants were computed and tallied based on the Statistical Formula to identify the aligned results. The researchers used the Jamovi App, ANOVA, and T-Test to calculate and interpret the data.

3. RESULTS AND DISCUSSIONS

Results should be discussed thoroughly but concisely in this section with the aid of figures and tables whenever necessary.

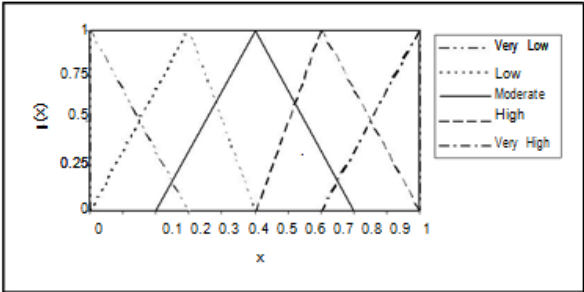


Fig. 1. Captions should be 9 pt. Century, “Tight” Text Wrapping

Text within tables should use 9 pt. Century font, as shown in the example below. Tables should as much as possible occupy only one column page. Table headings should be re-indicated for catenated tables.

Table 1. Sample table format

Energy Resource	Emission Factor (t CO ₂ /TJ)	Available Resource (TJ)	Expected Consumption (TJ)	Emission Limit (10 ⁶ t CO ₂)
Coal	105	600,000	1,000,000	20
Oil	75	800,000	400,000	20
Natural Gas	55	200,000	600,000	60
Others*	0	0	>400,000	
		>2,000,000		
Total		00	2,000,000	100

Citations should be in this format, APA style (Adamo, 1980; Chen and

Hwang, 1992; Tan et al., 2005). They should be listed at the end of the paper in alphabetical order.

4. CONCLUSIONS

Based on the result of the related literature review and survey questionnaire, the researcher gained a number of conclusions related to the relationship of social anxiety and learning style of Senior High Students in San Jose Academy.

1. Making speeches in front of the crowd and meeting new people are the events that trigger the social anxiety of the majority of the respondents. Also some of the studies conducted by the different researchers shows that public speaking gives people anxiety because they make themselves more vulnerable to rejection.
0. The background profile that the researchers provide which is Strand, Gender, Socio-economic Status of parents and Religion do not have significant relationship between social anxiety and learning style.
0. Majority of the Senior High School Students of San Jose Academy had minimal level of social anxiety given by the data from the survey questionnaire, the data interprets that the mean of represent the result of the test who is ($M=3.05$). It interprets that most of the respondents had minimal social anxiety.

5. ACKNOWLEDGMENTS

This research would not be successful without the people who helped and gave their time to share useful information for our study.

First is to the Almighty God for his grace of wisdom, knowledge, and diligence for the researchers who conducted this study. Without this grace, what is recorded in this Research Paper will not succeed and be carried out.

Thanks also to the authors and the literature used by the researchers for this paper. Related literature has been a great help to increase our idea to do this research. We are also grateful to our classmates and other students that we talked to ask their parents for some time. Without these people, we would not be able to complete the survey and the information we need.

We are very grateful to our family for their support. Because of them, we have enough materials and time to properly carry out this research. We are very grateful for guiding us throughout and help us with some financial help that was needed in order for this research to be successful.

Our team is very grateful for the help and guidance of our teacher Mr. Rafael Patrick M. Pecjo. If not for his immense support and understanding from the first day of making this paper, we would not have been able to finish this research properly. Thank you very much, Sir.

Again, thank you very much for
the help you have given.

Influence of Social Media on the Social Behavior of Senior High School Students in Navotas City as Viewed by the Teachers, S.Y. 2022-2023

Vince Cabuhat, Jana Eugenio, Rosaro Magbiray, Rainier Nudo, Ron Trinidad
and Lily Tandog

Abstract: Social media has been widely used by students since the pandemic started and it shows concerning influence towards their social behavior. Since this also greatly affects their academic performance, one of the significant observers of the students is the teachers. There are reasons and ways of behaving in particular that displays connection between students and social media and its possible influences. The goal of this study is to show these concerns using the teachers' observations. This also aims to show reliable results that multiple stakeholders could benefit from. This study uses a quantitative approach, data are gathered using a survey and the respondents are chosen with a random sampling method. The survey questionnaire is distributed online through direct messages to randomly chosen respondents after finalizing the target population and the expected number of responses. The data are interpreted using Jamovi implied these analyses. The results shown are negative. It also shows that there are no significant differences in teachers' views depending on their age, civil status, gender, religion, and school type. With nothing influencing the perception of the respondents, the responses are pure observations without any outside variables influencing these. Students, according to teachers, displayed unlikely behaviors due to social media use and are observed exhibiting unhealthy social contact or interaction. Also, social media use increases the chances of involvement of students in risky sexual behaviors. Students also experience academic failures due to high exposure to social media. Compared to other studies, this study led to the same findings. However, despite showing that social media had a negative impact on student social conduct, it is concluded that it has no significant role on senior high school students of Navotas City's social behavior in the school year 2022-2023.

Key Words: teachers and students; social media and students; social media influence; students and social behavior; social media and social behavior

1. INTRODUCTION AND RELATED LITERATURE

1.1 Introduction

1.1.1. Background of the Study

The internet has provided a

platform for millions of computers located in diverse locations in many nations. Hundreds of businesses, governments, research institutes, educational institutions, and other organizations connect. In today's communication environment, social media has become a crucial component of people's lives, especially students. Its usage is increasing more than ever before, particularly in the post-pandemic era, which is distinguished by a huge upheaval in educational institutions. According to recent social media research, nearly 3 billion people worldwide are currently communicating via social media (Iwamoto & Chun, 2020).

This growing population of social media users is spending an increasing amount of time on social network groups, as statistics show that individuals spend an average of 2 hours per day on a variety of social media applications, exchanging pictures and messages, updating status, tweeting, favoring, and commenting on much updated socially shared information (Abbott, 2017). People access all types of information with ease through the use of mobile phones and computers. Social media networking sites like Instagram, Facebook, and YouTube are more commonly used by students. Teens and young people, in particular, have embraced these sites as a chance to interact with friends all over the world, share knowledge, reinvent themselves, and demonstrate their social skills (Boyd, 2007). According to Iwamoto and Chun (2020), when students are affected by social media posts, especially due to the increasing reliance on social media use in life, they may be encouraged to begin

comparing themselves to others or develop unrealistic expectations of themselves or others, which can have several affective consequences. Many students become reliant on social media sites because they often engage in one or more activities on them. Due to this rising popularity, there is growing concern about the potential effects of social media use potentially having an impact on student's academic performance.

1.1.2 Statement of the Problem

1. What is the profile of the respondents in terms of
 - a.) Age
 - b.) Gender
 - c.) Religion
 - d.) School type
 - e.) Civil status
2. What is the influence of social media on the social behavior of high school students in Navotas City?
3. Is there a significant difference in the perceptions of teachers on the influence of social media on the social behavior of high school students and they're
 - a.) Age
 - b.) Gender
 - c.) Religion
 - d.) School Type
 - e.) Civil status
4. What implications can be drawn from the findings of the study regarding the creation of a Social Media Education Program for Students?

1.1.3 Research Hypothesis

Based on the question, the following hypothesis will be investigated: There was no significant

difference in the influence of social media on the social behavior of Senior high school students as observed by teachers depending on their age, gender, religion, school type, and civil status.

1.1.4 Theoretical/Conceptual Framework

According to Goffman's Symbolic Interactionism, which states that individuals are the way they interact with people defines or builds their identity.

This study will analyze the influence of social media on the social behavior of high school students in Navotas City as viewed by the teachers, School Year 2022–2023. Supported by Goffman's Theory of Symbolic Interactionism, the students will be analyzed by their social behavior on social media.

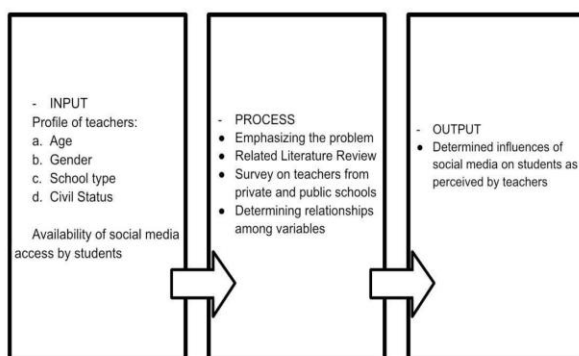


FIGURE 1: conceptual paradigm of teacher's profile and the frequency of social media use by students as contributing factors to their social behavior.

1.1.5 Significance of the Study

Several stakeholders can greatly benefit from the study on how social media affects high school students' social conduct in Navotas City. The Navotas City high school students will first benefit from the study because

they will learn more about how their use of social media influences their conduct. Students can utilize social media platforms wisely and prevent harmful effects on their social behavior by recognizing the impact of social media.

The teachers: They will gain from the study since they can utilize the conclusions to enhance the ways they educate. Teachers can modify their approaches to assist students to use social media more efficiently and develop healthy social behaviors if they have a greater grasp of how social media affects their pupils.

The parents: The study can give families useful knowledge about how to supervise and direct their children's use of social media in order to encourage positive social behavior.

The policymakers and educational institutions: By utilizing the study's findings to create policies and initiatives that encourage high school kids to use social media responsibly, they can gain from it. The study can improve the general well-being of the Navotas City community by encouraging positive social behavior and minimizing the negative effects of social media.

The Students: Students can better comprehend how social media affects their daily lives by knowing how it affects their social conduct. Kids can learn about social media's advantages and disadvantages and develop greater self-awareness when using it. Making better-informed choices about how to use social media can benefit students by researching how social media affects social behavior. People can gain knowledge about the possible repercussions of their social media

behavior and make more responsible decisions

1.1.6 Scope and Delimitation of the Study

The team of researchers has concluded the scope and limits of this study, and what the group of researchers came up with to know the various impacts of social media on the social skills and behavior of public and private high school students in Navotas City as viewed by teachers.

The scope of this study is only limited to the students and teachers of Navotas City for the school year 2022 to 2023. Any respondents and variables outside this area will not be included in the analysis of the teachers' observations of their students' social behavior.

1.2 Related Literature

In past studies shows that 50% of students around 12 years old have one or more social media accounts. By middle school, 83% already got their phones and 70% of teens are secretive to their parents when it comes to their digital activity.

On the other hand, 81% of teachers use social media to generate new techniques and ideologies when it comes to teaching. 54% of them use it to be able to reach out to their fellow teachers and 53% use it for deals and discounts for teachers. (MDR Reports, 2023 as cited in University of the People, 2023)

A quantitative study shows the possible effects of this large quantity of access between teachers and students. According to primary school teachers in Kwara State, Nigeria, the influence of social media on students is negative.

They stated that it consumes the allotted time for studying which hinders their focus on learning. The students showed offensive and inappropriate behaviors just to get their way on social media while in their classes. It also tempts them to commit several cyber crimes such as cyberbullying. The results are alarming and the students, not just those that are observed, need to have proper guidance when it comes to handling their gadgets and social media platforms. It also hinders them to be able to properly physically socialize (Adegboyega, 2020).

Teachers and students use social media in not-so-different ways. They also benefit from its use. Social media had become a good medium of teacher-student connectivity even before the pandemic started. These have been observed since the existence of different social media platforms and the way that teachers are adapting to these new technological changes in culture and learning. This is also where the normal classroom routines are held if necessary. Hence, the young ones are more impulsive using it so it must be controlled and observed. Social media gave more freedom to students to express themselves and that much freedom might lead most of them to lose their ability to know their limits.

Teachers must inform the parents of their students towards their behavior. The ways they interact both online and in real-time must be monitored to know which needs improvement and addressing. The students might bring its influence to their school and to the people outside their virtual reality may it be negative or positive. The observation must also

help to identify which of the students are benefiting from social media and which of those are victimized by its disadvantages.

2. METHODOLOGY

2.1 Research Design

To achieve the purpose, the correlational quantitative technique was chosen in this study. The goal of this research is to know what the influence of social media is on the social behavior of senior high school students in Navotas City as viewed by the teachers, S.Y. 2022-2023.

2.2 Research Population

The respondents in this study were teachers in the Navotas City area, with a total of 100 respondents. They are expected to offer credible results as a whole and are believed to provide the most objective feedback possible.

2.3 Research Instrument

The researchers employed survey forms in the form of rating scales to collect data. Survey forms were used since they are simpler and quicker to fill out. The study was conducted to ascertain the impact of social media on the social behavior of Navotas senior high school students. Questionnaires were also created by creating their own questions that aligned with the topic's objectives. The necessary data was collected using a Likert scale, with Google Forms distributed to various teachers throughout the Manila area, including

teachers at Lakandula High School, North Bay Boulevard North Elementary School, and Navotas Elementary School. It also includes a questionnaire about their suggestions and tactics for dealing with this circumstance.

Rate them using this scale:

5 - Strongly Agree,

4 - Agree

3 - Neutral

2 - Disagree

1 - Strongly Disagree

2.4 Data gathering Procedure

The researchers developed a questionnaire and performed a survey in Navotas City. Once the questionnaire has been accepted, we will use a Google form to poll the instructors in the area. When the researchers have gathered all of the data, the survey will be tallied.

2.5 Data Gathering Procedure

The researcher used quantitative data analysis using Jamovi. The acquired data were evaluated using descriptive analysis. Demographic characteristics considered in this study were grade level, school location, and age. Part of the research involves separating male and female students, as well as individuals with different learning styles. The researcher employs the mean to compute each respondent's answers to the questions. The standard deviation will be used to assess the variability of the results. The researcher also used the t-test

and one-way ANOVA to establish the group's level of relationship.

3. RESULTS AND DISCUSSION

3.1 Presentation, Analysis, and Interpretation of Data

This chapter highlights the outcomes of the analysis as well as the data collected from the data questionnaire replies. The following statistics were produced in tabular form based on the precisely given opinion on the problem statement.

Profile of the respondents in terms of

a.) Age Range

Frequencies of Age (Table 1)

Age	Counts	% of Total	Cumulative %
25 - 34	39	39.0 %	39.0 %
35 - 44	35	35.0 %	74.0 %
45 - 54	13	13.0 %	87.0 %
55 - 64	7	7.0 %	94.0 %
65 and over	6	6.0 %	100.0 %

In accordance with Table 1, 39% of respondents were between the ages of 25 and 32, 35% were between the ages of 35 and 44, 13% were between the ages of 45 and 54, and 7% were between the ages of 55 and 64, while 6% were over the age of 65. As a result, the majority of our respondents, who completed our survey, were between the ages of 25 and 34.

b.) Gender

Frequencies of Gender (Table 2)

Gender	Cou nts	% of Total	Cumulative %
Femal e	53	53.0 %	53.0 %
Male	47	47.0 %	100.0 %

Based on the data in Table 2. Our female respondents make up 53% of the total, while our male respondents make up 47%. As a result, 53% of our respondents are women.

c.) Religion

Frequencies of Religion (Table 3)

Religio n	Coun ts	% of Total	Cumulativ e %
Cathol ic	73	73.0 %	73.0 %
Christi an	18	18.0 %	91.0 %
INC	4	4.0 %	95.0 %
Other:	5	5.0 %	100.0 %

As shown in Table 3, the majority 73% of the teacher-respondents are Catholic while 18% of the respondents are Christian. 5% of the respondents are other religions and the remaining 4% of the total respondents are INC.

d.) School Type

Frequencies of School Type (Table 4)				Descriptives (Table 6)		
School Type	Counts	% of Total	Cumulative %		Mean	SD
Private	50	50.0 %	50.0 %	Influence 1 - Exhibit aggressive behavior	3.72	1.055
Public	50	50.0 %	100.0 %	Influence 2 - Disobey school rules and regulations	3.49	0.959
As seen in Table 4, the public and private sectors each have 50% of the respondents.				Influence 3 - Lack of attention to school activities	3.77	0.952
e.) Civil Status				Influence 4 - Involved in cyber-terrorism	2.95	1.048
Frequencies of Civil Status (Table 5)				Influence 5 - Change feelings and emotions	3.68	0.952
Civil Status	Counts	% of Total	Cumulative %	Influence 6 - Involved in drug abuse <td>2.77</td> <td>1.043</td>	2.77	1.043
Married	51	51.0 %	51.0 %	Influence 7 - Engage in fraud	3.04	1.034
Separated	2	2.0 %	53.0 %	Influence 8 - Risky sexual behavior	3.46	1.039
Single	46	46.0 %	99.0 %	Influence 9 - Engage in cheating/malpractice	3.53	1.010
Widow/Widowed	1	1.0 %	100.0 %	Influence 10 - Make false statements	3.49	0.937
According to Table 5, the majority of teacher-respondents are married, while 46% are single. 2% of respondents are divorced, while the remaining 1% are widows/widowers.				Influence 11 - Playing games instead of studying	4.13	1.022
Influence of social media on the social behavior of high school students in Navotas City according to Teachers				Influence 12 - Involvement in stealing	3.01	1.030
				Influence 13 - Move with bad peers	3.32	1.043
				Influence 14 - Involved in immoral behavior	3.30	1.068

Influence 15 - Become addicted to pornography	3.50	1.159
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According to Table 6, the teachers rated "Playing games instead of studying" (M= 4.13, Influence 11) as the most influential of the fifteen influences. "Lack of attention to school activities" was evaluated second to highest (M= 3.77, Influence 3). The third highest score is "Exhibit aggressive behavior" (M= 3.72, Influence 1). "Involved in drug abuse" had the lowest score (M= 2.77, Influence 6) of the fifteen influences. The second lowest score is "Involved in cyber-terrorism" (M= 2.95, Influence 4). "Involvement in stealing" was graded third-lowest (M= 3.01, Influence 12). These findings share Adegboyega (2020) that it may be argued that all of the items on the test indicated a negative impact of social media on students' social behavior as viewed by primary school teachers in Kwara State, Nigeria.

One-Way ANOVA (Welch's) (Table 7)

	F	df1	df2	p
Mean _Influence	1.16	4	21.6	0.356

Group Descriptives (Table 7.1)

Age	N	Mean	SD	SE
25 - 34	39	3.59	0.645	0.103
35 - 44	35	3.34	0.817	0.138
45 - 54	13	3.32	0.584	0.162
55 - 64	7	2.90	1.028	0.388
65 and over	6	3.43	0.344	0.141

The difference in influence scores when grouped by age is illustrated in Table 7, as established by one-way ANOVA $F(4, 21.6)=1.16$, $p=0.356$. This means that there was no significant difference in the Influence of Social Media on the Social Behavior of High School Students in Navotas City as Viewed by the Teachers Depending on age.

Independent Samples T-Test (Table 8)

Statistic	df	p
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Mean_Influence	Student's	1.35	98	0.180	Mean_Influence	1.54	3	11.0	0.259			
<i>Note.</i> $H_a \mu_{\text{Female}} \neq \mu_{\text{Male}}$					Group Descriptives (Table 9.1)							
Group Descriptives (Table 8.1)						Religion	N	Mean	SD	SE		
	Group	N	Mean	Median	SD	SE	Mean_Influence	Catholic	73	3.40	0.717	0.0839
Mean_Influence	Female	53	3.50	3.53	0.821	0.113		Christian	18	3.62	0.590	0.1391
								INC	4	3.23	0.221	0.1106
	Male	47	3.31	3.27	0.606	0.0884		Other:	5	3.00	1.417	0.6335

As shown in table 8, female teachers scored higher (M=3.50, SD=0.821) than male teachers (M=3.31, SD=0.606), $t(98)=1.35$, $p=0.180$. This means that there was no significant difference in the Influence of Social Media on the Social Behavior of High School Students in Navotas City as Viewed by the Teachers depending on gender.

The difference in influence scores when grouped by religion is illustrated in Table 9, as established by one-way ANOVA $F(3, 11.0)=1.54$, $p=0.259$. This means that there was no significant difference in the Influence of Social Media on the Social Behavior of High School Students in Navotas City as Viewed by the Teachers depending on religion.

One-Way ANOVA (Welch's) (Table 9)

F	df1	df2	p
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Independent Samples T-Test (Table 10)

Stat	df	p
------	----	---

stic				
Mean_Influence	Student's	-	^a 98	0.4
		0.83	.0	04
		8		

Note. $H_a \mu_{\text{Private}} \neq \mu_{\text{Public}}$
^a Levene's test is significant ($p < .05$), suggesting a violation of the assumption of equal variances

Group Descriptives (Table 10.1)

	Group	N	Mean	Median	SD	SE
Mean_Influence	Private	50	3.35	3.37	0.501	0.0708
	Public	50	3.47	3.53	0.906	0.128

As shown in Table 10, while the public school scored higher ($M=3.47$, $SD=0.906$) than the private school ($M=3.35$, $SD=0.501$), $t(98)=-0.838$, $p=0.404$. There was no significant difference in the Influence of Social Media on the Social Behavior of High School Students in Navotas City as Viewed by the Teachers depending on the type of school.

One-Way ANOVA (Welch's) (Table 11)

	F	df1	df2	p
Mean_Influence	.000	1	98	.959

Group Descriptives (Table 11.1)

	Civil Status	N	Mean	SD	SE
Mean_Influence	Married	1	3.35	0.501	0.0708
	Seperated	1	3.35	0.501	0.0708
	Single	1	3.35	0.501	0.0708
	Widow/Widowed	1	3.35	0.501	0.0708

As stated in Table 11, The researcher cannot compare it in terms of civil status because of a lack of data on those who are separated or widowed. It is not statistically possible to compute this.

4. CONCLUSIONS

According to the research's findings, senior high school students in Navotas City, regardless of their age, gender, religion, kind of school, or civil standing, do not significantly use social media in their social conduct, according to their instructors. Furthermore, social media is used and

benefited similarly by instructors and students. Even before the pandemic, social media had evolved into a crucial tool for connecting teachers and students, and this trend hasn't changed during the pandemic.

It is crucial to remember that when using social media, kids, especially young ones, might act impulsively. Teachers need to keep an eye on their pupils' online and offline conduct to protect their safety and help them develop better internet habits. To encourage the development of good internet habits, parents should be aware of their children's online activities. The way that students act online can have a big influence on how they act in class and in public.

In conclusion, even if using social media may be advantageous, it's crucial to exercise caution, especially for young people. Parents and instructors may assist young people in developing good internet habits and avoiding the potential drawbacks of excessive social media usage by keeping an eye on their online conduct.

5. ACKNOWLEDGMENTS

Below is a list of our references to follow. Each one of them contributes significantly to our investigation. The members of the panel won't approve this study without them. Likewise, thanks to the researchers that collaborated to complete this work. Our research professor, who helped us and instructed us on how to produce a research report correctly.

The Level of Competency in Extracurricular Activities of Grade 12 Students at San Jose Academy in School Year 2022-2023

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Abstract: This paper identifies and measures the level of competency in extracurricular activities of grade 12 students at San Jose Academy this school year, 2022-2023. The researchers conducted this study as Vice President and Department of Education Secretary Sara Duterte plans to outlaw extracurricular activities for the academic year 2022-2023 (Escudero, 2022). Proving that extracurricular activities contribute to the student's level of competency. Extracurricular activities provide students with opportunities to explore their interests, learn new skills, and develop their passions. These activities can have a positive impact on academic performance, as students become more focused and motivated to achieve their goals. The benefits of participating in one or more coordinated extracurricular activities transcend the social, academic, psychological, emotional, and physical aspects. These advantages involve

raising one's self-esteem as well as improving one's general health, study techniques, emotional stability, and subject score (Singh, 2020). Buckley & Lee (2021) conducted a study on the impact of extracurricular activities on students' competence and skill development. Extracurricular activities have developed many skills, such as confidence, teamwork, problem-solving, and communication. 15% of respondents stated that extracurricular activities boosted their self-confidence, 14% improved teamwork, 10% improved problem-solving, and 6% improved communication. These findings relate to this study's insights. The possible results based on the answers to surveys of respondents profiles and data may lead to recommendations and suggestions. It heads towards an intervention to assess the relevance of the results from the Level of Competency in Extracurricular Activities

of Grade 12 Students at San Jose Academy in the school year 2022-2023 for the enrichment of the Student Activity Program.

Key Words: competency;
extracurricular;

activities; academic;
performance

1. SECTION

1.1 Extracurricular Activities

Extracurricular activities serve as a means of reiterating the lessons taught in the classroom and provide students the chance to put their academic knowledge to use in a practical setting. As such, they are seen as an important component of a well-rounded education.

The Department of Education (DepEd), which plans to outlaw extracurricular activities for the academic year 2022–2023, commissioned the researchers to conduct this study. Vice President and Department of Education Secretary Sara Duterte announced at the start of the school year last August, that teachers should place more of an emphasis on academics than on conventional school activities. She continued by saying that DepEd will issue a department directive outlining the restrictions on extracurricular activities for the current academic year, only allowing co-curricular and academic activities (Escudero, 2022).

1.2 Competencies

Competency-based education is a framework for teaching and assessment that focuses on measuring the learning and mastery of students, rather than time spent in a course. This approach allows students to learn at their own pace, and demonstrate their mastery of a subject in a personalized and efficient manner. It also emphasizes a deeper understanding of the information and skills needed to succeed in the workplace and in life. Studies have shown that Competency-based education can lead to

an increase in overall competency levels of students.

Improving skill development is crucial for promoting long-term physical activity and fitness. Physical education teachers play a key role in ensuring that all students develop motor skills through progressive and continuous learning. Teachers should use professional judgment to choose assessment strategies that accurately measure students' attainment of skills, competencies, and points of view within their community of practice. Family factors also play a significant role in the development of students' reading skills, with studies suggesting that family engagement is a better predictor of student achievement than school engagement.

1.3 Academic Performance

Academic achievement is of the utmost importance in education because it is a crucial measure for assessing students' educational objectives. It serves as a measure of a student's understanding of the subjects being addressed in class, their ability to use what they have learned, and their ability to perform well on examinations. The National Assessment Governing Board (2012) stated in a report that academic achievement is a significant component in determining the quality of education. It is also a crucial element in determining how well educational programs operate and how well students are progressing. Academic performance is just as important in determining student attitudes and actions toward education as it is in assessing the

learning outcomes of students. According to a 2016 study by Rosário et al., children who perform better academically tend to have more favorable attitudes toward school and education in general, which can increase their engagement and drive to learn. Furthermore, a student's future educational and professional chances are significantly influenced by their academic success. More options for further education and better-paying jobs can be made available to students who perform well in school, increasing social mobility and economic prosperity.

Academic performance is a major concern in the Philippines, and numerous studies have been conducted to investigate the factors that influence student achievement. Bueno and Lopez (2017) discovered that family background, socioeconomic status, and educational resources were the most important factors that predicted academic achievement in the Philippines. The study also discovered that students from urban areas outperform students from rural areas, and that educational quality varies significantly depending on the school and location. The authors advocate for the implementation of policies to address these discrepancies and improve the overall quality of education in the Philippines. Tan (2019) conducted another study on the impact of teacher qualifications on academic performance in the Philippines. According to the study, teacher qualifications, particularly education and experience, were significant factors that predicted student achievement.

2. METHODOLOGY

The study takes into consideration the student's optional name, gender, age, and section. The data will be gathered through surveys with students and analyzed to determine the level of competency of the students in each activity.

For the academic year 2022-2023 at San Jose Academy, the researchers only examined 168 students in Grade 12.

The data gathered through the survey questionnaire was treated and interpreted using Jamovi Version 2.3.21. In the first stage of data analysis, frequency and percentage were used to describe the demographic profile of the Grade 12 students at San Jose Academy in terms of gender, strand, and academic performance. This was computed for the total sample of the two groups of respondents. A weighted mean was also used to determine the central tendency of the respondents' responses in terms of their level of competency. Lastly, to test the significant differences between the genders of the respondents and their level of competency, a t-test for independent samples was used. Meanwhile, to determine the significance of differences in terms of strand and academic performance between respondents and their computed level of competency, a one-way analysis of variance (ANOVA) was used.

3. RESULTS AND DISCUSSION

Presenting and interpreting the results based on data gathered from the respondents profiles.

Table 1. Gender

Gender	Counts	% of total
Female	86	55.1 %
Male	70	44.9 %

As shown in Table 1, the majority 86 or 55.1% of the Grade 12 respondents were female students while 70 or 44.9% of the respondents were Male.

Table 2. Strand

Strand	Counts	% of total
Accountancy, Business, and Management (ABM)	41	26.3 %
General Academic Strand (GAS)	21	13.5%
Humanities, and Social Studies Strand (HUMSS)	23	14.7%
Science, Technology, Engineering, and Mathematics Strand (STEM)	71	45.5%

The Grade 12 respondents in the Science, Technology, Engineering, and Mathematics Strand (STEM) scored 71 counts or 45.5% total as the highest among the four strands. Forty-one or 26.3% of the Grade 12 respondents were in Accountancy, Business, and Management (ABM). Twenty-three or 14.7% were in the Humanities, and Social Studies Strand (HUMSS); and 21, or 13.5% were General Academic Strand (GAS).

Table 3. Academic Performance

Academic Awards	Counts	% of total
High Honors	12	7.7 %
No Honors	49	31.4%
With Honors	95	60.9%

Academic Awards. Concerning academic awards, most of the respondents, 95 or 60.9% hold With Honors. Forty (49) or 31.4% of the participants were No Honors; 12 or 7.7% were holding High Honors.

Table 4. Intelligence

	Mean	SD
Logical AVG	3.68	0.803
Linguistic AVG	3.73	0.804
Spatial AVG	3.64	0.802
Interpersonal AVG	4.00	0.743
Intrapersonal AVG	4.06	0.655
Naturalistic AVG	3.29	0.778
Musical AVG	3.51	1.056
Bodi	3.88	0,868

Most of the respondents were intrapersonal with an average score of 4.06 (SD=0.655). Interpersonal with an average score of 4.00 (SD= 0.743). Bodily-kinesthetic with an average score of 3.88 (SD=0.868). Linguistic with an average score of 3.73 (SD=0.804). Logical Intelligence with an average score of 3.68 (SD=0.803). Spatial Intelligence with an average of 3.64 (SD=0.802). Musical Intelligence with an average score of 3.51 (SD=1.056). Lastly, Naturalistic Intelligence with an average of 3.29 (SD=0.778)

Table 5. Key Personality

	Mean	SD
Introvert AVG	4.00	0.667
Ambivert AVG	4.31	0.545
Extrovert AVG	3.52	0.924

As shown in Table 3, the highest average according to the respondents' key personality was ambivert with an average score of 4.31 (SD=0.545). Next, introvert with an average score of 4.00 (SD=0.667). Lastly, an extrovert with an average score of 3.52 (SD=0.924).

Table 6. Descriptives

Academic Awards	Mean	SD
Sharing Knowledge AVG	4.01	0.748
Conceptual Knowledge AVG	3.76	0.859
Operational Knowledge AVG	3.97	0.712
Systematic Knowledge AVG	3.84	0.769
Application of Knowledge	4.29	0.596

Based on Table 4, application of knowledge had the highest average score (M=4.29, SD=0.596). Second, sharing knowledge with an average of 4.01 (SD=0.748). Operational knowledge with an average of 3.97 (SD=0.712). Systematic knowledge with an average of 3.84 (SD=0.769). Lastly, conceptual knowledge with an average of 3.76 (SD=0.859).

Table 7. Level of Competencies Descriptive

	N	Mean	SD
Level of Competency AVG	156	3.96	0.620

The average level of competency according to personality was 3.96 (SD=0.620).

Table 8. Independent Samples T-test (Gender)

		Statistic	df	p
Level of Competency AVG	Student's t	1.05	154	0.297

Note. $H_a: \mu_{\text{Female}} \neq \mu_{\text{Male}}$

T-test revealed that there was no significant difference among the level of competency when grouped according to gender $t(154) = 1.05$, $p = 0.297$.

Table 9. Group Descriptives

	Group	Mean	SD
Level of Competency AVG	Female	4.01	0.578
	Male	3.91	0.669

Females had a higher level of competency (M=4.01, SD=0.578) than males (M=3.91, SD=0.669).

Table 10. One-way ANOVA (Welch's) (Strand)

	F	df 1	df 2	p
Level of Competency AVG	1.10	3	59.7	0.355

The difference among the level of competency scores when grouped according to strand was not significant as determined by one-way ANOVA $F(3, 59.7)=1.10$, $p=0.55$.

Table 11. Tukey Post-Hoc Test - Level of Competency AVG

		STEM	GAS	ABM	HUMSS
STEM	Mean difference	—	-0.232	0.129	-0.13901
	p-value	—	0.437	0.714	0.787
GAS	Mean difference		—	0.103	0.09300
	p-value		—	0.926	0.960
ABM	Mean difference			—	-0.00999
	p-value			—	1.000
HUMSS	Mean difference				—
	p-value				—

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

A Tukey post hoc test revealed the following results: Science, Technology, Engineering, and Mathematics Strand

(STEM) had a lower level of competency compared to General Academic Strand (GAS) ($p=.437$), Accountancy, Business, and Management (ABM) ($p=.714$) and Humanities and Social Studies Strand (HUMSS) ($p=.787$). General Academic Strand (GAS) had a lower level of competency compared to Accountancy, Business, and Management (ABM) ($p=.926$) and Humanities and Social Studies Strand (HUMSS) ($p=.960$). Accountancy, Business and Management (ABM) had a lower level of competency compared to Humanities and Social Studies Strand (HUMSS) ($p=1$).

Table 12. One-Way ANOVA (Welch's) (Academic Performance)

	F	df 1	df 2	p
Level of Competency AVG	5.58	2	34.7	0.008

There was a statistically significant difference among the level of competency when grouped according to academic performance as determined by one-way ANOVA $F(2, 34.7)=5.58$, $p=0.008$.

Table 13. Tukey Post-Hoc Test - Level of Competency AVG

		High Honors	No Honor	With Honors
High Honors	Mean difference	—	0.484	0.4015
	p-value	—	0.040	0.085
No Honor	Mean difference		—	-0.0821

	p-value		—	0.727
With Honors	Mean difference			—
	p-value			—

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

A Tukey post hoc test revealed the following results: High Honors students had a higher level of competency compared to students with No Honors ($p=0.040$) and With Honors ($p=0.085$). No Honors students had a lower level of competency compared to students with With Honors ($p=0.727$).

4. CONCLUSIONS

Several conclusions can be drawn from the results of this investigation. These are related to the conceptual questions that guided the undertaking of this exploration.

In this study, most of the variables could have been expected, according to the grade 12 respondents. The most significant variables that emerged from the analyses were those connected with their profiles, particularly in terms of gender, strand, academic performance, kind of intelligence, and their key personalities.

Based on the total of all findings, the overall level of competency among grade 12 students at San Jose Academy has an average of 3.96. All in all, the study states that the students fell under 3.10–4.00 advanced competency based on competency proficiency definitions.

5. ACKNOWLEDGMENTS

This research would not have been possible without the exceptional support of our research advisor, Mr. Rafael Patrick M. Pecjo, also our school principal at San Jose Academy. His enthusiasm, knowledge, and exacting attention to detail have been an inspiration and have kept this work on track since the proposal and through the final draft of this paper.

We gratefully acknowledge the insightful comments offered by the panel chair of our research presentation, Mr. Manuel Charles C. Manapat. The generosity and expertise of one and all have improved this study in innumerable ways and saved the paper from errors.

The Relationship between Research Anxiety and Learning Style of Senior High School Students of San Jose Academy

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Abstract: Maintaining motivation is one of the most challenging aspects of undertaking research. This drive should remain constant throughout the course of the project and enable the researcher to approach their task with optimism. Researchers is prone to experience worry as their motivation wanes. To do research, students need to have a fundamental awareness of evaluation and assessment procedures as well as digital literacy. Yet, simply comprehending these topics is insufficient; one must also take into account the interests and convenience of the students. In light of this, the goal of the current study is to comprehend what students experience, feel, and do when conducting their research in order to better understand how they cope. It seeks to understand the attitudes that students have toward taking part in research. The researchers used a quantitative technique and a correlational type of design to investigate the association between research anxiety and the student's learning preferences. The researchers used the Jamovi Application to analyze the data collected after giving the respondents a Google Form questionnaire, and they arrived at the conclusion that there is a substantial association between the two factors. Despite the absence of results and the study's limitations, the researchers offered advice that will be helpful to other studies in the future.

1. INTRODUCTION

1.1 The Problem and Its Background

Emotions influence almost every aspect of a person's life, so it is critical not to underestimate their power (Panju, 2008). Because they have higher degrees of academic motivation and achievement capacity, stronger problem-solving and planning skills, and a positive perspective on learning, certain emotionally intelligent people

frequently perform well in the classroom.

1.2 Research Questions

An in-depth understanding of the research anxiety and learning styles of senior high school students at San Jose Academy will help students determine the level of their research anxiety and how effective their learning styles are. The confidential information will be gathered and kept by the researchers,

and the information will remain private.

1.3 Research Hypothesis

Ho : Students' ability to adapt their learning styles is decreased when they experience research anxiety regularly. There is a positive correlation between research anxiety and the learning style of students.

Academic performance is also impacted by research anxiety, which is academic anxiety. Depending on how well they are able to comprehend and control their own emotions as well as those of others, students' fear of doing their homework may go up or down. If students possess the knowledge and skills to recognize, comprehend, manage, and employ both their own feelings and those of others, it is believed that they will be better able to control their negative emotions.

1.4 Significance of the Study

According to the researchers, this study about the relationship between Research Anxiety and the learning styles of the Senior High School Students of San Jose Academy will be beneficial for various people and groups. The Senior High Schools Students and Teachers, the parents, and the School Guidance Council.

2. METHODOLOGY

1.1 Research Design

Using quantitative techniques, this research was done. The researchers tried to elicit reactions to the aforementioned topic in order to support and achieve the goals of this study. Similarly to that, it tried to identify the numerous influences on pupils' academic achievement.

A correlational study was employed as part of the research design to explore the connection between the two variables.

1.2 The Respondents of the Study

The respondents, who were students at San Jose Academy in Navotas City in grades 11 and 12, and who were enrolled in the ABM, HUMSS, STEM, and GA Strands, were deemed to be the respondents by the researchers. The researchers made the decision to carry out their research using a technique called probability sampling. This led to a total of 20 responses from respondents for each strand. The table below lists the outcomes of the probability sampling strategy as they apply to the target population.

1.3 Research Instrument

From November 14 to November 19, the questionnaire was given to 40 senior high school students, 20 per strand (such as STEM, HUMSS, ABM, and GA). Google Forms were used to collect the

information. The survey's aim and purpose, as well as the confidentiality agreement and data protection, or the Data Privacy Act, are all included in the opening section of the survey, along

with a personalised message and introduction.

1.4 Data Gathering Procedure

The Jamovi application was used to process and evaluate the data collected through the survey questionnaire.

The demographic profile of the respondents was initially described using frequency and percentage in terms of grade level, gender, academic strand, and anxiety, things that influence it, and learning styles that work best for them were computed using the Jamovi program and by obtaining the total counts, percentage, and mean during the second step of data analysis.

1.5 Statistical Treatment of Data

Given a population size (N) and an error margin, the sample size (n) was calculated using Slovin's Formula (e). According to the needs of the study's data, the responses of senior high school students to the questionnaire were statistically analyzed. The data from the students was statistically analyzed using the research design tools. All descriptive statistics are considered, including frequency counts, means, percentages, and ranks. To ascertain whether the independent and dependent variables are correlated, the survey results will be totaled.

1.6 Data Analysis Plan

The conclusions were assessed and interpreted in light of the objectives of the study. Using an average weighted mean, the degree of research anxiety and its connection to student learning anxiety were assessed. The standard deviation was used to determine the

degree of variation and dispersion in the data. With the aid of Jamovi, a fully functional spreadsheet was created to compute values for statistical data based on the study's findings. .

3. RESULTS AND DISCUSSION

As the researcher gathered the data, the findings imply that the correlation between the technology efficacy of students and their academic performance was not done as there were not enough observations. With this, the researchers included this section in the recommendation due to the short time; the researcher had to collect a great demand of responses from the target respondents.

Table 1 - Research Anxiety Level

Descriptives	
Research Anxiety Level	
Mean	2.56
Standard deviation	0.385

The average score of Research Anxiety Level was 2.56 (SD=0.385)

Table 2 - What is the level of Research Anxiety of the Students?

Descriptives		
	Mean	S D

RA 1 - I found it hard to do research within a short period of time	2.60	0	research.	4	9
		5	RA 8 - I fear making mistakes or failing after conducting research	2.76	0
		4			4
		2			8
RA 2 - I could not seem to experience or think any positive feeling in doing research	2.33	0			4
		6			
		5			
		2			
RA 3 - I found it difficult to work up the initiative to do things	2.42	0	The average score for RA 1 was 2.60 (SD = 0.54), while for RA 2, it was 2.33 (SD = 0.65). The average score for RA 3 was 2.42 (SD = 0.61), while for RA 4, it was 2.63 (SD = 0.58). For RA 5, the average score was 2.56 (SD = 0.59) and 2.39 (SD = 0.70) for RA 6. The average score for RA 7 was 2.77 (SD = 0.45) and 2.76 (SD = 0.48) for RA 8.		
		6			
		1			
		2			
RA 4 - I found it hard doing research if only by myself	2.63	0	Table 3 - Is there a significant difference between students' research anxiety and their grade level?		
		5			
		8			
		2			
RA 5 - I experienced having a hard time because of a lack of understanding about the actual research process.	2.56	0	Independent Samples T-Test		
		5			
		9			
		2			
			Statistic	df	p
RA 6 - I tended to overreact to the situation of doing the research	2.39	0			
		7	Research Anxiety Level	Student's t	-0.937
		0			78
		3			0.352
RA 7 - I felt nervous and worried when thinking about defending our	2.77	0	<i>Note.</i> $H_a \mu_{\text{Grade 11}} \neq \mu_{\text{Grade 12}}$		
		4			

Respondents who are in Grade 12 level had a higher research anxiety level ($M = 2.60$, $SD = .358$) than those respondents who are in Grade 11 level ($M = 2.52$, $SD = .407$), $t(78) = -0.937$, $p = .352$). The difference between the research anxiety level and the two grade levels is not significant

The following are implications regarding the research anxiety of the students and its relationship with learning styles.

a. Students think that organising information and Time management are the most effective learning styles in coping with research anxiety.

b. A lot of students found it hard to do research within a short period of time as they also stated that time constraints are one of the factors that trigger their anxiety.

c. The absence of research partners or group mates has also a huge effect on writing the research, especially for the leaders or other members because of the tasks left behind by their absent members.

d. Students stated that using the library is the least effective research approach for them

4. CONCLUSION

The data shows a significant correlation between learning style and research anxiety. The study implies that the students' anxiety is caused by the fear of defending and making errors in their research. The research anxiety

of students is frequently generated by the absence of a partner and the amount of pressure provided to them, like time constraints and deadlines. This information is important for educators to consider when planning learning activities and research assignments, as it may influence some students' ability to perform well. It has been discovered that using managerial skills, communication, and applying strategies are excellent ways for students to cope with research anxiety.

5. ACKNOWLEDGEMENTS

TTTo everyone who made a substantial contribution to this paper, the authors would like to convey their gratitude. Starting with the research adviser, Mr. Rafael Patrick M. Pecjo, who has been incredibly helpful and hands-on throughout the entire study process. Also, a heartfelt thank you to the adviser, administrators of the institution, as well as the teachers who have contributed. It is noted that this study was based on the work of the writers and sources mentioned above.

