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JOURNAL OF EDUCATION, PSYCHOLOGY & HUMANITIES

P-ISSN 2599-5294
E-ISSN 2704-3258
Vol.6 Issue 2
December 2023

A Peer Reviewed Journal
Published Bi-annually by the
Adventist University of the Philippines

JOURNAL
OF EDUCATION, PSYCHOLOGY & HUMANITIES

Volume 6 | Issue 2
December 2023

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PRINTED IN THE PHILIPPINES

P-ISSN 2599-5294
E-ISSN 2704-3258

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Adventist University of the Philippines
Puting Kahoy, Silang, Cavite, Philippines
www.aup.edu.ph/urc/health-sciences

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July 2023

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EDUCATION

Factors Related to Career Preference of Industrial Technology Students in LSPU: Effects on Academic Performance

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Abstract

Individuals are recognized as active agents in life, making life preferences in modern theoretical approaches to study career preferences. People combine information from their environment to make career decisions. This study identified factors directly related to students' career preferences. The researcher used descriptive-correlation methodologies and statistical tools such as weighted mean, one-way analysis of variance, and Pearson product-moment correlation coefficient. Random sampling method was also used to select 162 students from two courses in the Industrial Technology program. The study reveals a relationship between parental factors such as parental support, parenting practices, parental role modeling, parental encouragement, and students' academic performance. The computed r value of .547 is higher than the critical value of .178 at .05 level of significance. The computed overall weighted mean of 3.17 indicates job availability and opportunity which are the reasons the respondents are interested in pursuing the career. Also, the academic performance of students averaged an overall grade of 2.11. This satisfactory level implies that some factors or conditions affect their interest in learning. However, the computed standard deviation of 0.29 indicates that the grades of the students are homogeneous. The computed value of .293 is higher than the critical value of .178 at .05 level of significance. This indicates that the students' academic performance is linked to their level of interest. As a result, students who are interested in a particular career may be more motivated to pursue it. In turn, interest fosters the development of goals to become involved, which leads to career practice and selection.

Keywords: *career preference, parental factors, personal interest, industrial technology, academic performance*

Almeida & Almeida (2022) defines industrial technology as a profession that requires such education and experience as is necessary to understand and apply technological and managerial sciences to industry. Olaosebikan and Olusakin (2014), have suggested that preference for a career is one of many important decisions students will make in determining their plans. It is a challenging task that entails a lengthy decision-making process, and these decisions will impact them throughout their lives. According to Soria and Stebleton (2013), factors influencing career preference can be intrinsic, extrinsic, or both. They go on to say that parents influence the career preferences of their children. Some choose to follow their interests regardless of how much or little it will make them, while others choose careers dictated by their families' income level. According to Nyamwange (2016), a student's current situation, skills, abilities, and academic progress all lead to career preferences. It was stated that factors such as home, school, and social environment shape career preferences. Financial considerations are one of the reasons because they must pay for family expenses. According to Uyar, Gungormus, and Kuzey (2011), on parental influence on the career preference of college students, 60% of the children were willing to take after their fathers' occupations, while 23% were willing to follow their mothers' occupations. One consistent finding in research suggests that students' aspirations are shaped by their parents' aspirations or expectations. Children can choose whatever they want to please their parents, (Khattab, 2015). On the other hand, Kumar (2016) claims that parental influence is far more common than is shown. In some cases, parents dictate their children's career preferences simply because they want their child or children to study the parent's desired course, regardless of the child's ability in the career proposed to them. It was also stated that the student's career preference was also influenced by their social status, financial resources, affordability, and future employability.

Many factors influence college students' career choices. Identifying these factors would provide parents, educators, and industry with information about where students place the most confidence in the career selection process. The extent to which parents influence their children's career preference in terms of parental support, barriers, involvement, encouragement, expectation, role modeling, and practices. The extent of parental factors and students' academic performance, as well as the level of interest and academic performance of college students in industrial technology.

Methodology

Research Design

The researcher used the descriptive-correlation design of research. This method identifies parents' influences on students' career preferences and their implications for academic performance. It involves description, recording, analyzing and interpretation of data that exist together with some types of comparison or contrast and it attempts to discover relationship between existing non-manipulative variables (Mitchell and Jolley, 2013)

Population and Sampling Technique

The survey included graduating college students from the 2018-2019 academic year. The stratified random sampling technique was utilized to select 162 participants, who were bachelor's degree students and second-year associate degree students. In this manner, the sample of 162 was divided between the two courses - BS Industrial Technology, 81 (50%), and Associate in Technology, 81 (50%).

The demographic profile of participants' parents in terms of education, occupation, and monthly income are shown in Tables 1 - 3. With 55 or 33.95%, the majority of parents only complete high school, their parents are non-professional workers, accounting for 138 (85.19%) and more than half of the parents, 95.64%, earned less than Php 6,000 pesos per month. According to the study's findings, the parents of the students who responded to the study are mostly high school graduates, non-professional workers, and have a monthly income of Php 6,000 or less. These socio-demographic conditions may have influenced them to choose their career in Industrial Technology.

Table 1

Demographic Profile of the Respondents in Terms of Parents' Educational Attainment

Parents' Education	Frequency	Percentage
College graduate	24	14.81
Vocational graduate	13	8.02
College level	21	12.96
High school graduate	55	33.95
High school level	27	16.67
Elementary graduate	22	13.58
Total	162	100.00

Table 2

Demographic Profile of the Respondents in Terms of Parents' Occupation

Parents' occupation	Frequency	Percentage
Professional	5	3.09
Non-professional	138	85.19
None	13	8.02
Deceased	6	3.70
Total	162	100.00

Table 3

Demographic Profile of Respondents in Terms of Parents' Monthly Income

Parents' monthly income	Frequency	Percentage
24,001 and above	3	1.85
18,001 to 24,000	11	6.79
12,001 to 18,000	14	8.64
6,001 to 12,000	36	22.22
6,000 and below	95	58.64
None	3	1.85
Total	162	100.00

Instrumentation

The study's instrument consists of a three-part self-administered questionnaire written in English. The demographic variables are the first section of the questionnaire. The second section of the questionnaire covers parental career factors. Each item will be graded on a four-point Likert scale with the following values: Strongly Agree (SA) = 1, Agree (A) = 3, Disagree (D) = 2, and Strongly Disagree (SD) = 1. The third section of the questionnaire contains statements about the students' interest in industrial technology.

The parental career attributes in this study were derived from several previous studies, specifically from Rodrigues et al. (2013). The attributes are then validated and supplemented by interviews with relevant groups of people, such as undergraduate students, parents, and university teachers. All respondents were asked to provide their thoughts on whether the existing attributes are relevant to the real situation and, more importantly, what else they thought could be added to this parental influence measurement. The validators' corrections and suggestions are then incorporated.

Analysis of Data

Statistical analyses, frequency, and percentage will be computed and used to determine the distribution of the respondents with regards to their demographic profile, weighted mean will be computed and used to determine the extent parental influences on students' preference of career, weighted mean will be also computed and used to describe the level of interest of senior Industrial Technology students. To describe the academic performance of participants, the descriptive statistics of mean will be computed and standard deviation was utilized. Pearson product moment correlation coefficient (Pearson r) was computed and used to determine aggregate effect of parental influences and academic performance of senior students. Pearson r was also used to find out the relationship of the level of interest and academic performance of the students.

Ethical Considerations

Ethical considerations were observed such as obtaining informed consent from potential research participants, ensuring confidentiality and anonymity and allowing participants the right to withdraw from the study. The researcher requested permission from the LSPU President and the LSPU Santa Cruz Campus Director to allow participants to respond to the questionnaire. In order to gain the participants' trust and confidence in answering the questionnaire, the researcher also attached a letter of request to the questionnaire, stating the purpose of the study and the importance of the information gathered. During data collection, the researcher first coordinated with the participants' instructors. The questionnaire was given to students who indicated a willingness to accommodate the researcher in the first or last fifteen minutes of class. The completed questionnaires were coded, and statistical calculations were performed. The results are then computed, analyzed, and interpreted.

Results and Discussion

Tables 4 - 10 present the extent of perceived parental influence in students' preference of career. Perceived parental influence is measured in terms of parental support, barriers, involvement, encouragement, expectation, and parental role modeling.

Extent of Perceived Parental Influence in Students' Preference of Career in Terms of Parental Support

Table 4

Descriptive Statistics on the Extent of Parental Influence in Students' Preference of Career in Terms of Parental Support

Statement	Weighted Mean	Description	Rank
My parents support me to choose a career in the industrial technology, no matter what position I hold	3.33	Agree	3
My parents have a positive attitude towards industrial technology industry	3.43	Agree	1
My parents believe that I can be successful working in the industrial technology industry	3.41	Agree	2
My parents think it is good for me to find a job which is related to what I am learning now	3.38	Agree	4
My parents often discuss with me about a career in the industrial technology	3.15	Agree	6
My parents have got some accurate information about a career in the industrial technology	3.06	Agree	7
My parents can refer me to work in the industrial technology industry	3.17	Agree	5
Overall weighted mean	3.28	Agree	

Legend: 3.51 - 4.00 Strongly Agree; 1.51 - 2.50; Disagree; 2.51 - 3.50 Agree; 1.00 - 1.50 Strongly Disagree

Extent of Perceived Parental Influence in Students' Preference of Career in Terms of Parental Barriers

Table 5

Descriptive Statistics on the Extent of Perceived Parental Influence in Students' Preference of Career in Terms of Parental Barriers

Statement	Weighted Mean	Interpretation	Rank
I will never take a job with heavy workloads that causes my parents to worry about me	2.78	Agree	1
I will never take a shift on a job that may cause concern on my parents	2.67	Agree	2
I will consider the company location when selecting a job because my parents don't want me to stay far away from them	2.52	Agree	3
Overall weighted mean	2.66	Agree	

Legend: 3.51 - 4.00 Strongly Agree; 1.51 - 2.50; Disagree; 2.51 - 3.50 Agree; 1.00 - 1.50 Strongly Disagree

Extent of Perceived Parental Influence in Students' Preference of Career in Terms of Parental Involvement

Table 6

Descriptive Statistics on the Extent of Perceived Parental Influence in Students' Preference of Career in Terms of Parental Involvement

Parental Involvement	Weighted Mean	Interpretation	Rank
I was encouraged by my parents to participate in some career-related education or training	3.12	Agree	4
My parent influenced me to study vocational education due to my vocational talent	3.25	Agree	2
My parents would like me to select a job with a group of highly qualified colleagues	3.18	Agree	3
My parents encourage me to work in a company where I could receive specialized training and develop working skills	3.41	Agree	1
Overall weighted mean	3.24	Agree	

Extent of Perceived Parental Influence in Students' Preference of Career in Terms of Parental Encouragement

Table 7

Descriptive Statistics on the Extent of Perceived Parental Influence in Students' Preference of Career in Terms of Parental Involvement

Parental Encouragement	Weighted Mean	Interpretation	Rank
My parents encourage me to choose a job in which I am interested in	3.43	Agree	2
I think my parents will let me choose a career myself	3.44	Agree	1
My parents encourage me to do a job using the best of my capabilities	3.41	Agree	3
Overall weighted mean	3.42	Agree	

Legend: 3.51 - 4.00 Strongly Agree; 1.51 - 2.50; Disagree; 2.51 - 3.50 Agree; 1.00 - 1.50 Strongly Disagree

Extent of Perceived Parental Influence in Students' Preference of Career in Terms of Parental Expectation

Table 8

Descriptive Statistics on the Extent of Perceived Parental Influence in Students' Preference of Career in Terms of Parental Expectation

Parental Expectation	Weighted Mean	Interpretation	Rank
I prefer to choose a job that can ensure my parents a good quality of life when they grow older	3.51	Strongly Agree	2
I prefer to select a job that makes my parents feel proud in front of other relatives and friends	3.59	Strongly Agree	1
My parents see technical education as a career for self-sustenance and wish that I should study the course.	3.25	Agree	2
Overall weighted mean	3.45	Agree	

Legend: 3.51 - 4.00 Strongly Agree; 1.51 - 2.50; Disagree; 2.51 - 3.50 Agree; 1.00 - 1.50 Strongly Disagree

Extent of Perceived Parental Influence in Students' Preference of Career in Terms of Parental Role Modeling

Table 9

Descriptive Statistics on the Extent of Perceived Parental Influence in Students' Preference of Career in Terms of Parental Role Modeling

Parental Encouragement	Weighted Mean	Interpretation	Rank
My parents encourage me to choose a job in which I am interested in	2.74	Agree	1
I want to be like my brother or sister	2.67	Agree	2
Overall weighted mean	2.70	Agree	

Legend: 3.51 - 4.00 Strongly Agree; 1.51 - 2.50; Disagree; 2.51 - 3.50 Agree; 1.00 - 1.50 Strongly Disagree

Extent of Perceived Parental Influence in Students' Preference of Career in Terms of Parenting Practices

Table 10

Descriptive Statistics on the Extent of Perceived Parental Influence in Students' Preference of Career in Terms of Parenting Practices

Parenting Practices	Weighted Mean	Interpretation	Rank
I consider my parents' opinion when selecting my career preference	3.10	Agree	2
I think my parents' work values will influence mine	3.14	Agree	1
I have chosen my career because our family clan is popular on the career	2.60	Agree	3
I have chosen my career because it is what my parents want for me.	2.51	Agree	4
Overall weighted mean	2.84	Agree	

Legend: 3.51 - 4.00 Strongly Agree; 1.51 - 2.50; Disagree; 2.51 - 3.50 Agree; 1.00 - 1.50 Strongly Disagree

The students agreed that the parental factor influenced their career preferences. Of the seven factors measured, the parental expectation is the most influential (3.45). Parental encouragement (3.42), parental support (3.28), parental involvement (3.24), parenting practices (2.84), and parental role modeling (2.70) are ranked next in influencing the career selection of the students. In contrast, parental barriers (2.66) are the least likely to influence their career preference. From the result, most respondents stated that they decided to pursue their careers because they wanted their parents to be proud of them and because they wanted a job that could ensure their parents a good quality of life as they grew older. Moreover, their parents let them choose a career for themselves.

Based on the results, the influence of the parental factor on the students' career preferences varies depending on the specific aspects of the factor being examined. Parental expectations such as "wanting their parents to feel proud of them" and "preparing a job that can ensure their parents a good quality of life" and parental encouragement in the form of "that their parents let them choose a career for themselves" are highly causal factors for the career selection of the students. In general, the students perceived all aspects of parental influence as influential in their preference of career.

Level of Interest of the Students on Their Career Preference

Table 11 describes the level of interest of the students on their career preferences. The computed overall weighted mean of 3.17 indicates the agreement of the students that they are interested in industrial technology because of job availability and the opportunity to apply their skills and knowledge. Thus, the students in the sample are primarily interested in job availability and the opportunity to apply their skills and knowledge learned in industrial technology.

Table 11

Level of Interest of the Students on the Career Preference

Interest	Weighted Mean	Interpretation	Rank
I am interested in choosing an IT related course because…			
I expect to do well in a job related to IT	3.29	Agree	5
my abilities and potential fit on this	3.27	Agree	6
it is my long-time dream for myself	3.17	Agree	8
I would like a job that lets me do a lot of practical things	3.33	Agree	4
opportunity to apply my skills and knowledge	3.38	Agree	2
availability of jobs	3.46	Agree	1
I don't have to be smart to study industrial technology	2.72	Agree	9
prestige associated with the profession	2.55	Agree	10
ability to choose a career specialization	3.35	Agree	3
Self-employment opportunity	3.21	Agree	7
Overall weighted mean	3.17	Agree	

Legend: 3.51 - 4.00 Strongly Agree; 1.51 - 2.50; Disagree; 2.51 - 3.50 Agree; 1.00 - 1.50 Strongly Disagree

Level of Academic Performance

Table 12 reflects the level of academic performance of the students. The results revealed that of the total of 162 industrial technology students, 107 (66%) have satisfactory grades, about 32 (20%) have very satisfactory grades, 18 (11%) have relatively satisfactory grades, and a further 3% (n = 5) reported having passing grades.

Table 12
Level of Academic Performance of Industrial Technology Students

Level of Performance	Frequency	Percentage
Excellent (1.0-1.25)	0	0.00
Very Satisfactory (1.5-1.75)	32	19.75
Satisfactory (2.0-2.25)	107	66.05
Fairly Satisfactory (2.5-2.75)	18	11.11
Passed (3.0)	5	3.09
Conditional Failure (4.0)	0	0.00
Failed (5.0)	0	0.00
Total	162	100.00
Mean = 2.11 (Satisfactory)	SD = 0.29	

The students averaged an overall grade of 2.11, which means they have a satisfactory level of academic performance. Based on the results, most industrial technology students have satisfactory academic performance. This level of performance indicates that their occupational readiness means they were adequately prepared for or fulfilled all demands or requirements for their chosen course.

Influence of Extent of Perceived Parental Influence on Students' Academic Performance

Table 13 shows that the most substantial relationship exists between parental support and academic performance ($r = 0.55$, $p < 0.05$). There was also a significant correlation between parenting practices and academic performance ($r = 0.33$, $p < 0.05$).

Table 13
Influence of Perceived Parental Influence on Students' Academic Performance

Parental Factor	*r*	*df*	$r_{.05}$	Decision	Interpretation
Parental supports	.547	160	.178	Reject Ho	Significant
Parental barriers	.121	160	.178	Accept Ho	Not significant
Parental involvement	.062	160	.178	Accept Ho	Not significant
Parental encouragement	.185	160	.178	Reject Ho	Significant
Parental expectation	.063	160	.178	Accept Ho	Not significant
Parental role modeling	.270	160	.178	Reject Ho	Significant
Parenting practices	.329	160	.178	Reject Ho	Significant

Additionally, there was also a significant relationship between parental role modeling and academic performance ($r = 0.27$, $p < 0.05$) and between parental encouragement and academic performance ($r = 0.18$, $p < 0.01$). However, there was no significant relationship between parental barriers, expectations, and involvement. Hence, the null hypothesis is partly rejected since not all aspects of the parental factor show a significant relationship with the student's academic performance. Thus, a significant relationship exists between the student's academic performance and parental support, role modeling, and encouragement but not with parental barriers, expectations, and involvement. Students' academic performance relates to parental support, role modeling, and encouragement. In contrast, parental expectations and encouragement are more influential in the students' career preferences.

Influence of Level of Interest on Career Preference on Academic Performance of Students

Table 14 shows that that interest influenced the students' academic performance ($r = 0.29$, $p < 0.05$). Hence, it can be concluded that students can have a higher level of performance in their chosen career if they have an interest in that particular career.

Table 14

Influence of Level of Interest on Career Preference to Academic Performance of Students

Variable	*r*	*df*	$r_{.05}$	Decision	Interpretation
Level of interest	.293	160	.178	Reject Ho	Significant

Following the study's discussions, the researcher recommends that as much as the students are dominated by parents with a monthly income of 6,000 pesos and below, the provision for a scholarship grant among qualified students should strengthen and not be limited to monetary grants but also with materials needed for them to thrive in their chosen career. Also, the Deans of Colleges might consider or create linkages with different establishments in which the learning process of students includes practice and apply skills in a practical way as an apprentice.

Parents' influence was mentioned as a strong step in encouraging their children to study industrial technology education. It is therefore recommended that, in the pursuit of supporting technical education, parents continue to encourage their children to develop their vocational skills, develop a greater interest in technical subjects, and become more committed to the development of their community through their technical career, as this will continue to motivate their children to study technical education.

In understanding the level of participants' interest towards career preference, the researcher suggests making use of the variables as self-assessment to students to see if their career preference matches their career interests for the purpose of career counseling. Instructors should always be aware of the potential for integrating academic as well as life experiences into their portfolios. One of the primary reasons why people go to school is to become productive members of society. They can always apply Math, English as well as their knowledge in computer, auto mechanics, electronics, food processing, consumer education, etc., to a career.

Similarly, since the factors that influenced the students to choose their career have significant relationship with their academic performance, it is suggested that the students be given an assessment test that may help them evaluate themselves and analyze their priorities in life and finally, give them an idea of what career to take up in college. In the same way, the Career Guidance Program of the tertiary schools should be improved and given utmost attention in order to maximize its services. This is one way by which the potentials of the students can be tapped and eventually given the proper direction.

Future studies should continue to test propositions of the Social Learning Theory of Career Decision Making to further examine factors that influence students' career preferences in industrial technology.

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EDUCATION

Ethical Behavior as Predictor of Job Performance

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Abstract

The teacher has always been a crucial component of a student's intellectual, social, and economic growth. Their performance can greatly contribute to prosperity by upholding their behavior in the educational system. This research aimed to investigate ethical behavior as a predictor toward job performance. This study is descriptive-correlational in nature. One-hundred respondents from five Adventist secondary schools in Myanmar within the academic year 2021-2022 willingly participated in the study. Data were gathered via survey questionnaires that were divided into two parts: one part is for teacher ethical behavior and the other part is job performance. The study revealed that there was a high level of teacher ethical behavior on the school campus. The teachers' job performance was rated very high which means that teachers were performing very well. It was also revealed that there was a positive relationship between teachers' ethical behavior and teachers' job performance. Furthermore, the teachers' job performance was also predicted by ethical behavior. Specifically, professional responsibilities significantly predict job performance.

Keywords: *teacher's ethical behavior, teacher's job performance, professional responsibilities*

One of the aims in the practice of school administration and supervision is to improve the job performance of the teachers, not only on how they manage their classes but also how this will have an impact on the learning of students. Education administrators and supervisors have this question that deals with ethical behavior and job performance of teachers.

In recent studies, education is seen as fundamental for every nation's social, intellectual, and economic development and prosperity. Teachers make a significant contribution to this prosperity by preserving the value of the educational process; thus, educational authorities at all levels must optimize the quality and effectiveness of teachers' work (Eren & Sylemez, 2021). In the study of Guo (2017), he stated that if the goal is to improve the educational process, then instructors and teaching techniques should be improved as well, because the success of any educational process is heavily reliant on the performance and effectiveness of teachers.

Promoting ethical behavior in the classroom is an important ingredient to effective teaching. Akman (2018) mentioned that many researchers are interested in the study of the relationship between teacher's ethical behavior and job performance in general. Teachers' job performance can be seen to affect not only the teachers themselves, but also their students and the quality of the educational process; not just the development of the educational system, but also the well-being of the larger community (Ali et al., 2017).

It is evident that one of the themes addressed in many books and articles is ethics which encompasses a wide range of fields. It includes education, health, and justice, as well as management sciences. Ethics is a subject that explores the foundations and underlying principles of moral conduct and determines the right and wrong bounds of action (Lee, 2020). The idea of correct action is based on what makes human activities ethically good or worthless. Ethics focuses on attitudes and behaviors such as analyzing, deciding, and carrying out desirable actions connected to human rights and obligations towards other people. According to this definition, ethics encompasses all the values and moral principles that decide what is good and wrong and establish universal rules in this regard (Mwanza et al., 2017).

Professional ethics, which pertains to the behavior that a professional must follow, is also crucial in the teaching profession because professional principles and ethics serve as a guide to the instructors' professional practices. All teachers must enhance their understanding of ethics to maintain professional standards in teaching and research, as well as monitor and advise students' ethical activities (Lee, 2020). Teachers' ethical practices are significant because they serve as role models in society.

In general, professional ethics principles govern the essential principles that teachers must follow in their dealings with pupils, parents, coworkers, and other members of society, as well as in performing their obligations to them. Professionalism, responsibility, fairness, equality, honesty, truthfulness, trust, impartiality, respect, professional dedication, constant progress, resource efficiency, maintaining a healthy and safe environment for pupils, and avoiding corruption are the ethical standards to which instructors must adhere within the teaching profession (Guo, 2017).

When these aspects are studied, it can be stated that instructors construct behavioral norms in relation to the conditions they experience. Teachers should be ethical specialists since they are challenged with ethical situations throughout their careers. Teachers who do not know how to respond ethically will not be able to teach ethics and will not set a good example for their pupils. Based on the studies cited above, this research study attempted to answer the following research questions:

1. How is teacher's ethical behavior in terms of:
   a. Teacher's behavior in class
   b. Relationships based on self-interest
   c. Teacher's professional responsibilities
   d. Sexual harassment behaviors
   e. Teacher's behavior outside the class?
2. What is the level of a teacher's job performance?
3. Is there a significant relationship between teachers' ethical behavior and job performance?
4. Does teachers' ethical behavior predict job performance?

Methodology

Research Design

This study utilized the descriptive-correlational research design to determine the extent of the teachers' ethical behavior and job performance. The relationship between these variables was also analyzed. Lastly, teachers' ethical behavior was tested as a predictor of job performance.

Population and Sampling Technique

The respondents for this study were from the five Adventist secondary schools in Myanmar. One hundred secondary teachers expressed their willingness to participate in this study.

Out of the 100 respondents, 36 teachers or 36% were male and 64 teachers or 64% were female. With regards to age, 45.5% of the respondents were 21-25 years old, 32.3% were 26-30 years old, 13.1% were 31-35 years old, 5.1% were 36-40 years old, and 4.0% were 41 years old and above. Additionally, 76.0% of the respondents were college graduates, 23.0% were master's degree graduates, and only 1.0% of the respondents were doctoral graduates. Moreover, 68.0% of the respondents have been teaching for five years and below, 18.0% have been teaching for 6 to 10 years, 9.0% have been teaching for 11 to 15 years, and 5.0% have been teaching for 16 to 20 years.

Instrumentation

For data collection, the instrument has three parts. The first part is the demographic profile of the respondents; the second part is the modified questionnaire on ethical behaviors with five indicators including teachers' behavior in class, relationship based on self-interest, professional responsibilities, sexual harassment behavior, and ethical behavior outside the class. The third part measures teachers' job performance using five indicators including teaching planning, class organization, monitoring and evaluation, class atmosphere, and discipline and teachers' job leadership.

Analysis of Data

The collected data from the survey were analyzed by using the statistical software Statistical Package for the Social Sciences (SPSS). Mean and standard deviation were used to determine the extent of teachers' ethical behavior and job performance. Pearson product moment was applied to determine the relationship between teachers' ethical behavior and their job performance. Linear regression was utilized to find out if teachers' ethical behavior predicts their job performance.

Ethical Considerations

In the conduct of research, the mindset, character, and attitude of the respondents were considered. To ensure the quality and integrity of the research, the researcher requested the participation of the target respondents of the study and the context from where it was supposed to be conducted. They were informed that participation was voluntary. Confidentiality and anonymity were also strictly observed and ensured.

Results and Discussions

Extent of Teachers' Ethical Behavior

The first research question measured the extent of teachers' ethical behavior. The respondents' scaled response was agreed with M=3.90, SD=.531, and it is interpreted as appropriate.

Table 1
The Extent of Teachers' Ethical Behavior

	Mean	SD	Verbal Interpretation
Teachers' Behavior in Class	3.65	0.728	Appropriate
Relationships Based on Self-interest	3.79	0.77	Appropriate
Teachers' Professional Responsibilities	4.16	0.697	Appropriate
Sexual Aggravation Behaviors	4.39	0.61	Appropriate
Teachers' Behavior Outside the Class	3.50	0.844	Fairly Appropriate
Grand Mean	3.90	0.531	Appropriate

Scoring system: 1.00 – 1.49 Strongly Disagree/ Very Inappropriate; 1.50 – 2.49 Disagree/Inappropriate; 2.50 – 3.49 Slightly Agree/Fairly Appropriate; 3.50 – 4.49 Agree/Appropriate; 4.50 – 5.00 Strongly Agree/Very Appropriate

In a detailed account, the highest item was on the variable and sexual aggravation behaviours, which had a mean of 4.39 and standard deviation of .61. This result implies that teachers have created free sexual pestering behaviour and an atmosphere where a student feels safe. On the other hand, behaviours outside class had the lowest mean (M=3.50 SD=.844) which is considered as slightly appropriate.

Level of Teachers' Job Performance

The second research question assessed the level of teachers' job performance. The respondents' scaled response was strongly agreed which means that the teachers' job performance was very high (M=4.33, SD=0.531).

Table 2
Level of Teachers' Job Performance

	Mean	SD	Verbal Interpretation
Teaching Planning	4.43	0.728	High
Class Organization	4.25	0.77	High
Monitoring and Evaluation	4.22	0.697	High
Classroom Atmosphere and Discipline	4.28	0.610	High
Teacher Leadership	4.47	0.844	High
Grand Mean	4.33	0.531	High

Scoring system: 1.00 – 1.49 Strongly Disagree/ Very Low; 1.50 – 2.49 Disagree/Low ; 2.50 – 3.49 Slightly Agree/Fair; 3.50 – 4.49 Agree/High; 4.50 – 5.00 Strongly Agree/Very High

According to the results, the job performance of the teachers from the five Adventist secondary schools was very high. In a detailed analysis, the highest measured dimension was teacher leadership (M=4.47, SD=.844). This is a clear indication that their leadership skills are very evident. These skills can lead to excellent class management and drive students toward academic success.

Relationship Between Teachers' Ethical Behavior and Job Performance

Table 3 shows the results of the Pearson-Moment correlation. It demonstrated the relationship between the dimensions of ethical behavior and job performance.

Table 3

Relationship Between Teachers' Ethical Behavior and Job Performance

		Teachers' Behavior in Class	Relationships Based on Self-interest	Teachers' Professional Responsibilities	Sexual Aggravation Behaviors	Behaviors Outside the Class
Teaching Planning	r	0.305	0.173	0.21	0.169	0.161
	p	0.002	0.085	0.036	0.092	0.11
		Significant	Not Significant	Significant	Not Significant	Not Significant
Class Organization	r	0.252	0.031	0.043	-0.048	0.202
	p	0.011	0.758	0.669	0.636	0.044
		Significant	Not Significant	Not Significant	Not Significant	Significant
Monitoring and Evaluation	r	0.328	0.105	0.191	0.079	0.243
	p	<.001	0.299	0.057	0.436	0.015
		Significant	Not Significant	Not Significant	Not Significant	Significant
Classroom Atmosphere and Discipline	r	-0.008	-0.113	0.301	0.293	-0.171
	p	0.935	0.263	0.002	0.003	0.088
		Not Significant	Not Significant	Significant	Significant	Not Significant
Teacher Leadership	r	0.327	0.077	0.386	0.309	-0.082
	p	<.001	0.444	<.001	0.002	0.416
		Significant	Not Significant	Significant	Significant	Not Significant

*Note. * p < .05, ** p < .01, *** p < .001*

According to the results, some dimensions of ethical behavior had a significant relationship to the dimensions of job performance. Accordingly, the results reveal that teacher behavior in class was significantly related to teaching planning (r = 0.305, p = 0.002), class organization (r = 0.252, p = 0.011), monitoring and evaluation (r = 0.328, p <0.001), and teacher leadership (r = 0.327, p < 0.001).

The results also show that teachers' professional responsibilities are significantly related to teaching planning (r = 0.210, p = 0.036), classroom atmosphere and discipline (r = 0.301, p = 0.002), and teacher leadership (r = 0.386, p < 0.001). Additionally, sexual aggravation behaviors are significantly linked to classroom atmosphere and discipline (r = 0.293, p = 0.003) and teacher leadership (r = 0.309, p = 0.002). Lastly, behaviors outside the class are significantly connected to class organization (r = 0.202, p = 0.044), and monitoring and evaluation (r = 0.243, p 0.015).

The findings were supported by the study of Mugizi, Mujuni, and Dafiewhare (2019) who found out that aspects of ethical leadership namely ethical guidance, power sharing, integrity, fairness, role clarification, and people orientation had a positive and significant relationship with job performance of teachers. The findings of Shehzad, Khan, and Khan (2022) also supported the idea that ethical behavior positively affects job performance. Further, their research showed that ethical leadership has an influential role in boosting performance.

Teachers' Ethical Behavior as Predictor of Job Performance

Lastly, the fourth research question sought to find out whether teachers' ethical behavior predicts job performance. The results presented in Table 4 show that teachers' job performance is predicted by ethical behavior.

Table 4
Predictors of Job Performance

Predictors	R2	B	SE	β	t	p
Constant	.116	3.678	.185		19.914	.000
Teachers Professional Responsibilities		.157	.044	.340	3.579	.001

R^2 = .116, F = 12.808, p =.001

The model presented in Table 4 is significant. However, there is only one dimension of ethical behavior that predicts teachers' job performance, which is professional responsibilities (R2 =11.6%, β = .340, p = .001). This reveals that other factors that are not included in the study could help explain or predict teachers' job performance.

Conclusions and Recommendations

The study revealed that there is an appropriate level of teacher ethical behaviour in the school. It reveals that teachers are role models to their students, and they help them feel secure.

Teachers' job performance results were high. This explains that secondary school teachers of the five Adventist schools are performing very well. Teacher leadership which was the highest was highly exhibited which is a clear indication that they can manage their classes very well and inspire students to achieve success.

It was also revealed that there is a significant relationship between teacher behavior in class and teaching planning, class organization, monitoring and evaluation, as well as teacher leadership. The results also conclude that teachers' professional responsibilities are significantly related to teaching planning, classroom atmosphere and discipline, and teacher leadership. Likewise, sexual aggravation behaviors are substantially correlated to classroom atmosphere and discipline, and teacher leadership. Similarly, behaviors outside the class are notably linked to class organization and monitoring and evaluation. Finally, it was concluded that teachers' performance of professional responsibilities significantly predicts job performance.

Based on the results, it is recommended that teachers' ethical behavior should be considered as an important asset to help and improve school's services. The study further recommends that other factors or variables should be studied to identify more predictors of teachers' job performance.

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EDUCATION

Online Learning Climate in Relation to Knowledge, Attitude and Laboratory Skills in Genetics of Undergraduate Biology Students as Mediated by Teaching Performance

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Abstract

Amidst the sudden shift in the educational paradigm in higher educational institutions during the COVID-19 pandemic in the Philippines, the study aimed to determine the relationship of online learning climate to knowledge, attitude, and laboratory skills in genetics of undergraduate biology students as mediated by teaching performance. This study employed the descriptive-correlational research design. Using purposive sampling, the questionnaires were distributed online to state universities and colleges (SUCs) all over Luzon that offered online learning modality in genetics during the COVID-19 pandemic. Using Structural Equation Modeling (SEM) in the SmartPLS, the results showed that teaching performance partially mediates the relationship of online learning climate to knowledge ($\beta = 0.127$, $p = 0.001$), attitude ($\beta = 0.169$, $p = 0.000$), and laboratory skills ($\beta = 0.177$, $p = 0.000$). The educational effects of this study can prompt the advancement and improvement of the overall approach in learning genetics online and could be potentially relevant nationally and across a wider range of potential stakeholders to promote a learner-centered atmosphere especially in genetics education.

Keywords: *online learning climate, knowledge, attitude, laboratory skills, teaching performance*

The emergence of CoronaVirus Disease (CoViD)- 19 pandemic affects various social dimensions including the education sector. In decreasing the spread of the virus, community lockdowns and physical distancing were implemented resulting in the shutting down of various establishments including schools and universities (Tarkar, 2020). These phenomena resulted in the realization of distance learning among academic institutions at all levels, as a response to the abrupt shift in the educational system (Al Lily, Abunasser & Alqahtani, 2020; Carrillo & Flores, 2020). Distance learning involves utilization of self-learning modules and online classes (Al Lily et al., 2020; Carrillo & Flores, 2020).

The Commission on Higher Education (CHEd) in the Philippines provided alternative policies such as a flexible learning approach that will help the teachers and students in delivering and acquiring quality education amidst pandemic. This abrupt shift of the educational platform affects the learning of students, from a traditional or in person learning environment to an online learning environment. Online learning climate has a significant impact among students. Online learning methodology are accompanied with various issues (Tarkar, 2020) such as poor internet connection, which affects the continuity of online learning (Sartika, Ritonga, Lahmi, Rasyid & Febriani, 2021), and the active role of the academic institution in providing support in the implementation on online teaching and learning among teachers and students (Castro & Tumibay, 2021). More so, teachers encountered difficulty in assessing the performance of their students, in which traditional assessment tools were shifted to online (Tarkar, 2020) in which its credibility is questionable in some higher education courses (Tarkar, 2020; Tomas, Munangatire & Iihuhua, 2023).

Academic institutions also play a vital role in the acquisition of learning among students; it also serves as a place where they can hone their skills, abilities and develop social relationships (Tarkar, 2020). However, due to the closure of academic institutions and emphasis in online learning, students experienced negative implications on their social, physical and mental health due to isolation from peers, boredom, difficulty in utilizing and distractions brought by online platforms, lack of guidance, mood changes, and anxiety (Akpınar, 2021; Irawan, Dwisona & Lestari, 2020).

Amidst the emergence of the global pandemic, one of the curricular offerings in several Higher Education Institutions (HEIs) in the Philippines is the Bachelor of Science in Biology. This course also includes several laboratory activities that are being done in the face-to-face manner. In addition, over the past decades, vast number of researches that has been carried out internationally has consistently confirmed that genetics was among the subjects regarded to be difficult to understand by students (Çimer, 2011; Etobro and Banjoko, 2017; Kiliç and Winterbottom, 2016 and Smith and Knight, 2012).

Further, one of the implications of the online learning climate among students is the knowledge they acquired, attitudes they developed and laboratory skills they applied. As to Sombria, Celestial, Jalagat & Valdez (2023), online learning has a significant influence on the knowledge acquired by learners. More so, students' attitude in online learning has a positive relationship with their academic performance (Kisacik, Sonmez & Ozdas, 2023). Lastly, virtual laboratories arise as substitutes to traditional laboratories. Although, it is suggested to utilized virtual laboratories in conjunction with conventional laboratories to improve students learning, however, it is recommended to conduct further studies prior to its utilization to ensure students' safety and their acquired skills with it (Hadibarata & Jusoh, 2023)

With the abovementioned studies, Hartmann, Rego, Khoury, Bernuci & Yamaguchi (2023) concluded that there is an increasing need to reevaluate the knowledge, attitudes and practices like laboratory skills of the students in the distance learning brought by pandemic; hence, the study was conducted to determine the relationship of online learning climate and knowledge, attitude and laboratory skills as mediated by teaching performance as perceived by undergraduate Biology students enrolled in Genetic course in a higher education institution in Luzon, Philippines.

Methodology

Research Design

This study utilized a quantitative, descriptive-correlational design which was considered to determine the relationship between online learning climate to knowledge, attitude and laboratory skills as mediated by

teaching performance in selected SUCs in Luzon. Descriptive design was deemed fit for the study because this design used non-experimental approaches wherein the measures of the variables exist naturally and its goals are to describe the variables and establish the relationship that is existing between them.

Population and Sampling Technique

The study was conducted among the undergraduate Biology students who were enrolled during the first and second semester, Academic Year (AY) 2020-2021 in identified SUCs which offered online learning modality in genetics amidst the COVID-19 pandemic. Purposive sampling was utilized to identify the participating SUCs while, on the other hand, convenience sampling was employed to determine the 295 participants, of which 20% (59) were males and 80% (236) were females. In addition, an informed consent form was secured before the involvement of the participants.

Instrumentation

The study applied an adapted and expert- validated questionnaire. The instrument of this study was submitted to ten (10) selected experts from different fields of specializations for content evaluation and validation. These experts scrutinized the items of the instrument with their inputs and thereafter appropriately rated it for the conduct of the research and were modified to the extent of the comprehension of the respondents. Further, the questionnaire was subjected to a reliability test and obtained a Cronbach's alpha value of .970 for online learning climate, .957 for knowledge, .917 for attitude, .958 for laboratory skills, .981 for content expertise, .982 for teaching approaches and .980 for virtual classroom management respectively, suggesting that the items have relatively high internal consistency

Data Analysis

Descriptive and inferential statistics were carried out in order to achieve the objectives of the study. Frequency, percentage, mean and standard deviation were utilized to determine the level of online learning climate, knowledge, attitude, laboratory skills and teaching performance of faculty. Furthermore, in order to determine the relationship of online learning climate to knowledge, attitude and laboratory skills as mediated by teaching performance, the study employed Structural Equation Modeling (SEM) through SmartPLS software.

Ethical Considerations

The conduct of the research was approved by the Ethical Review Committee (ERC) of the Adventist University of the Philippines which ensured that all the research processes that were conducted during the data gathering processes were ethically maintained. In the whole process, the researcher observed the standard ethical responsibility. All the respondents were given thorough explanations with regards to the objectives, risks and procedures of this research. Under the ethical obligations, the researcher observed guidelines to avoid plagiarism and other academic fraud.

Generally, the researcher upheld the right course in the whole process thereby keeping all the data collected from the institutions with original contents from the respondents and were treated with utmost confidentiality.

Results and Discussion

The results of the study aimed to determine the relationship of online learning climate to knowledge, attitude and laboratory skills in genetics of undergraduate biology students as mediated by the teaching performance of faculty during the first and second semester, Academic Year (AY) 2020-2021 in identified SUCs all over Luzon are presented in this section.

Level of Online Learning Climate

Table 1 presents the perceived level of online learning climate in terms of different dimensions among the undergraduate biology students. The grand mean score is 3.06 which is interpreted as a positive climate. The highest mean score is on dimension, "People: Peer Support" (M = 3.21; SD = .482), while the lowest is, "Place or Setting" (M = 2.95; SD = .461).

Table 1

Summary of Descriptive Results of Online Learning Climate

Online Learning Climate	M	SD	SR	VI
People: Teacher Support	3.10	.491	Agree	Positive Climate
People: Peer Support	3.21	.482	Agree	Positive Climate
Place or Setting	2.95	.461	Agree	Positive Climate
Policies	3.07	.395	Agree	Positive Climate
Programs	3.02	.431	Agree	Positive Climate
Processes	3.03	.480	Agree	Positive Climate
Grand Mean	3.06	.457	Agree	Positive Climate

Legend: 4) 3.50-4.00=strongly agree 3) 2.50-3.49=agree 2) 1.50-2.49=disagree 1) 1.0-1.49=strongly disagree, M = Mean, SD = Standard Deviation, SR = Scale Response, VI = Verbal Interpretation

As discussed by Tareen & Haand (2020) , a positive online learning climate is more convenient and flexible among students, promotes their active participation and caters student's needs, educational and psychological. Consequently, Azhari, Firmansyah & Maulana (2022) also discussed that peer or family support significantly affects the online study habits of students which would later influence their learning performance resulting in a positive online learning climate.

Level of Students' Knowledge, Attitude And Laboratory Skills in Genetics

As reflected in Table 2, the level of students' knowledge, attitude and laboratory skills in genetics were revealed. The grand mean score of knowledge is 3.19 (SD = .434) which is interpreted as high knowledge. Meanwhile, with a grand mean score of 3.22 (SD = .378), attitude is interpreted as positive attitude. On the other hand, the grand mean score of laboratory skills is 3.02 (SD = .444) which is interpreted as skilled.

Table 2

Summary of Descriptive Results of Students' Knowledge, Attitude and Laboratory Skills in Genetics

	M	SD	SR	VI
Knowledge	3.19	.434	Agree	High Knowledge
Attitude	3.22	.378	Agree	Positive Attitude
Laboratory Skills	3.02	.444	Agree	Skilled

Legend: 4) 3.50-4.00=strongly agree 3) 2.50-3.49=agree 2) 1.50-2.49=disagree 1) 1.0-1.49=strongly disagree, M = Mean, SD = Standard Deviation, SR = Scale Response, VI = Verbal Interpretation

Results indicate that distance learning leads to higher or broader knowledge among students. Sombria et al. (2023) also revealed that utilization of online learning platforms in education helps students to develop critical thinking skills and problem solving. Although the results showed a positive attitude of students towards online learning, Autila, Syafar & Yulmiati (2023) still emphasized the role of the teachers in promoting positive attitude towards learning modality used in education. Lastly, Rowe, Koban, Davidoff & Thompson (2018) indicated that online laboratories equipped the students in the acquisition of sufficient understanding and concepts relevant to the performance of course activities.

Level of Teaching Performance of Faculty

Table 3 shows the perceived level of teaching performance of faculty in terms of content expertise, teaching approaches and virtual classroom management. The grand mean score is 3.98 which is interpreted as good. The highest mean score is "content expertise" (M = 4.01; SD = .813), while the lowest is, "teaching approaches" (M = 3.94; SD = .834).

Table 3

Descriptive Statistics of Teaching Performance in terms of Content Expertise, Teaching Approaches and Virtual Classroom Management

Teaching Performance	M	SD	SR	VI
Content Expertise	4.01	0.813	Very Satisfactory	Good
Teaching Approaches	3.94	0.834	Very Satisfactory	Good
Classroom Management	3.99	0.849	Very Satisfactory	Good
Grand Mean	3.98	0.832	Very Satisfactory	Good

Legend: 5) 4.50-5.00= outstanding 4) 3.50-4.49= very satisfactory 3) 2.50-3.49= satisfactory 2) 1.50-2.49= fair 1) 1.0-1.49=poor, M = Mean, SD = Standard Deviation, SR = Scale Response, VI = Verbal Interpretation

Teachers' content expertise is essential in delivering quality education among students. The following may be considered as suggested by Hampel (2009) to develop content expertise of teachers who will engage in online teaching; teachers' experience in facilitating online group activities, determine students' development needs, and try different tools to support collaborative and engaging online learning activities among students. Results show that teaching approaches in online learning are very satisfactory, Badia, Garcia & Meneses (2017) suggested to consider predictors in the adoption of specific teaching approaches such as teachers, age, educational background and online teaching dedication. As a classroom manager, Martin, Budhrani, Kumar & Ritzhaupt (2019) presented the different roles a teacher plays in order to have effective teaching among its students, such as facilitator, subject matter expert, mentor, course designer and content manager.

Mediating Effects of Teaching Performance on the Relationship of Online Learning Climate to Knowledge, Attitude and Laboratory Skills in Genetics

As indicated in Table 4, the teaching performance of faculty significantly mediates the relationship of online learning climate to knowledge, attitude, and laboratory skills, coefficients are 0.127, 0.196, 0.177, and p-values are 0.001, 0.000, 0.000, respectively. The present study reveals that an online learning climate can improve students' knowledge acquisition, attitude development and application of laboratory skills through effective teaching performance. It significantly concludes the teachers play a vital role in students' performance in an online learning modality.

Table 4

Mediating Effects of Teaching Performance on the Relationship of Online Learning Climate to Knowledge, Attitude and Laboratory Skills in Genetics as Mediated by

Indirect Paths	Coefficient	T statistics	p-value
Online Learning Climate -> Faculty Performance -> Knowledge	0.127	3.482	0.001
Online Learning Climate -> Faculty Performance -> Attitude	0.169	4.364	0.000
Online Learning Climate -> Faculty Performance -> Laboratory Skills	0.177	4.370	0.000

The study revealed that the online learning climate has a positive influence on knowledge, attitude and laboratory skills of the students. Through, students acquired higher or broader knowledge that develop their

critical thinking and problem-solving skills. Students also developed a positive attitude towards online learning and are able to equip their laboratory skills necessary to the competence they needed. In addition, teachers' performance as perceived by students are very satisfactory in terms of their content expertise, teaching approach and classroom management. Lastly, the study revealed that teaching performance significantly mediates the online learning climate and students' knowledge, attitudes and laboratory skills. Thus, put weights in the role of the teacher in the performance of students in online learning.

With those results, it is recommended to conduct a similar study with a broader population which includes private higher education institutions which have other policies and programs relevant to online learning. Furthermore, it is also suggested to focus the study to specific curricular programs and not a subject offering. This may imply significant contribution in the enhancement of the program offering.

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PSYCHOLOGY

Parenting Styles, Sociability, and Personal Motivations and Their Influence on Online Dating Among Early Adults: An Embedded Correlational Study

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Abstract

The COVID-19 pandemic has affected many people, not only through economics but also the individuals' mental states. Isolation protocols implemented by the government make people heavily rely on digital platforms as a source of information and socialization. Teens and young adults have resorted to the use of online platforms for dating and searching of romantic partners which is deemed to be potentially dangerous if misused. Using An Embedded Correlational Design, this study explored the relationship of parental approaches and social interaction dwhich could be linked to an individual's frequent use of online dating services. A total of 282 young adults from NCR, Philippines ages 18-30 years old and who subscribed to online dating applications were the respondents of this study. Data were gathered virtually through the utilization of online questionnaires. Results of this study indicated that most of the participants perceived their parents' approach to be authoritative. Moreover, the findings indicated a high level of sociability in openness and interaction, and low-level of dating intensity. Additionally, Kruskal-Wallis revealed significant differences among the variables in terms of age and gender, but no difference with the applications they used. It was also found that individuals with higher level of sociability in terms of interaction and raised by authoritarian parents had higher possibility to engage in online dating. Qualitative data also confirmed that young adults participate in online dating to meet their social and emotional needs.

Keywords: *parental approaches, social interactions, personal motivations, online dating*

Today's consumers and citizens, especially teens and young adults, rely heavily on digital platforms and apps (Stoisescu, 2020). These platforms have become key spaces for self-presentation and relationship-building (Labor, 2020). This growing connectivity through advanced technology can also pose challenges for both teens and their parents (Anderson, 2019). Frequent use of online dating platforms may be the first step toward excessive or problematic use (Kuss et al., 2014). Specific reasons or inducements for certain individuals' interest in the virtual world might further prompt long-term effects. A predisposition exists wherein diversity in parental approaches and different social interaction attitudes may be linked to an individual's extensive use of online dating sites.

Parental approaches may play a significant role in a child's perceptions and interconnections, while family troubles and disputes may have an impact on an individual's social and amorous development. Hence, young individuals may have the probability of engaging in secret dating and establishing unhealthy attachments, leading to unfavorable consequences later.

Online dating in the Philippines has increased its popularity, specifically among young individuals. It can be supported by a recent report by tinder on March 2020, where tinder set a record for the most activity with over 3 billion swipes a day. Research finding shows that the intention to utilize online dating sites is linked to word-of-mouth, attitude, perceived delight, and perceived playfulness (Alam et al., 2018). In addition, variables such as: "Ease of Communication," "Thrill of Excitement," and "Casual Sex" have been identified as corresponding motivators of men to engage in dating applications (Sumter et al., 2017).

Furthermore, since young people are in the stage wherein they have great enthusiasm in knowing and exploring the world, socialization is one of their ways to aid such curiosities. Online dating can be viewed as one of their means to satisfy these interests. According to research conducted by Kim et al., (2009), people who are outgoing and have low levels of social anxiety are more inclined to seek romantic partners using all channels available to them. It has been shown that sociability has a marginally significant impact on the usage of internet dating services, indicating that persons who are more gregarious are proven to have a higher tendency to utilize internet dating services than those who are less sociable. Moreover, another factor that may prompt the drive of youth to engage in online dating sites is the impact of peer influences. Adopting or rejecting an innovation is a personal decision and a choice that is greatly influenced by others. Peer is frequently regarded as a primary reference that plays a major role in various decision-making situations. Therefore, persons who perceive stronger peer influence are more likely to embrace online dating sites. (Peng & Cao, 2017).

Family, particularly parents, play a significant role in an individual's psychosocial development as they are the primary source of social support. However, each family environment differs, and each parenting style produces different behavioral outcomes. Parents who adopt an authoritative style, characterized by reasoning, understanding, consensus, and trust, tend to foster pro-social behavior in their children.

Previous studies fail to consider the underlying and developmental factors why individuals engage in online dating, for they are only focused on specific factors. Research on a few constituents of this study exists. However, specific analyses of the possible association of parenting styles to online dating do not exist. Also, only a few research explored the relationship between sociability and the involvement of youth in online dating sites.

In this study, the researchers aimed to identify whether there is a correlation between perceived parenting styles and an individual's sociability trait with their intensity of engagement in online dating. This study seeks to address the insufficient analysis on this topic and provide deeper insights into the perspectives and motivations of young individuals regarding their involvement in the virtual world of dating. Specifically, this study aimed to answer the following questions:

1. How do the respondents perceive the parenting styles of their parents?
2. What is the level of the respondents' sociability in terms of:
   a. Openness
   b. Interaction
3. How intense are the respondents' engagement in online dating?

4. Is there a significant relationship among perceived parenting styles, sociability, and online dating intensity?
5. Which among the sociability and parenting style variables significantly predict online dating intensity?
6. What are the motives of the respondents in engaging in online dating apps?

Methodology

Research Design

The embedded-correlation approach was used in this study. This type of research design utilized a mixed method of both qualitative and quantitative research along with correlation. Mixed methods were utilized to be convenient in understanding contradictions between quantitative and qualitative results; it also identified that it reflects participants' point of view, as it gives voice to study the participants as well as ensuring that the study's conclusions are based on the experiences of the participants (Wisdom & Creswell, 2013).

Furthermore, the quantitative method measured the relationship between parenting styles, sociability, and engagement with online dating intensity by using correlation to predict the relationship between the three variables. On the other hand, the qualitative method supported and explored further data that may predict online dating engagement along with their views and motives in participating in online dating.

Population and Sampling Techniques

The population in this research included online dating app users with an accessible population of emerging adults, ranging from 18-30 years of age, who must be Filipino citizens residing in the National Capital Region (NCR), and must be active in online dating for at least two months from the time of data gathering. The researchers utilized the Snowball sampling method to recruit participants, wherein the data collection used referrals. Like a snowball increase in size, while rolling, the data collection is expected to increase until the data are enough to be analyzed. The data gathering was conducted virtually using online questionnaires as a survey and an informational reference.

Profile of the respondents

The survey's 282 respondents were distributed across three age groups: 10% were age 18 (n=29), 70% were age 19-22(n=197), and 20% were age 23 and above(n=56). In terms of gender, 39% were male (n=109), 53% were female (n=150), 6% prefer not to say (n=16), and 2% were others (n=7). Regarding online dating applications, 63% were using

Tinder (n=179), 15% were using Bumble (n=42), 31% Omegle (n=11), 1% of Tan tan (n=2), 6%

Fb dating (n=17), and 4% others ((n=11).

Instrumentation

The informed consent includes all information about the study and their rights as a respondent, such as their right to refuse or withdraw, confidentiality, and contact information. The respondents were asked about their demographic profile, such as age, gender, and the applications they are using in online dating. The researchers in this study utilized three modified questionnaires to measure the variables of the study:

Sociability Questionnaire. The researchers used a modified version adapted from Sociability Questionnaire: An Index of Skill by Berent& et al. (n.d). The sociability questionnaire determines a person's social ability. It is an objective measurement tool that helps determine the degree of an individual's social challenge. It applies to adolescents and adults. This questionnaire consisted of 35-item Likert scale questions. and was reduced to a 15-item scale with two factors, Openness and Interaction. Twenty items got deleted after undergoing the pilot study due to irrelevance and low reliability from the confirmatory factor analysis.

Perceived Parenting Style Questionnaire. A modified version adapted from the Parenting Styles & Dimension Questionnaire (PSDQ)-Short Version; a Likert scale designed by Robinson & et al. (2001). The questionnaire identifies the individual's parenting style from the three factors such as authoritarian,

authoritative, and permissive. The authoritative parenting style has three subfactors with five questions each, and in total, there are 15 questions and an alpha of 0.86. Secondly, the authoritarian style consists of 3 subfactors with four questions each and has an alpha of 0.82. Lastly, the permissive parenting style does not have any subfactors and has only five questions, and it has 0.64 as its alpha. This test is an established questionnaire, as shown by its reliability and validity; however, after the pilot study, the researchers reduced the items to 16 after some items had low reliability from the confirmatory factor analysis.

Online dating Intensity scale. A modified version adapted from the Online dating intensity scale of Bloom and Taylor (2019). With the author's approval, the researchers received a copy of the questionnaires and used it to measure the respondent's intensity using online dating applications (e.g., websites or telephone applications). The Online dating intensity scale consists of 10 items but was reduced to 6 items due to some items having low reliability from the pilot study results.

Open Ended Question. The respondents were asked about their motives in joining online dating using open-ended question.

Pilot Study

The Pilot Study evaluated the research tools, questions, survey structure, distribution channels, and the questionnaire's validity and reliability. Survey questionnaires were analyzed using statistical treatment of Cronbach alpha. The pilot study contained 40 participants for the quantitative section and only one to two participants for the qualitative section, which determined if the interview guide answered the research question. Moreover, open-ended questions provided more depth and satisfactory responses to research questions since participants could freely express themselves with their own words. Furthermore, enabling greater accessibility and convenience for the participants, the pilot study was completed online and only administered to the students at Adventist University of the Philippines.

Data Gathering Procedure

After examining and revising the questionnaires, the researchers chose the study's subjects using a snowball sampling method. First, the researchers contacted certain individuals who fit the criteria of online dating to participate and asked to recommend it to another participant until it reached the target population. Google forms were utilized in producing online questionnaires that were disseminated through messenger and email to the selected participants. For the authorization of access, the URL was given to everyone. Then, participants were given a month to complete the questionnaires. After following these data collection procedures, the researchers proceeded to conduct a statistical analysis of the obtained data.

Statistical Analysis of Quantitative Data

The respondents' profiles in terms of levels of parenting, sociability, and engagement with online dating were measured using the mean. The means of these three variables were then correlated to examine their relationships in predicting engagement in online dating. For research questions 1-3, descriptive analyses were conducted to obtain the mean and standard deviation, providing insight into how respondents perceive their parents' parenting styles, their sociability levels, and their online dating intensity. Research question 4 utilized Pearson correlation to determine the relationships between the variables. Additionally, for research question 5, the Wilcoxon signed-rank test, Kruskal-Wallis test, and pairwise comparison were used to identify significant differences between variables such as age, gender, frequency of online dating app usage, and the specific apps used. In research question 6, regression analysis and model comparison were employed to identify the best predictors of engagement in online dating. Furthermore, qualitative data were transcribed and categorized into distinct themes and subcategories.

Qualitative Data Analysis

For the supplementary qualitative data, a thematic analysis was used. This qualitative data analysis approach involves exploring the data to identify, examine, and report recurring patterns. Thematic analysis

requires interpreting the data to select codes and generate themes (Braun & Clarke, 2006). The qualitative information was processed in six stages: familiarization with the data, formulation of initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the final report.

Ethical Considerations

For the security of each participant, the study rigorously adhered to ethical considerations, obtaining approval from the Ethical Review Board of AUP. The safety, confidentiality, and anonymity of the participants were ensured by first obtaining informed consent, providing participants with a thorough understanding of the study. The researchers then offered further explanations for clarification. The purpose was to acquire permission from the participants and inform them that all obtained information would be protected, respecting their rights and privacy.

Results and Discussion

Perceived Parenting Styles

Comparing the three parenting styles in Table 4. It shows that the largest mean, which indicates that the results for the authoritative parenting style interpret as high (M=3.82, SD=0.824). It implies that the authoritative parenting style appears to be the dominant style as perceived by the young people. In recent studies by Batool and Lewis (2022), parenting styles may have a direct impact not just only on the child's peer preference but rather on their forming of intimate relationships during their adolescent years.

Table 1

Descriptives Statistics on Perceived Parenting Style

Statements	Mean	SD	Verbal Interpretation
Authoritative			
My parents explain the consequence of my behavior.	4.00	1.028	High
My parents are responsive to my needs.	4.05	0.997	High
My parents take my preferences into account when making plans for the family.	3.75	1.066	High
My Parents give praise when I do good.	3.90	1.049	High
My parents help me to understand the impact of my behavior by encouraging me to talk about the consequences of my own actions.	3.84	1.134	High
My parents take my own desires into account before asking me to do something.	3.38	1.188	Neither High nor Low
Authoritative (Grand Mean)	3.82	0.824	High
My parents give hurtful criticisms when I commit mistakes.	3.2	1.371	Neither High nor Low
I need to do what my parents want me to do even if I disagree with them	2.98	1.305	Neither High nor Low
My parents tell me mean words when I talk about my troubles.	2.74	1.376	Neither High nor Low
My parents don't allow me to give inputs to the family rules.	2.50	1.200	Neither High nor Low
My parents use physical punishment as a way of disciplining me.	2.27	1.345	Low
Authoritarian (Grand Mean)	2.74	0.987	Neither High nor Low
My parents spoil me.	2.58	1.155	Low
My parents always give what I want even when they are unreasonable.	2.16	1.140	Low
My parents often express their difficulty in disciplining me.	2.88	1.243	Neither High nor Low

{table continues on the next page}

I have not received punishment from my parents even if I did something wrong.	2.23	1.223	Low
My parents seldomly check my whereabouts or performance in school.	2.99	1.234	Neither High nor Low
Permissive (Grand Mean)	*2.57*	*0.734*	*Low*

Scoring System: 1.00 – 1.80 Strongly Disagree/ Very low; 1.81-2.60 Disagree/ Low; 2.61-3.40 Neither Agree nor Disagree/ Neither Low nor High; 3.41-4.20 Agree/High; 4.21-5.00 Strongly Agree/Very High

Rana, Akhtar, and Tahir (2022) defined authoritative parents as those who may set boundaries for their children; however, they do not interfere with or prevent their adolescent children from their activities. Thus, research shows that children with authoritative parents are found to be more social and capable of being independently taking care of themselves. Moreover, individuals who experience an authoritative or caring parenting style tend to be more romantic and more likely to secure their intimate relationships (Vera Cruz, 2013).

This might explain why most young adolescents who were raised by authoritative parents usually found themselves trying these (online dating) applications in search of friendships or romance that they know they can handle whatever situation may come. Hackathorn and Malm (2021) also suggested that individuals raised by authoritative parents are often found with higher self-esteem and self-efficacy, decision making, lower risky behavior, and delinquency, as well as a better overall adjustment when forming platonic and romantic relationships across their lifespan.

Table 1 shows neither high nor low results (M=2.74, SD=0.987), indicating that some respondents perceived their parents as authoritarian, with rules that could directly impact their relationships and activity boundaries. Conversely, Table 1 shows a low result (M=2.57, SD=0.734), indicating a low presence of permissive parenting traits. Permissive parenting is characterized by leniency and easygoing behavior. The results suggest that respondents perceived their parents as neither too strict nor too lenient.

Level of Sociability

Table 2 shows the participant's level of sociability. For sociability in terms of openness, it interpreted openness as high (M=3.92, SD= 0.440). Table 2 also indicates that the respondent's level of interaction is interpreted to be at a high (M=3.42, SD=0.669) level.

Table 2

Descriptives Statistics on Sociability

Statements	Mean	SD	Verbal Interpretation
I listen patiently to others and try to see things from their points of view	4.32	0.838	Very High
Before I challenge anyone of their opinion, I first try to understand him or her.	4.40	0.754	Very High
I think about what kind of impression I make on others.	4.22	0.933	Very High
I like looking things on other's perspective.	4.27	0.844	Very High
*I'm afraid I would mess up when I'm in a new environment.	2.15	1.123	High
I am good at knowing how much to share about myself. (For example, I know when to keep emotional distance, and when to speak intimately.)	4.19	0.918	High
I try to emphasize the positive than the negative things when I confront other people.	4.11	1.055	High

{table continues on the next page}

I can openly discuss the quality of my relationship to someone else in my conversations with him or	3.70	0.873	High
Openness (Grand Mean)	3.92	0.440	High
I'm good at interacting with other people.	3.17	1.041	Neither High nor Low
I understand all the different roles I play in life.	3.91	0.912	High
I'm good at starting conversations with people I don't know.	3.32	1.190	Neither High nor Low
I have plenty of self–confidence.	3.29	1.147	Neither High nor Low
I'm good at both speaking and listening to others.	3.94	0.879	High
*I'm uncomfortable at parties and large, noisy events.	2.79	1.274	Neither High nor Low
*I think I'd be happier if I could exist all by myself.	2.96	1.344	Neither High nor Low
Interaction (Grand Mean)	3.42	0.669	High

**negatively stated items Scoring System: 1.00 – 1.80 Strongly Disagree/ Very low; 1.81-2.60 Disagree/ Low; 2.61-3.40 Neither Agree nor Disagree/ Neither Low nor High; 3.41-4.20 Agree/High; 4.21-5.00 Strongly Agree/Very High*

Overall, the sociability of the participants revealed a high level of both openness and interaction. This indicates that the participants may show their sociable personalities in the real world to the online dating platforms. Furthermore, their lack of connection with others may explain why online dating platforms serve as their way to fill their need to be connected and to interact with others. Thus, studies indicate the importance of social interaction in which individuals may benefit from a positive outlook in life and contribute to their longevity (Barth [2022]; Sagita and Irwansyah [2021]; Grant [2021]; Wang, et al. [2018]; Goodmon [2014]; Orosz et al. [2018]).

Level of Intensity Towards Online Dating

Table 3 shows the level of intensity of the respondents towards online dating. the results are interpreted as low (M=1.92, SD=0.809). The results indicate that young adolescents have a low-intensity level of engagement with online dating apps despite scoring high on openness.

Table 3

Respondents' Online Dating Intensity

Statements	Mean	SD	Verbal Interpretation
On average, how many times per day do you log on to your online dating service?	2.15	1.028	Low
On average, estimate how much time do you spend per day using online dating services (e.g., browsing, messaging, editing your profile)	2.22	0.997	Low
How often do you edit your online dating service profile?	1.26	1.066	Very Low
Using online dating services is part of my everyday activity.	2.14	1.049	Low
I feel out of touch when I haven't logged into my online dating account for a week.	1.73	1.134	Very Low

{table continues on the next page}

I would miss online dating if I had to suddenly stop using online dating services.	2.04	1.188	Low
Grand Mean	1.92	0.809	Low

Scoring System: 1.00 – 1.80 Strongly Disagree/ Very low; 1.81-2.60 Disagree/ Low; 2.61-3.40 Neither Agree nor Disagree/ Neither Low nor High; 3.41-4.20 Agree/High; 4.21-5.00 Strongly Agree/Very High

The finding contradicts the study by Gu et al.(2018), which discuss the connection between an individual's openness trait in the real world and the virtual world, suggesting that social networks are an extension of oneself. Although respondents score high in sociability, it is important to note that Gu et al.(2018) focused on social media, not online dating. Stinson and Jeske (2019) argues that the sociability trait has little influence on engagement in online dating, aligning with the present study's finding that high sociability does not necessarily lead to intense use of online dating applications. Furthermore, many variables influence the intensity of online dating usage, such as curiosity and boredom, which became primary psychological states during the pandemic (Orosz, 2018).

Therefore, individuals may not spend or invest much time in these applications, explaining the low-intensity level among the participants. They may be using online dating apps to alleviate boredom or satisfy curiosity. Consequently, these apps have become popular platforms for connecting with others, utilizing matchmaking algorithms designed to pair individuals with similar preferences (Homnack, 2015).

Relationship of Perceived Parenting Styles, Sociability, and Online Dating Intensity

Table 4 shows the relationship among perceived parenting styles, sociability and online dating. According to the result presented among the variables, there are five paired variables that are significantly related. Those are interaction and authoritative, interaction and online dating, authoritarian and online dating, permissive and online dating, authoritative and authoritarian.

Table 4

Correlation matrix

		Openness	Interaction	Authoritative	Authoritarian	Permissive	Online dating
Openness	Pearson's r	—					
	P- Value	—					
Interaction	Pearson's r	0.36	—				
	P- Value	<.001	—				
Authoritative	Pearson's r	0.236	0.122	—			
	P- Value	<.001	0.04	—			
Authoritarian	Pearson's r	-0.015	-0.083	-0.185	—		
	P- Value	0.807	0.165	0.002	—		
Permissive	Pearson's r	0.032	0.07	0.206	0.339	—	
	P- Value	0.588	0.24	<.001	<.001	—	
Online dating	Pearson's r	0.068	0.175	-0.012	0.173	0.179	
	P- Value	0.254	0.003	0.836	0.004	0.003	

Both interaction-online dating and permissive-online dating present the same p-value score of 0.003. This indicates that those who are socially engaging and who were raised in a permissive parental home are more likely to use online dating. Dating platforms have proven to be an effective way of interacting with other people not only for dating purposes but also to meet new and different people. This works as specially for interactive children that enjoy social gatherings even if only through online platforms.

As the use of internet dating, permissive parents usually set few limits and expectations for their children and let them work things out for themselves (Gill, 2017). As a result, children who were raised in permissive home tend to regulate their own activities, including engaging in online activities such as online dating apps.

A similar score appears with interaction-authoritative that shows the (p-value=0.04). This parenting style has been acknowledged as the most productive and useful method of raising a child, as well as a flexible approach to parenting techniques that are focused on their own personal goals and each child's unique behavior (Cherry, 2020). With, parental practices were associated with the sociability level of the children. Thus, based on the characteristics and as referred to in this subject matter, children raised by authoritative parents are self-reliant and considered to be responsible enough in social activities, even in the world of online dating apps.

On the other hand, authoritarian-online dating p-value represent a similar score result (p-value=0.004). Indicates that children raised by authoritarian parents are more likely to use online dating apps as well. Authoritarian parents are described as demanding, strict, punitive, cold, and critical. They feature high demands and low levels of warmth. When it comes to social relationships, children who are raised by authoritarian parents are likely to be withdrawn and disconnected. This might explain why they prefer to engage in social media such as dating apps rather than real-life relationships with people. This allows them to connect with other people in the safest and most comfortable way possible. With, both authoritative and authoritarian families produce children who are engaged in online dating apps. This is proven by the result of authoritative/authoritarian (p-value=0.002), showing that both authoritative and authoritarian parents are significantly correlated. This implies that, even though both parenting styles are quite different and completely contrary, both produce children who use online dating platforms to socialize.

Predictors of Online Dating

Considering all the variables and the results from the regression analysis Table 5, the best predictor of engaging in online dating intensity in the sociability was their level of interaction and the Authoritarian parenting style. The model suggests that interaction and authoritarian parenting styles predict 6.63% of the variance of online dating intensity.

Table 5

Regression Analysis Showing The Best Predictors

Predictor	Estimate	SE	T	F	R	R2	P
Intercept	0.707	0.2862	2.47	9.90	0.257	0.0663	<.001
Interaction	0.231	0.0702	3.29				
Authoritarian	0.155	0.0475	3.26				

Among the online dating individuals, interaction and authoritarian parenting styles predict 6.63% with a (p-value <.001) of the variance of online dating. The results might explain that those individuals who are high in interaction and the way they were parented have a later contribution to whether their child would engage and be intense in online dating. Emotionally withdrawn children are usually results and found primarily in an Authoritarian parenting style. These children tend to shy away from expressing emotions as they lack warmth, support, and guidance in forming relationships (Baumrind, 1971). Thus, they consider engaging in dating in secrecy in online dating as a source of compensation. The stricter the environment, the more likely they would get into online dating. Moreover, in terms of sociability, results also explain that individuals who like to interact in the real world are more likely to engage in online dating. Previous studies reveal that a person's openness to the real world and virtual world has a connection, and social networks might be an extension of self (Gu, 2018 & Goodmon, 2014).

Personal Motivations in Engaging in Online Dating Apps

The researchers have identified two themes on the motivating factors that motivate individuals to engage in online dating applications: social and emotional needs. Table 6 and 7 summarize the sub-themes and verbatim quotes on the participant's motivations in engaging in online dating apps.

Table 6

Personal Motivations Because of Social Needs

Sub-themes	Participant's Verbatim Quotes
To connect	"To get to know people especially during peak pandemic when we weren't allowed to go out. As humans, it's hard to go on for long periods of time without talking to other people. It was beneficial in a way that made me feel I'm not alone and that pandemic fatigue is in fact real and what I'm feeling is valid." -50, F
	"It allows you to conveniently meet and connect with like-minded people. I think online dating is beneficial to me because people are craving human connection because staying indoors is frustrating". – 148, M
	"My motives in joining social dating sites/apps are basically just wanting to meet people and know different kinds of stories in life. I actually think it benefit me in a way to see things in a different perspective and different culture". -58, F
To be heard	"Looking for someone to talk to, the way I can open my problems without any judgment". 151, F
	"Just to have a little talk with someone who won't judge me & my opinion. (They say it's safer to tell your problems with a stranger, they won't tell it to anyone)". – 172, F
To have fun	"Just for fun" – 157, M
	"Hook ups" – 205, M
	"I joined the app just for fun. I dont know if its has benefits to me since im not always here. But its kinda nice to connect to some people i don't really know.'' – 130, M
	"Omg haha most memorable I guess when I was able to hang with one of the afam (a foreigner around Manila) guy i was talking with and yeah u know haha anyway, thats just a one time thing lol and he looks so good tho haha" – 166-2, N

Social Needs

The first theme was social needs. The data provided a clear interpretation that most individuals joined the online dating community because they were looking for someone with whom they could interact thru an online platform.

To Connect. Social interaction is a critically important contributor to good health and longevity, Jane Brody (2017) wrote in her article in the New York Times. She discussed how different studies have concluded that regardless of age, gender, health practices, and status, the major difference in survival lies within the individual's close social ties. With a healthy lifestyle and close social ties, humans can live the longest (Brody, 2017). During the pandemic, the emotional joy of connecting with others has been largely absent from our lives (Grant, 2021). We needed that connection because human beings function better on every level when we are in contact with others. Furthermore, the connection and harmony we feel when we relate to others (collective effervescence) cannot be obtained in solitude (Barth, 2022). Everyone needed it; even introverts showed signs of stress during the pandemic (Grant, 2021).

In addition to the findings, individuals joined the online dating community in hopes of finding friendships. They wanted to connect with someone they could relate to and become friends with. The romance was not their priority, but rather just to connect with a possible friend.

Online dating has finally won the role of matchmaking from families and friends. Nowadays, most people prefer to be independent and do not want to rely on others to meet someone (Rosenfeld, Thomas, & Hausen, 2019). The reason might be because of the convenience of connecting. Majorities of online daters say it was at least somewhat easy for them to find others that they found physically attractive, shared common interests with, or who seemed like someone they would want to meet in person (Anderson, Vogels, & Turner, 2020). Finally, the success of the relationship, be it friends or couple, does not depend on how you met. Rather, the relationship takes a life of its own after the initial meeting (Shashkevich, 2019).

To be Heard. Another sub-theme that emerges from the data is how individuals prefer to be heard of their problems without any judgment from others. A study conducted about family stigma wherein the public blames the family members for their incompetence in handling a member of their family with the illness. The negative perspective of the public turns the family members to avoid social situations, spend energy and resources on hiding the secret, and deal with discrimination within employment and/or housing situations (Larson & Corrigan, 2008). In the study of Corringan & Nieweglowski (2019) on how someone with mental illness may be viewed as a burden even by their own family. When their own family is ashamed of them, individuals may develop self-stigma that makes them hesitant to disclose their problems or illness to someone they know (Corringan & Nieweglowski, 2019). This explains that individuals inside the application do not prioritize romance. Rather, they wanted to have someone to listen to them. Their preference to hide their real name from the public's eye just to express their feelings and feel their right to be heard, even if it is in the form of anonymity, could result in satisfying their social need.

To Have Fun. Furthermore, individuals confessed that they joined dating apps solely for the purpose of having fun or exploring sexual urges. They used the term "fun" which has been embraced by the online dating community, as another word that typically implies sex. The usage of internet dating apps on mobile phones for sexual purposes has expanded, notably as a means of locating potential sexual partners.

However, additional studies further explained that young adulthood is the period for sexual experimentation and maturation. Therefore, establishing a significant sense of one's sexuality and identity is an important step for emerging adults. It is a crucial aspect of people's lives and a major and remarkably constant determinant of social attitudes. (Morgan, 2013). Hence, considering previous studies together with the responses from the participants, the researchers hypothesized that young people's propensity for engaging in virtual dating might be explained not only through the drive for sexual desires but also by the need to discover their social identity through the process of sexuality exploration. Thus, the reported sexual interactivity desires were not primarily considered as needs, but rather a course of action to achieve a definite sense of individuality, stance, and disposition in social settings.

Table 7

Personal Motivations Because of Emotional Needs

Sub-themes	Participant's Verbatim Quotes
To be relieved from stress	*"Just bored. I love to socialize with other people. It's beneficial for a reason that it diverts your attention from stress due to acads and pandemic stress." – 1*
	"I guess it has benefits to the point that when I need someone to talk to, and tell my frustration and stress to some stranger, this is very helpful." – 63
	"To find someone to talk, Yes it benefit to me because it help to loss my stress" – 223
To be motivated	*"To find new people and friends. Yes, it helps me a lot, especially when I do modules. They also motivate me in my schoolwork and they have a lot of understanding of my situation and depressing series." – 2*
	"I enjoy listening to different stories, life experiences and lessons that makes beneficial to me." – 54

{table continues on the next page}

	"I enjoyed chatting with random type of person. I can say that it is beneficial because you will learn a lot to different people." – 183
To find romance	*"To meet and see new people, find someone who's compatible with me and its beneficial since it very convenient. One swipe away and you might go on a date." –112*
	"At the very least, find new friends to talk (and possibly meet) with eventually. First and foremost, just to engage in casual dating (with or without sexual interaction). I find online dating beneficial because of its convenience. It's very easy to engage with people with this medium. It also helps in getting to know someone before eventually meeting with them, consequently, it is also easy to pull out of boring or unfruitful interactions (a.k.a it's very easy to ghost someone when they're too boring or uninteresting, communication goes both ways!)" –169
	"To find a friend/gf and also it helps me to boost my self-confidence when entertaining other people." –100
	"To get to know other people that could lead to possibly dating. Since I have strict parents, using dating apps can be beneficial to me since it's the easiest way for me to interact and meet people." – 105
To be validated	*"I wanted validation from strangers. Yes, it helps me socialize more, sometimes dating apps aren't just for romance." – 16*
	"I just wanna know and meet new people and to explore things that I still dont know. To be honest, there are really pros and cons into being on a dating app but i must say that cons weigh much better, at least on my own experience; especially when youre part of the LGBTQ community, its really kinda bothering how some ppl treated me and yeah tbh being on the dating app has a psychological effect on me because there was one time that i got kinda addicted into seeking validations from other ppl lmao istg i did not expect that to happen." – 166
	"I need validation from other people because anxiety sometimes get the better of me and makes me question my worth. It is beneficial in a way that it keeps my negative thoughts about myself away for a while." – 216

Emotional needs

The second theme that emerged from the data was emotional needs. Given that the qualitative data provided that several individuals engage in online dating to satisfy their emotional needs.

To be Relieved. Answering the motives and the benefits people get from dating apps, some of the respondents stated that online dating was one of the ways to avoid dealing with schoolwork and the pandemic crisis. Online dating became their medium in distressing themselves with schoolwork and to release stress from the pandemic crisis. Furthermore, through online dating, people have full control to decide who is worth their time and emotions. There are many conversations that turn into friendships and teach them to know more about themselves. Finding someone to share their values and interest serves as a stress reliever in overwhelming conditions. What these people have in common is basically to fulfill the basic human need for social connection. Maintaining social connections is critical.

To be Motivated. People find dating app platforms brought them to light in a way that it motivates them in dealing with their overload of work itself, especially in their mental state. One of the respondents pointed out that people on dating apps provided happiness and motivation in dealing with schoolwork, especially when listening to their depressing series. Many people manage to improve their motivation through talking with people who understand them, especially with someone who enjoys talking with strangers. Some are just happy to interact with new people and listen to their stories. Moreover, there are some good insights

people could get through others' life experiences. It serves as a life lesson that people can learn to brighten their future by avoiding the negative point of view and cherishing the positive one. Being able to hear and see different people's point of view and perspectives broaden one's view of the world.

To Find Romance. Among online dating individuals, the look for romantic relationships has been one of the motivating factors to satisfy their emotional needs. Online dating applications were designed specifically for romance and to connect with people conveniently. Particularly in these times of pandemic where interaction is limited, its convenience brings a lot of benefits for people who look for potential partners, moreover, being in a relationship improves are well-being. In a study by (Kawamichi & et al, 2016). Being in a romantic relationship is linked to higher subjective satisfaction and lower gray matter density. Romantic relationships enhance happiness via positive experiences. These dating applications can serve as a tool for curing loneliness in this pandemic. Moreover, internet dating programs may assist those who struggle to build meaningful relationships, particularly those whose parents are very controlling. Having strict parents offers both benefits and drawbacks. It may be beneficial in some way and produce well-behaved children however excessive strictness may be problematic and may affect future relationships especially romantic relationships (Li, 2022).

To be Validated. Aside from looking for romance, another subtheme that emerged in the data was validation. Individuals find online dating a great way to seek validation from the likes they receive from strangers. Thus, validation is also one of the motivating factors to satisfy their emotional needs.

Referring to the responses in table 21, individuals seek validations in online dating applications. Dating apps have ranking and like systems that could give a sense of validation and fulfillment based on the number of likes in their profiles. Especially as a member of the LGBT, where it may be a difficult case as discrimination is not an uncommon thing, and validation may play a huge effect on individuals psychologically. Everyone wants to be heard, seen, and feelings matter. Validation helps individuals feel cared for and supported. According to Peadneault (2022) being validated gives a sense of value and worth; it communicates acceptance, strengthens relationships, and fosters better emotional regulation.

Conclusion and Recommendation

Since the present study found out that there is a correlation between sociability and online dating intensity, it is recommended to further their investigation by exploring different theories that tackle different sociability traits. Furthermore, studies should be extended through age, gender, and community. Moreover, the number of apps they are using and the starting point of their entry to the application should also be noted. Lastly, regions aside from NCR may provide other responses to the subject, and cultures and perspectives of other regions should be put into consideration as well.

It was also found the authoritative parenting style provides a more positive upbringing to their children. With this, parents are recommended to take seminars and courses that tackle parenting styles to develop their child's character and lessen any unnecessary behaviors in the future.

Online dating applications were found to host different genders, such as LGBT, thus, individuals within the gender group should be aware of the possible negative feedback of some people that discriminates against the LGBT community. Thus, it is recommended that they would look for an application that supports their community or an application specifically made for them to avoid any unwanted encounters.

Furthermore, for individuals looking for socialization and planning to try an online dating application, it is recommended to maintain proper conduct within the online dating platform. Improper conduct ruins the integrity and the image of the application.

Finally, individuals looking for emotional support inside the online dating application should be aware of the risk they will encounter. It is recommended to look for an application or contact someone that provides emotional support through online, call, or offices that is open for clients.

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PSYCHOLOGY

Relationship of Pet Attachment on College Students' Academic Stress and Subjective Happiness

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Abstract

Since the onset of the COVID-19 pandemic, numerous institutions, including schools, were forced to close, compelling students to continue their education online. This shift necessitated adjustments that impacted students' well-being, leading many to seek comfort and support from their pets. This paper explores the relationship between pet attachment, academic stress, and subjective happiness among college students. Data were collected from 233 participants attending Adventist colleges in the Philippines and analyzed using SPSS. The findings indicate that students generally exhibited a high level of pet attachment and subjective happiness, while their academic stress levels were low. There is a positive correlation between pet attachment and both subjective happiness and academic stress, and a negative correlation between subjective happiness and academic stress. Based on these results, it is recommended that non-pet owners consider acquiring pets and that current pet owners spend more time with their pets. Future research should investigate additional ways pets can enhance student well-being.

Keywords: *student well-being, pet attachment, academic stress, subjective happiness*

The onset of the pandemic in the Philippines on March 2020 forced schools to close which affected 25 million pupils (United Nations Office for the Coordination of Humanitarian Affairs, 2021). Giannini (2020) states that the pandemic has a negative impact on the education of children. Learning at home is a source of stress for learners and causes stress and anxiety.

Being a fur parents in the Philippines has become a fad. Many posts on Facebook or Instagram involve pets. In the latest survey of Rakuten (2021) among pet owners in the Philippines, they were asked what pet they raised at home, and it found that 67% pet owners raised dogs while 43% raised cats, followed by 3% rabbit owners and last is 3% hamster owners. From the study of Rakuten (2021) it was confirmed that dogs are man's best friends followed by cats. In addition, it also shows that the top 3 motivations for people to get a pet is first to become happier and feel less stress, to have company, and the desire to feel more secure.

Moreover, pets aid to children's emotional and social skills, as well as reduce stress and promote heart health. In addition, interacting with animals have been demonstrated to lower blood pressure and lessen cortisol. Noden (2015) found out that pets are also essential to the improvement of mental and emotional health of students which is why they are used as pet therapies for college where students feel increased levels of stress.

Stress is an inevitable part of anyone's life. The American College of Health Association Health Assessment in 2018 found that 87% of college students report that they experience high intensity of stress at least once in a year. College students deal with more responsibilities, poor time management, the change in sleeping and eating habits and not having enough breaks to have self-care are some of the reasons why they are stressed. One of the common sources of the students' stress is the academic workload. (Llego et al., 2022.) School activities such as college exams, outputs, deadlines, and the like are also sources of stress.

Stress does not only affect our physical health but also our behavior, emotion, and thoughts. (Stress Symptoms, 2021; Marks, 2021). On the other hand, there are studies that prove how stress affects the happiness level of the students. The more stress a student is perceiving, the lower the happiness (Schiffrin, 2008 & Kim, 2018). In the same study of Kyoungmi Kim (2018), college students who have higher optimism appear to have higher happiness. College years are stressful for all, especially nowadays where students experienced more significant demands from classes and from the professors. Academic stress prompted to lessen the well-being thus increases the risks of having anxiety and depression. (Pascoe et al., 2019).

Nevertheless, just as pets can help in the well-being of people with many areas of life, they can also aid improve the mental health of students in terms of their academic stress which even pertains to college students. In a study by Ward et al., (2018) they tried to examine how therapy dogs can affect the mental health and wellbeing of college students. It was found out that the experimental group were able to experience strong immediate effects after being exposed to therapy dogs with a significant increase in happiness and well-being while reduction to stress levels.

In addition, interaction with pets have been found to increase positive mood thus has greater decline when it comes to anxiety, could relieve stress and were 41% less likely to have depression compared to individuals who does not own or interact with pets. (Picard, 2015; Thelwell, 2019; Michniak et al., 2016; Chakma et al., 2021). These findings show that dog owners are more inclined to exercise as they walk their dogs and, as a result, they become more familiar within their area and feels positive about it.

Several studies were done to examine the relationship of pets to the academic stress and happiness of students. Although these studies focus on the use of pet therapies in school and its relationship to the wellbeing and academic stress that students experience from face-to-face classes. This study, however, focuses on the relationship of pet attachment on academic stress and happiness that students experience with online learning. Specifically, this study aimed to answer the following research questions:

1. What is the level of pet attachment of the participants?
2. What is the level of academic stress among college students?

3. What is the level of subjective happiness of the participants?
4. Is there a significant relationship between subjective happiness and academic stress?
5. Is there a significant relationship between subjective happiness and pet attachment?
6. Is there a significant relationship between pet attachment and academic stress?

Methodology

Research Design

The study uses a descriptive correlational design to examine academic stress and happiness levels among participants using structured questionnaires. Descriptive research, as defined by the Office of Human Research Protections (OHRP) (2001), gathers data without manipulating variables or changing the environment, providing information on naturally occurring states and behaviors within a group.

Population and Sampling Techniques

Participants are undergraduate college students, aged 18-25, attending online classes. Specifically, participants who are pet owners and primary caregivers of their pets for at least six months were chosen. Non-probability sampling was used, specifically unrestricted self-selected sampling. This method involves public self-selected surveys posted online and advertised via social media and other platforms. Participation was limited to one response per individual through Google Forms.

The demographic profile of the study participants revealed that 24% were males and 76% were females, totaling 233 participants. In terms of university enrollment, 55% of the participants were from Adventist University of the Philippines, 13% from Manila Adventist College, 9% from Mountain View College, and 1% from Northern Luzon College. Regarding pet ownership, 57% of the participants owned only dogs, 17% owned only cats, and 26% owned both cats and dogs.

Instrumentation

The study used a questionnaire with two parts: demographic profile and structured questions to measure academic stress and happiness levels. The Inventory Pet Attachment Scale measures pet owners' emotional attachment to their pets with 23 items on a 7-point Likert scale. The Student's Academic Stress Scale is a 40-item questionnaire assessing stress levels in five categories, with responses ranging from 'No Stress' to 'Extreme Stress.' Lastly, the Oxford Happiness Scale is a 29-item questionnaire on a 6-point Likert scale measuring personal happiness, validated by reliability and factorial analysis.

Data Gathering Procedure

A pilot study was conducted with students from Manila Adventist College and Adventist Medical Center College- Iligan to test the questionnaire's reliability and make necessary adjustments. After completing the pilot study and making the required changes and corrections to the questionnaires, the actual data collection began immediately. The researchers created a Google Form survey with the attached questionnaires to measure the variables. To promote the study, they posted a poster with a survey link on their Facebook timelines, making it viewable to the public. Additionally, each researcher shared the link in their group chats and with their acquaintances. One researcher was designated to manage the Google Forms access and communicate with the participants.

Analysis of Data

The Statistical Package for Social Science (SPSS) was utilized to determine the statistical results, data was encoded and processed using the SPSS. To classify the demographic profile of the participants, descriptive statistics of frequency was used; academic stress and happiness of the participants was measured using mean and standard deviation and correlation analysis was used to explore the relationship between the variables.

Ethical Consideration

To ensure ethical considerations in this research study, the researchers secured approval from the AUP Ethical Review Board. Informed consent was obtained from all participants, emphasizing the importance of their voluntary participation and their right to withdraw from the study at any time. The anonymity and confidentiality of all participants were strictly maintained throughout the study.

Results and Discussion

Level of Pet Attachment

Participants answered a 23-item questionnaire on pet attachment. Each item is rated using a 7-point scale. Higher point on the scale means better pet attachment. Summary of participants' responses is presented in Table 1.

Table 1

Descriptive Statistics on the Level of Pet Attachment

Statements	Mean	SD	Scaled response	Verbal Interpretation
As time goes by, I feel closer to my pet.	3.54	1.85	Partly False	Somewhat Low
I am the happiest when I spend time with my pet.	5.94	1.44	Somewhat True	High
When sad, I turn to my pet.	5.40	1.59	Somewhat True	High
I worry about the welfare of my pet when left alone.	6.34	1.23	Completely True	Very High
I think my pet experiences feelings the same way people do.	5.06	1.69	Partly True	Somewhat High
If something were to happen to my pet, I would fall apart.	5.95	1.47	Somewhat True	High
If I could, I would take my pet with me wherever I went.	4.56	1.66	Partly True	Somewhat High
I feel as though my pet is more like a human than an animal.	5.93	1.41	Somewhat True	High
I feel very sad when I routinely leave my pet alone during the day.	6.00	1.34	Somewhat True	High
I like for my pet to always be near me.	4.80	1.76	Partly True	Somewhat High
I treat my pet more like my child than a pet.	4.90	2.08	Partly True	Somewhat High
I enjoy grooming my pet.	4.75	1.60	Partly True	Somewhat High
I spend a great deal of my spare time interacting with my pet	5.62	1.54	Sometimes True	High
I spend as much of my free time with my pet as possible.	4.52	1.98	Partly True	Somewhat High
When my pet is alone, I spend a great deal of time worrying that it is lonely.	5.32	1.54	Sometimes True	High
I like for my pet to sleep with me in my bed	5.36	1.66	Sometimes True	High
My pet is the most important thing in the world to me.	4.10	1.70	Partly True/ Partly False	Average
If I had to, I would choose my pet over other relationships.	5.33	1.65	Sometimes True	High

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I prefer the company of my pet to people.	5.35	1.75	Sometimes True	High
The wellbeing of my pet is more important than my own.	5.53	1.69	Sometimes True	High
I tell my troubles to my pet.	5.17	1.64	Partly True	Somewhat High
I often deny myself things to take care of my pet.	5.45	1.75	Sometimes True	High
I frequently buy toys for my pet.	4.82	1.79	Partly True	Somewhat High
Grand Mean	5.21	1.23	Partly True	Somewhat High

Scoring System: 1.00- 1.85 Completely False/ Very Low; 1.86- 2.71 Somewhat False/Low; 2.72- 3.57 Partly False/ Somewhat Low; 3.58- 4.43 Partly True/Partly False/ Average; 4.44- 5.29 Partly True/ Somewhat High; 5.30- 6.15 Somewhat True; High; 6.16- 7.00; Completely True/ Very High

The results indicate the overall level of pet attachment of the participants (M = 5.21, SD = 1.23) which is interpreted as somewhat high. This generally shows that the respondents often give the attention, nurture and form of attachment to their pets. The lowest mean is on item 'As time goes by, I feel closer to my pet.' (M=3.54; SD=1.85), and the highest mean is on item 'I worry about the welfare of my pet when left alone.' (M=6.34; SD= 1.23).

The COVID 19 pandemic provided opportunity to pet owners to have more time at home as the mode of learning is only through online. With this opportunity they have more time to spend with their pets and bond with them which could help aid in some negative feelings during the pandemic. Some of the causes that students may feel are from the restrictions of socializing with friends and love one's while being in the pandemic. This in turn may lead them to turn to their pets and spend more time with them to cope as they may receive emotional support from their pets which can lead to stronger affection and attachment. This can be supported by a study by Mueller et al. (2021) which shows that prior to the pandemic, dog owners had lower degrees of loneliness and higher levels of bonding, indicating probable species-level variations in these relationships. Adolescents with pets spent more time with them throughout the pandemic, and pet interactions were commonly mentioned as a stress-relieving method.

Level of Academic Stress of the Participants

Five constructs of academic stress were considered: inadequate study facilities, fear of failure, interpersonal difficulties, personal inadequacy, and teacher-pupil relationship. Table 2 to 7 present the level of academic stress of college students with table 7 showing the overall score.

Table 2

Descriptive Statistics on the Level of Academic Stress for Inadequate Study Facilities

Statements	Mean	SD	Verbal Interpretation
Lack of concentration during study hours.	2.39	0.991	Slight Stress
Conflict with friends	1.51	1.21	No Stress
Conflicts with authorities	1.68	1.25	No Stress
Inadequate space or room for study at home	1.79	1.27	No Stress
Lack of assertiveness (confidence) in the class	2.09	1.25	Slight Stress
Lack of opportunity to meet teachers.	1.75	1.14	No Stress
Lack of mutual help among classmates	1.69	1.22	No Stress
Grand Mean	1.84	0.796	Slight Stress

Scoring System: 1.00 – 1.80 No Stress; 1.81 – 2.60 Slight Stress; 2.61 – 3.40 Moderate Stress; 3.41 – 4.20 High Stress; 4.21 – 5.00 Extreme Stress

Based on the results, the Inadequate Study Facilities score (M = 1.84, SD = 0.796) indicates slight stress among students. This suggests that students encounter minor issues with accessing appropriate study facilities. This finding contrasts with studies from regions like Afghanistan, where during the pandemic, students faced significant challenges due to the lack of continuous online teaching and learning. For instance, students in low-income districts were less likely to have computers or adequate internet access at home (Los Angeles Times, 2020). However, our data suggests that this is not a significant problem for the participants, likely because they attend private Adventist schools and are financially capable of owning necessary gadgets for schooling.

Students have benefited from live streaming services on social media (e.g., Instagram, Facebook), participating in regular discussions on trending topics and staying connected with peers and instructors through online forums. The growth of social networks and the increased online presence of academic institutions have further supported this trend. Additionally, the internet has become a valuable learning resource, with educational websites compensating for some of the lack of direct study facilities provided by teachers.

Table 3

Descriptive Statistics on the Level of Academic Stress for Fear of Failure

Statements	Mean	SD	Verbal Interpretation
Communicating my grades to my parents	1.41	1.37	No Stress
Worrying about the online examinations	2.49	1.25	Slight Stress
Teachers give more assignments or online activities in the class	2.76	1.15	Moderate Stress
Worry about results after examinations.	2.70	1.24	Moderate Stress
Exams are tough and not valued well.	2.30	1.16	Slight Stress
Unable to complete the assignment in time.	2.23	1.32	Slight Stress
Unable to discuss Academic failures with parents.	1.89	1.48	Slight Stress
Not able to grasp the subject matter.	2.23	1.17	Slight Stress
Grand Mean	2.25	0.906	Slight Stress

Scoring System: 1.00 – 1.80 No Stress; 1.81 – 2.60 Slight Stress; 2.61 – 3.40 Moderate Stress; 3.41 – 4.20 High Stress; 4.21 – 5.00 Extreme Stress

The results shows that the level of stress of the participants for fear of failure M = 2.25 (SD = 0.906) is slight stress which implies that the students may find only a small amount of considerable stress from the thoughts about failing academically. Fear of failure was described by Conroy and Elliot (2004) as "dispositional tendency to avoid failure in achievement settings because the humiliation and embarrassment of failure are perceived to be overwhelming"

It can be observed from the results that the lowest scored item M = 1.38 (SD = 1.30) is item 8 which states 'Communicating my grades to my parents' which shows that overall, of the participants have experienced no difficulty with communicating with their parents about their grades. On the other hand, item 10 'Teachers give more assignments or online activities in the class's has the highest score M = 2.67 (SD = 1.136) but only with moderate stress. This result indicates that the participants may have encountered difficulties due to the number of assignments or online activities they received from their teacher however only in certain extent.

According to one research from 4,300 students that came from 10 high-performing public and private high schools in upper-middle-class California communities., excessive homework has been linked to high stress levels, physical health problems, and a lack of balance in children's lives at the same time 56 percent of students in the study cited homework as a primary stressor in their lives (Enyati, 2014). As recommended by The National Education Association and the National Parent Teacher Association Students should spend

10 minutes per grade level on homework each night. (Terada, 2018). With this the researchers may assume that the students from the study may have received only a considerable number of assignments from their teachers. However, despite these, they may encounter problems that cause them to not finish their assignments in time. This may be because as students do their assignments by using devices then they may easily be distracted from other applications such as social media that could cause them to procrastinate.

Table 4

Descriptive Statistics on the Level of Academic Stress for Interpersonal Difficulty with Teachers

Statements	Mean	SD	Verbal Interpretation
Communicating my grades to my parents	1.41	1.37	No Stress
Worrying about the online examinations	2.49	1.25	Slight Stress
Teachers give more assignments or online activities in the class	2.76	1.15	Moderate Stress
Worry about results after examinations.	2.70	1.24	Moderate Stress
Exams are tough and not valued well.	2.30	1.16	Slight Stress
Unable to complete the assignment in time.	2.23	1.32	Slight Stress
Unable to discuss Academic failures with parents.	1.89	1.48	Slight Stress
Not able to grasp the subject matter.	2.23	1.17	Slight Stress
Grand Mean	2.25	0.906	Slight Stress

Scoring System: 1.00 – 1.80 No Stress; 1.81 – 2.60 Slight Stress; 2.61 – 3.40 Moderate Stress; 3.41 – 4.20 High Stress; 4.21 – 5.00 Extreme Stress

As what can be seen in the results, the participants score M = 1.91 (SD = 1.02) which can be interpreted by slight stress when it comes to Interpersonal Difficulties with Teachers. This could mean that the participants have some few troubles with feeling overwhelmed when it comes to difficulties with communication with their teachers. The students may be more likely to cope and deal effectively with stressors when it comes to communicating with their teachers. According to Thomas, Karmos, & Altekruse (1981) poor interpersonal communication frequently leads to strained relationships and difficult-to-resolve issues. On the other hand, positive interpersonal relationship leads to many benefits such as a source of happiness and a buffer against stress (Martin, 2014).

Table 5

Descriptive Statistics on the Level of Academic Stress for Personal Inadequacy

Statements	Mean	SD	Verbal Interpretation
Difficulty in remembering all that is studied.	2.66	1.19	Moderate Stress
Lack of self-confidence.	2.32	1.28	Slight Stress
Hesitate to ask the teacher for detailed explanation.	2.34	1.26	Slight Stress
Lack of fluency while speaking the language other than the mother tongue.	2.03	1.32	Slight Stress
Difficulty in public speaking.	2.37	1.33	Slight Stress
Feeling of inferiority.	1.98	1.30	Slight Stress
Last minute preparation for the examinations.	2.55	1.28	Slight Stress
Difficulty in adjusting with opposite gender	1.34	1.22	No Stress
Grand Mean	2.20	0.953	Slight Stress

Scoring System: 1.00 – 1.80 No Stress; 1.81 – 2.60 Slight Stress; 2.61 – 3.40 Moderate Stress; 3.41 – 4.20 High Stress; 4.21 – 5.00 Extreme Stress

The results shows that the personal inadequacy level scores M = 2.21 (SD = 0.953) which can be interpreted as slight level of stress. Inadequacy feelings occur when we believe we are not good enough. The results may imply that the participants don't have much trouble coping and dealing with their confidence or self-esteem when dealing with academic activities. These may show that the participants are able to cope well and believes that they are capable of accomplishing tasks and goals. Moreover, some the factors also involved in this category includes hesitating to ask teachers, problems than involves public speaking and not fluent with language. These may be resolve by some features and functions used for online meetings such as having as having close and open cam, mute and unmute button and even comment sections where they may be able to give their ideas without speaking verbally. Small discussion groups, anonymous polls, and live subtitles are just a few of the tools available in the virtual classroom to help make remote learning more effective (Connelly, 2021). With all of these help the participants may have more opportunity to overcome some of their feelings that led to personal inadequacy.

Table 6

Descriptive Statistics on the Level of Academic Stress for Teacher Pupil Relationship

Statements	Mean	SD	Verbal Interpretation
Teachers make too many extra demands on students.	2.49	1.19	Slight Stress
Poor interest in some subjects.	2.20	1.30	Slight Stress
Teacher shows socio-economic status on students.	1.43	1.20	No Stress
Slow in getting along with the curriculum	1.83	1.23	Slight Stress
Monotonous (boring or tedious) teaching style by the teacher.	1.98	1.24	Slight Stress
The teacher discusses the lesson too fast; it's hard for me to catch up	2.11	1.28	Slight Stress
Importance of the subject matter.	1.97	1.22	Slight Stress
Grand Mean	2.00	0.941	Slight Stress

Scoring System: 1.00 – 1.80 No Stress; 1.81 – 2.60 Slight Stress; 2.61 – 3.40 Moderate Stress; 3.41 – 4.20 High Stress; 4.21 – 5.00 Extreme Stress

The result shows that the students experience a slight level of stress M = 2.00 (SD = 0.941) when it comes to teach-pupil relationship. This may indicate that the students find only a small amount stress regarding their relationship with their teachers. Teacher-student interaction is important as it could be of good help to the student's academic development. According to Allen et al. (2013), teacher-student relationship creates an emotional bond with the student, which leads to improved academic performance, this is because a positive teacher-student relationship fosters collaboration and motivation in pupils, both of which are linked to student achievement (Chen, 2016). This could also imply that the participants may be having a positive experience with their teachers making them more comfortable to seek for their help when it comes to academic activities which gave them no trouble with this issue and moreover this could lead to a better performance in school.

Table 7

Descriptive Statistics on the Level of Academic Stress

Items	Mean	SD	Verbal Interpretation
Overall Level of Academic Stress	2.05	0.788	Slight Stress

Scoring System: 1.00 – 1.80 No Stress; 1.81 – 2.60 Slight Stress; 2.61 – 3.40 Moderate Stress; 3.41 – 4.20 High Stress; 4.21 – 5.00 Extreme Stress

According to the results, participants have an overall score of M = 2.05 (SD = 0.778) which can be interpreted as slight level of stress. Particularly, they experienced only a slight stress to all the subscales; inadequate study facilities (M=1.84, SD= 0.796), fear of failure (M = 2.25, SD = 0.906), interpersonal difficulty with teachers (M = 1.92, SD = 1.02), teacher-pupil relationship (M = 2.00, SD = .941), and feeling of personal inadequacy (M = 2.20, SD = .953). This result indicates that the students may experience emotional tension from their academics but only in a small degree. Just as the overall result of academic stress from the respondents, in a similar study done by Malik and Javed (2021) about the Perceived stress of university students during COVID-19-induced e-learning, they found that from their 966 respondents, 82.5% experiences moderate stress only.

The small amount of stress that the students experienced may be because of the advantages from having online classes. Because students are not bound by a set schedule they have the flexibility to manage their careers and studies. In a traditional classroom, class meeting times are established, and students have little control over them, forcing them to plan their lives around them. Most people select online learning does so because it allows them control over how they allocate their time to various initiatives (Community College Aurora, n.d.) In a study done by Schaffhauser (2021) Among online students who were participants from the study, over half of virtual students claimed that one benefit of distance learning was the flexibility to take breaks when needed, as stated by 48 percent of respondents, and that their virtual classes were "engaging" (41 percent). The same is for the participants of the study, with the advantage of having breaks and more free time they may experience lesser stress and pressure with their academic life.

Level of Subjective Happiness

Participants answered a 24-item questionnaire to test their subjective happiness where each item is being rated using a 6-point Likert scale. Summary of participant's subjective happiness is presented in Table 8.

Table 8

Descriptive Statistics on the Level of Subjective Happiness

Statements	Mean	SD	Scaled Response	Verbal Interpretation
I don't feel pleased with the way I am. *	3.67	1.41	Slightly Agree	Moderately High
I am interested in other people	4.15	1.38	Slightly Agree	Moderately High
I feel that life is rewarding.	4.79	1.27	Moderately Agree	High
I have feelings towards almost everyone.	3.61	1.37	Slightly Agree	Moderately High
I wake up feeling rested.	3.95	1.38	Slightly Agree	Moderately High
I am not optimistic about the future. *	3.97	1.50	Slightly Agree	Moderately High
I find most things amusing	4.38	1.22	Moderately Agree	High
I am always committed or involved.	4.20	1.26	Slightly Agree	Moderately High
Life is good.	4.79	1.34	Moderately Agree	High
I do not think that the world is a good place*	3.79	1.52	Slightly Agree	Moderately High
I laugh a lot	4.66	1.23	Moderately Agree	High
I am satisfied about everything in my life.	4.35	1.29	Moderately Agree	High
I am happy.	4.61	1.23	Moderately Agree	High
I find beauty in some things.	5.07	1.04	Moderately Agree	High
I have a cheerful effect on others.	4.63	1.15	Moderately Agree	High
I feel able to take anything on	4.18	1.20	Slightly Agree	Moderately High

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I often experience joy and elation.	4.44	1.20	Moderately Agree	High
I don't find it easy to make decisions.*	2.87	1.42	Slightly Disagree	Moderately Low
I don't have a particular sense of meaning in my life. *	4.09	1.45	Slightly Agree	Moderately High
I feel I have a great deal of energy.	4.17	1.18	Slightly Agree	Moderately High
I have a good influence on events.	4.25	1.14	Slightly Agree	Moderately High
I don't have fun with other people.*	4.58	1.22	Moderately Agree	High
I don't feel particularly healthy*	3.78	1.47	Slightly Agree	Moderately High
I don't have happy memories of the past*	4.82	1.30	Moderately Agree	High
Grand Mean	4.24	0.749	Slightly Agree	Moderately High

**negatively stated items Scoring System: 1.00 – 1.83 strongly disagree/very low; 1.84 – 2.66 moderately disagree/low; 2.67 – 3.49 slightly disagree/moderately low; 3.50 – 4.32 slightly agree/moderately high; 4.33 – 5.15 moderately agree/high; 5.16 – 6.00 strongly agree/very high*

The result of participants' Subjective Happiness is Moderately High (M = 4.24, SD = 0.749). It indicates that the students may somewhat think and feel that their life is going well. According to psychological studies, subjective happiness can be accurately quantified and consists of emotional and cognitive components. Joy, pleasure, contentment, and fulfilment characterize happiness as an emotional state. While there are many definitions of happiness, Dwidienawati et al. (2021) found that people are only slightly happier after a year of the COVID-19 epidemic. Happiness may be acquired through social relationships and leisure activities. However, due to the pandemic, socializing is discouraged, leading to lesser chances to enjoy face to face social interaction and leisure activities. Interacting by using gadgets may allow interaction with friends and family online; however, interacting face to face is different. People are happier after face-to-face contact than after online interactions (Mallen, 2003). The researchers assume that this could be one of the factors why students may be happy but only to a slightly higher degree.

Relationship Between Subjective Happiness and Academic Stress

Table 9 presents the correlation analysis relationship between subjective happiness and academic stress. The result indicated a significant weak negative relationship between academic stress and happiness r= -0.215, p< .001.

Table 9

Correlation Analysis between Subjective Happiness and Academic Stress

Variable	Correlation with Subjective Happiness	
	r	p
Academic Stress	-0.215	< 0.001

Correlation is sig. at 0.05 (2-tailed)

Results implies that an increase in the level of academic stress is associated with a decrease in subjective happiness. Fear of failure results from low-income homes who find it difficult to enhance their school performance, high parental expectations, views of an uncertain socio-economic future, and the avoidance of suffering humiliation (Nsiah, 2017). The importance of life satisfaction and self-esteem as positive functional components in managing, regulating, or minimizing psychological discomfort and increasing subjective happiness (Freire & Freire, 2019).

Relationship Between Subjective Happiness and Pet Attachment

Table 10 presents the correlation analysis for the relationship between subjective happiness and pet attachment. As shown, subjective happiness and pet attachment have a significant weak positive correlation r= .133, p=0.037.

Table 10

Correlation Analysis between Subjective Happiness and Pet Attachment

Variable	Correlation with Subjective Happiness	
	r	p
Pet Attachment	0.133	0.037

Correlation is sig. at 0.05 (2-tailed)

Results indicates that an increase in the level of pet attachment is associated with an increase in subjective happiness. Chaudhary and Srivastava (2017) found a significant difference between the people who own a pet and those who do not have it in terms of psychological well-being and happiness. Pet owners were happier with their lives than non-pet owners, but there were no differences in well-being, personality, emotion control, or need fulfilment (Bao & Schreer, 2017).

Pets play an essential part in people's everyday lives, from lowering stress and loneliness to increasing productivity and general well-being; thus, regular contact with dogs may help people become healthier and more cheerful, resulting in a better life (Peng et al., 2018). Pet attachment influences an owner's happiness through leisure copings, such as leisure companionship and mood enhancement leisure. Pet attachment can help people become happier as they engage in leisure activities with their pets (Tang et al., 2013). According to Emma Elsworthy (2018), having a close link with a family pet can increase biochemicals like endorphins and oxytocin, making owners feel more relaxed, peaceful, and happy at home.

Relationship Between Pet Attachment and Academic Stress

Table 11 presents the correlation analysis for the relationship between pet attachment and academic stress. As shown in the table, academic stress and pet attachment have a significant weak positive correlation r=0.174, p=0.006.

Table 11

Correlation Analysis between Pet Attachment and Academic Stress

Variable	Correlation with Subjective Happiness	
	r	p
Overall Academic Stress	0.174	0.006

Correlation is sig. at 0.05 (2-tailed)

This result implies that increased academic stress is associated with an increase in pet attachment. Results may be because whenever students encounter stressors in life such as from their academics, they tend to seek emotional support to cope. This support could be by turning to their pets and thus resulting in higher attachment. Pets encourage emotional stability by regulating feelings, managing stress, and assisting individuals in coping with difficult life events (Hunt & Stein, 2007; Bystrom & Persson, 2015). In a study by Pendry and Vandagriff (2019), they found that having time to interact with a pet can relieve stress for a moment.

Pendry et al. (2021) conducted another study about incorporating human-animal interaction into stress management programs. Results showed that students at risk of failure would have better executive functioning if they had frequent exposure to the petting of dogs compared to students who undergo a series of stress management lectures and exercises utilizing a didactic approach. Lower self-esteem or feelings

of personal inadequacy are found to have a relationship with educational stress. Owning a pet helps an individual to have greater self-esteem, lessen fears, and be less distracted. (Nguyen, 2022; McConnell, 2011).

Conclusions and Recommendations

The research found that participants exhibited a slightly high level of pet attachment, likely due to the increased time spent with pets during the pandemic. This extra time at home fostered closer bonds between students and their pets. The study also revealed that students experienced low levels of academic stress from online learning, which can be attributed to the flexible scheduling that allows for better time management and reduced pressure.

Additionally, students showed a slightly higher level of subjective happiness, partly due to social interactions and leisure activities with friends, though these opportunities were limited during the pandemic. Martin Seligman's theory supports that pleasure can come from pet ownership, while Lazarus's theory suggests that academic stress perception was low among students. The more stressed students felt, the more attached they became to their pets, seeking them as sources of social support. This attachment also correlated with increased happiness levels.

The researchers recommend that student pet owners spend more time with their pets, especially during leisure or stressful times. They also suggest that future studies explore other ways pets contribute to student well-being, include a larger sample size, and consider more variables. Additionally, identifying other factors that trigger stress and happiness among college students would be beneficial.

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PSYCHOLOGY

Influence of Ocean Personality Traits and Emotional Dependency on Relationship Satisfaction of Married Individuals

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Abstract

This descriptive-correlational study investigates the relationships among OCEAN personality traits, emotional dependency, and relationship satisfaction in married individuals. Using questionnaires, data were collected from a sample of 135 married Filipino individuals aged 20 to 50. The quantitative data were analyzed using Jamovi (version 2.2) software for ANOVA, Pearson correlation, t-tests, and regression analysis. The findings revealed significant correlations between OCEAN personality traits and relationship satisfaction. Emotional dependency was found to negatively correlate with relationship satisfaction ($p= 0.007$). However, there were no significant differences in relationship satisfaction based on gender (Welch's t $p=0.080$, Mann-Whitney U $p=0.146$) or the number of years married ($p=0.565$). Regression analysis identified extraversion ($\beta=-0.282$) and emotional dependency ($\beta=0.340$) as significant predictors of relationship satisfaction, with emotional dependency explaining 5.28% ($r^2 = 0.0528$) and extraversion explaining 9.77% ($r^2 = 0.0977$) of the variance in relationship satisfaction. The study concludes that emotional dependency and extraversion are critical predictors of relationship satisfaction in married individuals. The implications and recommendations are further discussed.

Keywords: *personality traits, emotional dependency, relationship satisfaction*

Globally, dissatisfaction within marriages often leads to divorce or annulment, impacting individuals, their partners, families, and society by decreasing overall happiness and health. Understanding the factors influencing marital satisfaction is crucial to fostering peaceful and happy marriages and avoiding adverse outcomes. Research indicates that low marital satisfaction, characterized by negative evaluations and discontentment with the marriage, contributes to family instability and divorce (Mirfardi et al., 2010). Additionally, marital satisfaction significantly affects individuals' psychological well-being, influencing both their physical and mental health (Güven, 2005; Omage, 2013). Recent studies suggest that more than half of marriages may end in disappointment and separation (Mohammadimehr & Ayatollah, 2017).

Marital satisfaction has profound implications across various aspects of life, including mental health. For instance, women experiencing greater fluctuations in relationship satisfaction over time are more prone to depressive symptoms compared to those with stable satisfaction levels (Whitton & Whisman, 2010). The quality of a couple's relationship also plays a pivotal role in family stability (Petruccelli et al., 2014). Amidst these influences, factors such as emotional dependency and personality traits emerge as critical determinants of relationship satisfaction among married individuals.

Emotional dependency, where one relies on another for emotional needs fulfillment, has shown mixed effects on relationship satisfaction. While some studies report a positive correlation between emotional dependency and satisfaction (Rusbult et al., 1991), others suggest it can lead to discomfort and conflicts rooted in insecurity and low self-esteem (Petruccelli et al., 2014). Personality traits, another influential factor, predict behaviors across life situations, including marriage. Research indicates that higher relationship satisfaction is associated with lower neuroticism and higher conscientiousness levels in both partners (Sayehmiri, 2020). However, these findings predominantly stem from Western cultures, which may value and perceive relationship dynamics differently (Hassan et al., 2012).

Given the significant societal and personal implications of unsatisfied marriages (Lambert & Fincham, 2011), understanding the complex interplay of emotional dependency and personality traits in relationship satisfaction is essential. Unhappy marriages can detrimentally affect life satisfaction, happiness, self-confidence, and overall well-being (Mohammadimehr & Ayatollah, 2017; Laub et al., 1998). Identifying and comprehending these factors can empower married individuals to better understand their relationships and proactively address issues that may impact their satisfaction.

This study determines whether emotional dependency and OCEAN personality traits are significantly related to relationship satisfaction. Married Filipino individuals were the target sample. This study was conducted in the Second Semester of AY 2022-2023. Specifically, this study sought to answer the following research questions:

1. What are the dominant OCEAN personality traits of the respondents?
2. What is the level of emotional dependency among married individuals?
3. What is the level of relationship satisfaction among married individuals?
4. Are there significant relationships between

Emotional Dependency and relationship satisfaction

OCEAN Personality traits and relationship satisfaction?

5. Is there a significant difference in relationship satisfaction in terms of gender and the years of marriage?
6. Which of the following variables significantly influence relationship satisfaction?
   a. Emotional dependency
   b. OCEAN Personality traits
   c. Gender
   d. Years in marriage

Methodology

Research Design

This study employed a descriptive-correlational research design to explore the relationships between emotional dependency, OCEAN personality traits, and relationship satisfaction. The descriptive method explicitly delineates the characteristics of the variables, sub-variables, and models, providing both graphical and numerical representations. Additionally, it systematically associates these variables. The correlational research design specifically highlights the relationships between the variables, offering insights into their interconnections.

Population and Sampling Technique

This quantitative study utilized a purposive sampling technique to select respondents from a larger target population. The purposive aspect ensured a systematic selection process based on essential criteria, while the random aspect ensured optimal representation of the target population. The criteria for inclusion were: (1) legally married individuals (not live-in partners), (2) Filipino nationality, and (3) ages between 20 and 50. A total of 135 individuals met these criteria and participated in the study.

Instrumentation

Three adopted questionnaires were used to measure the variables in the study. The reliability of these instruments was ensured through a pilot study, after which items were adjusted to better suit the selected population.

Big Five Personality Test: This inventory assesses the five personality traits (Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism) using a 44-item questionnaire with a 5-point Likert scale. Known as the OCEAN traits, this test is highly reliable and suitable for professional contexts. It is also freely available (John and Srivastava, 1999).

Partners Emotional Dependency Scale (PEDS): This tool measures emotional dependency in romantic relationships through 22 items on a 5-point Likert scale. The PEDS is unidimensional with high convergent validity (correlation coefficient of .96) with the CDE (Emotional Dependency Questionnaire) and good internal consistency (Cronbach's alpha of .90) (Camarillo et al., 2020).

Relationship Assessment Scale (RAS): This brief, 7-item questionnaire evaluates overall satisfaction in romantic relationships. Respondents rate each item on a 5-point Likert scale. The RAS has good internal consistency, with a coefficient alpha value of .91 (Vaughn et al., 2016).

Data Gathering Procedure

The researchers conducted a pilot study to assess the feasibility of recruiting participants and to verify the reliability of the instruments for the selected population. The pilot involved 30 Filipino married individuals aged 20 to 50. Based on the responses, the researchers identified a need to adapt and modify some questions to better fit the target population. These modifications involved rephrasing items without altering their meaning to enhance clarity and relevance.

For the distribution of the revised questionnaires, the researchers employed multiple techniques to reach a diverse set of participants calls for participants were posted on Facebook and Instagram, targeting individuals who met the study's criteria; printed questionnaires were distributed door-to-door in various towns and provinces; Lastly, a Google Form link, accompanied by an invitation, was shared through email and messaging apps.

Ethical Considerations

To ensure adherence to ethical principles during data gathering, several measures were implemented. The researchers obtained permissions from local barangays and relevant institutions to conduct the survey. Participants were provided with informed consent forms detailing the study's purpose, procedures, and their rights. This included assurances of anonymity and confidentiality.

During the initial briefing, participants were informed about the voluntary nature of the study and their right to withdraw at any time without consequences. The questionnaire procedures were designed to ensure participants faced no risks, emphasizing a stress-free and secure environment. Finally, to safeguard privacy, all potentially identifying information, such as names and email addresses, was removed from the collected data before analysis. The data analysis results contain only anonymous and aggregate information, ensuring the participants' identities remain fully protected.

Data Analysis

The study aimed to examine the relationship between emotional dependency, OCEAN personality traits, gender, years in marriage, and relationship satisfaction. The respondents' profiles were measured using mean and standard deviation. Correlation analysis was conducted to determine the magnitude and direction of the relationship between these variables.

Next, regression analysis was used to identify the variable(s) that directly influence relationship satisfaction. This method allowed the researchers to determine cause and effect for making predictions. Moreover, ANOVA (Analysis of Variance) was used to investigate whether moderating variables have significant differences. Lastly, Jamovi (version 2.2) was the computer application used to analyze data efficiently and accurately.

Results and Discussions

Dominant OCEAN Personality Trait

Tables 1 – 4 present the level of personality traits. The tables are presented in the following order: Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism.

Table 1

Descriptive Statistics on the Level of Openness

Item	Mean	SD	Verbal Interpretation
I am creative and come up with new ideas.	3.75	.879	High Openness
I am curious about many different things.	3.7	.847	High Openness
I am intellectually curious	3.61	.811	High Openness
I could generate new concepts.	3.8	.721	High Openness
I enjoy challenges.	3.82	.897	High Openness
I like to reflect and understand ideas.	3.98	.796	High Openness
I enjoy learning and trying new things.	4.27	.696	Very High Openness
Total	3.85	.556	High Openness

Scoring System: 1.00 – 1.80 Very Low; 1.81 – 2.60 Low; 2.61 – 3.40 Average; 3.41 – 2.20 High; 4.21 – 5.00 Very High

The data analysis on Openness revealed that the respondents had high openness, as indicated by the mean M=3.85 (SD=0.556). It suggests that these individuals develop their imagination and intuition in different areas of interest. Further examination of the individual items on the scale showed that the highest mean M=4.27 SD=0.696 was given to item # 44, "I enjoy learning and trying new things." It implies that the respondents explore new things and are open to new experiences. Meanwhile, item #15, "I am intellectually curious," received the lowest mean M=3.61 SD=0.811, which is still high, indicating that the respondents are also likely to be driven by conceptual, abstract, and theoretical interest.

Studies done by Boyd (2020) state that individuals with high levels of openness are more receptive to new concepts and ideas, allowing them to be more flexible and adapt to unexpected situations. Additional literature affirms their broad-minded approach and curiosity when faced with novel situations. Moreover, they tend to seek out fresh opportunities and creative ventures (Angelini, 2023). Overall, the results suggest

that while the respondents are generally open to new experiences and willing to try new things, their motivation may not be solely based on intellectual curiosity. They may be talented at linking disparate concepts and ideas through their different thinking abilities.

Table 2

Descriptive Statistics on the Level of Conscientiousness

Item	Mean	SD	Verbal Interpretation
I do a good job.	4.18	.668	High Conscientiousness
I tend to be careless. *	3.29	.845	Average Conscientiousness
I am disorganized. *	3.66	.924	High Conscientiousness
I tend to be lazy. *	2.65	.957	Average Conscientiousness
I continue until the task is finished.	4.27	.706	Very High Conscientiousness
I am efficient.	4.04	.674	High Conscientiousness
I am easily distracted. *	3.36	.852	Average Conscientiousness
Total	3.64	.364	High Conscientiousness

**Negatively stated items.*

Scoring System: 1.00 – 1.80 Very Low; 1.81 – 2.60 Low; 2.61 – 3.40 Average; 3.41 – 4.20 High; 4.21 – 5.00 Very High

Table 3

Descriptive Statistics on the Level of Extraversion

Item	Mean	SD	Verbal Interpretation
I am a person who likes to talk.	3.63	1.05	High Extraversion
I am full of energy.	3.74	.772	High Extraversion
I am an enthusiastic person.	3.84	.745	High Extraversion
I am assertive and confident.	3.82	.827	High Extraversion
I am outgoing and sociable.	3.52	.953	High Extraversion
Grand Mean	3.71	0.608	High Extraversion

Scoring System: 1.00 – 1.80 Very Low; 1.81 – 2.60 Low; 2.61 – 3.40 Average; 3.41 – 4.20 High; 4.21 – 5.00 Very High

The data analysis on extraversion revealed that the mean score M=3.71; SD=.608 of the married individuals in the sample indicates that, on average, they exhibit high levels of extraversion. It means that they are sociable, assertive, and expressive. Item #16, "I am an enthusiastic person," has the highest mean score (M=3.84; SD=0.745), implying that the sample respondents are energetic and passionate about their pursuits. Meanwhile, Item #36, "I am outgoing and sociable," with the lowest mean score (M=3.52; SD=0.953), still falls within the high range, suggesting that the respondents also possess high levels of friendliness and outgoingness.

Other studies associate extraversion characteristics with various positive outcomes, including better social support (McCabe and Fleeson, 2012), greater well-being, and more successful romantic relationships (Shi et al., 2018). In addition, a study suggested that extraversion traits can serve as a protective barrier against adverse household mobility impacts (Oishi & Schimmack, 2010). Additional support for the concurrent and long-term relationship between extraversion and happiness in life was given in the study by Costa and McCrae (1980). Overall, the data suggest that most participants can express and communicate their emotions successfully, as well as the ability to interact amicably with others.

Table 4

Descriptive Statistics on the Level of Agreeableness

Item	Mean	SD	Verbal Interpretation
I tend to find errors with others. *	3.92	.931	High Agreeableness
I start arguments and fights with others. *	4.28	.869	Very High Agreeableness
I can be cold and distant.*	3.31	.805	Average Agreeableness
I am considerate and kind to everyone.	4.31	.674	Very High Agreeableness
I am rude to others. *	4.32	.760	Very High Agreeableness
Grand Mean	4.03	.493	High Agreeableness

**Negatively stated items.*

Scoring System: 1.00 – 1.80 Very Low; 1.81 – 2.60 Low; 2.61 – 3.40 Average; 3.41 – 4.20 High; 4.21 – 5.00 Very High

The data analysis on agreeableness revealed that the mean score M=4.03; SD=.493 indicates that the married individuals in the sample possess a high level of agreeableness. It means that they are trustworthy and empathic. The item with the highest mean score of 4.32 (SD=.760) is "I am kind to others," which suggests that married individuals in the sample exhibit high empathy and compassion towards others. On the other hand, the item with the lowest mean score (M=3.52; SD=.953), "I can be cold and distant," suggests that the respondents exhibit an average level of aloofness or detachment from others.

Several studies reveal that individuals with high levels of agreeableness reported more positive relationships with their coworkers and supervisors, leading to greater job satisfaction and lower levels of burnout (Ode & Robinson, 2007). Overall, the data indicate that most respondents exhibit cooperation and understanding characteristics, leading them to compromise their interests for the relationship's well-being, thus creating harmony.

Table 5

Descriptive Statistics on the Level of Neuroticism

Item	Mean	SD	Verbal Interpretation
I am depressed and unhappy.	1.96	.945	Low Neuroticism
I am relaxed and can handle stress well. *	2.34	.830	Low Neuroticism
I am tense and anxious.	2.39	.838	Low Neuroticism
I am emotionally stable, and I do not get upset easily. *	2.47	.945	Low Neuroticism
I tend to change my mood unpredictably.	2.79	.957	Average Neuroticism
I can remain calm in tense situations. *	2.26	.791	Low Neuroticism
I get nervous easily.	2.76	.924	Average Neuroticism
Grand Mean	2.42	.558	Low Neuroticism

**Negatively stated items.*

Scoring System: 1.00 – 1.80 Very Low; 1.81 – 2.60 Low; 2.61 – 3.40 Average; 3.41 – 4.20 High; 4.21 – 5.00 Very High

The data analysis on neuroticism revealed that the mean score M=2.42; SD=0.558 suggest that most individuals in the sample exhibit a low level of neuroticism. Conveying that most respondents are patient and less likely to show irritable behavior. Item #29, with the highest mean score (M=2.79; SD=0.957), which is still relatively low on the overall results, "I tend to change my mood unpredictably," suggests that the married individuals in the sample exhibit some degree of problems with emotional regulation. Conversely, item #4, with the lowest mean score (M=1.96; SD=0.945), "I am depressed and unhappy," suggests that the sample of individuals exhibit lower levels of depressive and anxiety symptoms, characteristic of low neuroticism. The standard deviations of the scores for all items indicate

some variability in the responses of the married individuals, suggesting that not all individuals possess the same level of neuroticism.

Recent findings indicate that people with low levels of neuroticism are generally have a self-regulated behavior and thought process leading less anxiety, worry, and other negative emotions (Widiger, 2017). In addition, people with lower neuroticism are typically reported to have more positive emotional states and more satisfying relationships (Noftle & Shaver, 2006). The data suggest that most respondents have an accurate view of reality, helping them develop better coping skills and resilience. Furthermore, they show traits such as emotional stability and positive affect.

As a conclusion on the descriptive results on OCEAN personality traits, the researchers found that the dominant trait of the married participants is agreeableness. It is important to note that openness, conscientiousness, and extraversion are also considered high, displaying results relevantly higher than the average population. On the other hand, the neuroticism trait is the least dominant trait among the respondents. With this, we can propose that most individuals who participated in this research exhibit healthy personality traits and behaviors that help them deal with challenges effectively.

Level of Emotional Dependency

Table 6 below present the results to answer the research question, "What is the level of emotional dependency among married individuals." The tables include each mean, standard deviation, and verbal interpretation.

Table 6

Descriptive Statistics on the Level of Emotional Dependency

Item	Mean	SD	Verbal Interpretation
I am satisfied with myself.*	1.80	0.871	Very Low Emotional Dependency
I think that my partner's well-being is more important than mine.	3.76	1.082	High Emotional Dependency
I cannot handle the thought of ending the relationship.	3.13	1.498	Average Emotional Dependency
I apologize to my partner, even though I know it's not my fault.	3.29	1.177	Average Emotional Dependency
I feel the need to be reassured about my partner's love and affection.	3.62	1.233	High Emotional Dependency
I normally do things or activities that I don't like to just please my partner.	2.50	1.036	Low Emotional Dependency
I justify my partner's fights, complaints, or cheating, because I think it is better than losing him/her.	1.98	1.136	Low Emotional Dependency
I feel guilty when I argue with my partner.	3.14	1.101	Average Emotional Dependency
I cannot leave my partner even though our relationship makes me suffer	2.51	1.501	Low Emotional Dependency
I have done things that I know are wrong to keep my partner from leaving me.	1.64	0.974	Very Low Emotional Dependency
I am worried that I am not good enough for my partner and that he/ she may leave me.	1.92	1.030	Low Emotional Dependency
I feel like I need to check my partner's devices, so I know where and who he/she is with.	1.80	1.028	Very Low Emotional Dependency
I think I haven't been true to myself because of this relationship.	1.72	1.104	Very Low Emotional Dependency

{table continues on the next page}

I plan things based on what my partner likes and wants.	3.12	1.008	Average Emotional Dependency
I feel extreme jealousy even on small things.	1.73	0.940	Very Low Emotional Dependency
I have neglected my duties and relationships since I am with my partner.	1.65	0.892	Very Low Emotional Dependency
I worry that my partner enjoyed his/her past relationships more than being with me.	1.51	0.827	Very Low Emotional Dependency
My partner has told me that he/she feels stressed out because I always want to be with him/her or know where he/she is.	1.55	0.944	Very Low Emotional Dependency
I feel helpless and lonely when I am not with my partner.	2.57	1.219	Low Emotional Dependency
I suspect that my partner wants to end our relationship.	1.28	0.719	Very Low Emotional Dependency
I feel the need to please my partner.	2.67	1.292	Average Emotional Dependency
I am willing to do anything to get my partner back if he/she left me.	2.71	1.591	Average Emotional Dependency
Grand Mean	2.35	0.552	Low Emotional Dependency

**Negatively stated items.*

Scoring System: 1.00 – 1.80 Very Low; 1.81 – 2.60 Low; 2.61 – 3.40 Average; 3.41 – 4.20 High; 4.21 – 5.00 Very High

The data analysis revealed that the mean score for emotional dependency (M=2.35; SD=0.552) indicates a low level of emotional dependency among married individuals. It means they do not rely on their spouses to feel complete or worthy. The highest mean (M=3.76; SD=1.082) is on item #2 of the Partner's Emotional Dependency Scale, which states, "I think that my partner's well-being is more important than mine." It indicates a strong level of emotional attachment to their partner and a desire to make their partner happy, but it could also lead to neglecting their own needs. Meanwhile, the lowest mean (M=1.28; SD=0.719) is on item #20, which states, "I suspect that my partner wants to end our relationship." It indicates that they have trust and assurance in their relationship as well as in the commitment of their partner.

Previous findings also imply that people free from emotional dependency recognize their emotional needs and work with their partners to address them (Raypole, 2020). More literature indicates that low levels of emotional dependency are self-sufficient, confident, and less reliant on others' opinions. On the other hand, emotionally dependent individuals encounter maladaptive behaviors due to their need for reassurance. (Barreira, & Jimenez, 2020). To summarize, the study suggests that married individuals in the sample tend to prefer being less emotionally reliant on their partners and prioritizing their and their partner's well-being equally. They find a balance to meet the needs of everyone in the marriage.

Level of Relationship Satisfaction

Table 7 presents the results to answer the research question, "What is the level of relationship satisfaction among married individuals." Mean, standard deviation, and verbal interpretation are presented.

Table 7

Married Individuals' Level of Relationship Satisfaction

Item	Mean	SD	Verbal Interpretation
My partner meets my needs well.	4.18	0.836	High
I am satisfied with my relationship.	4.42	0.796	Very High
My relationship is good compared to most.	4.21	0.933	Very High
I wish I had not gotten into this relationship. *	4.22	1.10	Very High

{table continues on the next page}

My relationship meets my original expectations.	3.84	0.929	High
I love my partner.	4.76	0.576	Very High
I have a lot of problems with my relationship.*	3.41	0.989	Average
Total	4.21	0.643	Very High

**Negatively stated items.*

Scoring System: 1.00 – 1.80 Very Low; 1.81 – 2.60 Low; 2.61 – 3.40 Average; 3.41 – 4.20 High; 4.21 – 5.00 Very High

The results suggest that the overall level of Relationship Satisfaction is Overall M= 4.21(SD= 0.643) very high. It means that generally, the participants have a positive evaluation of and attitude towards their marriage overall. The highest mean is on item #6 on the relationship satisfaction questionnaire, which states, 'I love my partner' (M=4.76; SD=.576), and the lowest mean is on item #7 of the relationship satisfaction questionnaire, which says, 'I have many problems in my relationship' (M=3.18; SD=.989). It implies that while the participants acknowledge that they must deal with difficult situations as married individuals, they are willing to work on it because they care about and prioritize their partners. Couples who experience relationship satisfaction usually have realistic expectations when entering the marriage, or they must work together towards healthy habits.

Recent studies agree with our findings, indicating that the rates of satisfied couples have increased due to the adaptability and flexibility of married individuals. (De Abreu-Afonso, J., 2021). Results from a quantitative study, with 43,517 females participating, show that mothers are happy in their relationship with their spouses throughout the different stages of life, experiencing stable and consistent commitment. (Kingsbury et al. 2022) Moreover, research suggests that the increase in satisfaction of those committing to marriage might be due to personal satisfaction, insinuating that healthy people form healthy marriages (Bühler, 2021). Findings also determine that if couples accept, trust, and respect each other, they can grow a pleasurable and satisfying relationship within their marriage (Miller, 2011). Whereas other studies confirm that working hard towards a goal (Li & Fung, 2011) and healthy communication (Haris, 2018) can facilitate the achievement of relationship satisfaction. In conclusion, one can say that most married individuals who participated in this study think of their marriage as close to the ideal. Furthermore, their primary needs and wants are well met by their partners.

Relationships Between Variables

Correlation Between Emotional Dependency and Relationship Satisfaction

Table 8 displays the correlation between Emotional Dependency and Relationship Satisfaction. According to the correlation matrix, a negative correlation exists between emotional dependency and relationship satisfaction, portrayed by Pearson's correlation coefficient (r) of -0.230. It indicates that relationship satisfaction increases as emotional dependency decreases and vice versa. The p-value of 0.007 suggests that this negative correlation is statistically significant. Thus, the formulated null hypothesis is rejected.

Table 8

Emotional Dependency and Relationship Satisfaction Correlation Matrix

		Relationship Satisfaction
Emotional Dependency	Pearson's r	-0.230***
	p-value	0.007

*Note. * p < .05, ** p < .01, *** p < .001*

The findings of this study contradict the results of a study conducted by Kemer (2017), which found that emotional dependency was a significant positive predictor of relationship satisfaction. They stated that experiencing a strong emotional connection allows the individual to express themselves freely. Thus, their

needs and the needs of their partners are met. However, the data from this study revealed that emotional dependency had a significant negative influence on relationship satisfaction, which implied as feelings of neediness and the lack of autonomy are negative contributors to relationship satisfaction.

In summary, the results suggest that there is indeed a relationship between emotional dependency and the relationship satisfaction of married individuals. Therefore, married individuals with lower levels of emotional dependency tend to have higher levels of relationship satisfaction. At the same time, the individual's excessive need for their partner's validation and the belief that their relationship is worth keeping even among intolerable circumstances can decrease relationship satisfaction.

Correlation Between OCEAN Personality Traits and Relationship Satisfaction

Table 9 displays the correlation between OCEAN Personality Traits and Relationship Satisfaction. The p-values for all these correlations are less than 0.001, implying they are statistically significant.

Table 9

OCEAN Personality Traits and Relationship Satisfaction Correlation Matrix

	Relationship Satisfaction	
Personality Traits	Pearson's r	p-value
Openness	0.296***	<.001
Conscientiousness	0.304***	<.001
Extraversion	0.313***	<.001
Agreeableness	0.308***	<.001
Neuroticism	-0.396***	<.001

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

The positive correlations between relationship satisfaction and the personality traits of openness (r = 0.296), conscientiousness (r = 0.304), extraversion (r = 0.313), and agreeableness (r = 0.308) indicate that an increase in these traits is associated with a rise in relationship satisfaction. Conversely, the negative correlation between relationship satisfaction and neuroticism (r = -0.396) suggests that an increase in neuroticism leads to a decrease in relationship satisfaction, thus rejecting the null hypothesis.

The findings of this study align with previous research by Sayehmiri (2020) and Amiri et al. (2011), which support the notion that neuroticism is negatively correlated with relationship satisfaction. Individuals with high levels of neuroticism often experience despair, anger, and dissatisfaction with themselves, reducing their overall happiness in life and marriage. Other studies, such as those by Donnellan et al. (2004) and Seidman (2013), explain that people with high neuroticism are prone to moodiness and irritability, and thus, do not typically experience higher levels of marital satisfaction. Additionally, Taraghijah et al. (2017) note that individuals high in neuroticism emphasize adverse life events over positive ones, leading to lower happiness.

Previous literature also finds a strong correlation between marital satisfaction and conscientiousness (Claxton et al., 2012). Conscientious people, being disciplined and effective in handling relationship conflicts, experience greater satisfaction within their marriages (Razeghi et al., 2011). Amiri et al. (2011) affirms that individuals with high levels of agreeableness tend to refrain from aggression or abusive behavior, increasing marital satisfaction. Furthermore, Boyce et al. (2016) notes that wives with high conscientiousness promote higher marital satisfaction. Given the dynamic and demanding nature of marriage, this implies that conscientiousness is a relevant personality attribute for the psychological well-being of married people (Story & Bradbury, 2004).

Comparison of Relationship Satisfaction in Terms of Gender and Years of Marriage

Table 10 illustrates the differences in the relationship satisfaction of married individuals when gender and the years of marriage are considered. The table presents the p values of gender in terms of the relationship satisfaction variable (Welch's t p=0.080 and Mann-Whitney U p=0.146), where both are greater than .05, meaning the difference is considered statistically insignificant.

Table 10

Comparison of Relationship Satisfaction in Terms of Gender and Years of Marriage

Variable	Gender	Statistic	df	p
Relationship Satisfaction	Welch's t	1.77	113	.080
	Mann-Whitney U	1735		.146
	Years of Marriage			
	F	df1	df2	p
Relationship Satisfaction	0.814	6	43.7	.565

*not sig. at p <.05 Male (N=46) Female (N=89) N=135

The results indicate that gender does not affect relationship satisfaction of the respondents. This implies that the likelihood of experiencing relationship satisfaction within a marriage is not influenced by whether the individuals are male or female. The relationship satisfaction of the participants in terms of years of marriage is also statistically insignificant (p = 0.565, greater than 0.05). This suggests that the number of years married does not affect the relationship satisfaction of the respondents.

Research by Yoo et al. (2013) indicates that the degree of relationship satisfaction for both men and women depends on the effectiveness of their communication style and their affinity towards their spouse. Furthermore, men typically report greater intimacy in their relationships during interviews; however, standardized tests and inventories often show lower scores in their relationship satisfaction (Ubando, 2016).

Conversely, previous studies have shown that relationship satisfaction is correlated with the amount of time partners have spent together. These studies suggest that the marital quality of both husbands and wives fluctuates over the years, eventually becoming stable (Kurdek, 1999; Lavner & Bradbury, 2010).

Predictors of Relationship Satisfaction

The table below presents the results to answer the research question, "Which of the following variables significantly influence relationship satisfaction: emotional dependency, OCEAN personality traits, gender, and years in marriage." A regression analysis was used to predict relationship satisfaction from the independent variables named OCEAN personality traits and emotional dependency, and moderator variables named gender and years in marriage. The data analysis is presented using a tabular format.

Table 11

Regression Coefficient with dependent variable Relationship Satisfaction

Predictor	Estimate	SE	t	p	r	r^2
Emotional Dependency	-0.282	0.093	-3.02	0.003	0.230	0.0528
Extraversion	0.340	0.0846	4.02	<.001	0.313	0.0977

R-Squared= 0.156, p < .001

The statistical results of the regression analysis, which included all the independent variables of this study, found that extraversion (β = -0.282) and emotional dependency (β = 0.340) are the two significant predictors of relationship satisfaction. Emotional dependency explains 5.28% (r^2 = 0.0528) of the variance in relationship satisfaction, while extraversion explains 9.77% (r^2 = 0.0977). The remaining independent

variables were removed due to their insignificant influence on relationship satisfaction. The p-values for both predictors are below the 0.05 significance level, making the results statistically significant. Therefore, the null hypothesis is rejected.

Previous systematic review research conducted by Kamal (2018) supports these findings. Kamal's review examined the influence of OCEAN personality traits on marital satisfaction, analyzing 30 studies with a sample size of 16,052 married individuals. The review concluded that extraversion is positively associated with marital satisfaction and can predict it. Solomon and Jackson (2014) also state that extraversion is a general predictor of higher relationship satisfaction. However, Malouff et al. (2010) hypothesized that extraversion may have a cultural influence on relationship satisfaction.

The results imply that the significant predictors of relationship satisfaction are emotional dependency and extraversion, with extraversion having a more substantial effect. If individuals have high emotional dependency, their relationship satisfaction will be low. Conversely, individuals with extroverted personalities tend to be more satisfied in their relationships.

Conclusions and Recommendations

The study concludes that married individuals tend to experience low levels of emotional dependency and neuroticism, highlighting their autonomy and self-consciousness. They exhibit high levels of relationship satisfaction, agreeableness, openness, conscientiousness, and extraversion, which help them handle difficult situations due to their adaptability, gregariousness, compassion, and responsibility. Gender and years of marriage do not significantly impact relationship satisfaction, although longer-term marriages are consistently associated with higher satisfaction levels. Emotional dependency and extraversion are identified as key predictors of relationship satisfaction, with emotional dependency negatively affecting satisfaction and extraversion having a positive influence. All OCEAN personality traits are significantly correlated with relationship satisfaction, with extraversion being a predictor and neuroticism indicating a negative correlation. The study also notes that cultural factors influence how emotional dependency is perceived, particularly in the Philippines, where a collective community might view dependency differently than in Western cultures. Attachment theory suggests that emotional dependency, rooted in anxious attachment styles from childhood, negatively affects relationships, while choice theory emphasizes that lack of autonomy and accountability can harm relationships.

Based on these findings, the study recommends that individuals become aware of their own OCEAN personality traits to identify areas for improvement. Those struggling with emotional dependency or unsatisfactory relationships should seek professional help from therapists or counselors. It is advised that people learn to be independent and self-sufficient while cultivating positive characteristics such as compassion, empathy, resilience, flexibility, creativity, kindness, friendliness, discipline, and self-control. Future researchers are encouraged to conduct studies with larger samples and bilingual questionnaires to enhance representativeness, explore different cultural contexts and age ranges, and address selection bias in sampling by using creative strategies like offering incentives or assessing non-response bias. Introverts and reserved individuals should learn to convey their thoughts, feelings, needs, and worries to their partners, as open communication is crucial for relationship growth and satisfaction.

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HUMANITIES

The Theory of Planned Behavior and Influences on Willingness-to-Pay for Green Air Travel: A Values Orientation Perspective

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Abstract

Civil aviation's contribution to the increase in GHG emissions is well established. Similarly, tourism or leisure travel is known as the major sector that drives commercial air travel. Mitigation efforts such as carbon offsetting to reduce the sector's impact are available. However, availing of such efforts has cost implications to the traveler. This research combined the theory of planned behavior (TPB) and the value-belief-norm (VBN) theory to determine the influences on air travelers' willingness-to-pay (WTP) for green air travel. A total of 305 respondents were surveyed for this paper. The findings were generally consistent with literature on the applicability of TPB and VBN as influences on pro-environmental behavior. Results showed that attitudes and subjective norms significantly influence WTP. The results also established that attitudes, subjective norms, and perceived behavioral control significantly mediated the effects of egoistic, altruistic, and biospheric values on air travelers' WTP for green air travel. The findings could be considered by businesses in designing green products, crafting messaging calling for increased pro-environmental behavior, and evaluating the premium that customers are willing to pay to patronize green products or to behave pro-environmentally.

Keywords: *pro-environmental behavior, value-belief-norm theory, carbon offsets, greenhouse gas emissions, civil aviation*

The accumulation of GHG emissions in the atmosphere from anthropogenic activities, or activities from human actions, is causing warming of the planet (IPCC, 2021). These emissions come from five main sectors, namely energy systems, industry, agriculture, forestry and other land uses (AFOLU), transport, and operation of buildings. In 2018, the share of emissions from these five sectors were 34% for energy systems, 24% for industry, 21% for AFOLU, 14% for transport, and 6% for operation of buildings (Lamb et al., 2021).

For the transport sector, overall emissions are projected to double by 2050, with high growth in air travel demand being a major contributor (Higham et al., 2019). Of total transport-related emissions, 50% is attributed to aviation (World Tourism Organization, 2019). The demand for civil aviation is mostly driven by global tourism (Becken & Shuker, 2019).

Due to the significant contribution of tourism in aviation emissions, it is therefore important to understand one relevant and important consumer segment which is the tourists, specifically those who travel by air. In particular, the type of values exhibited by tourists is an important area of study as literature has established that values play a significant role in influencing pro-environmental behavior (PEB) (Zhang et al., 2020).

Sustainable tourists that exhibit higher PEB are those more likely to be interested in such green products (Trivedi et al., 2015). A sustainable tourist is one who is highly committed to practicing or adopting sustainability principles when on holiday (Passafaro et al., 2015). However, typically, environmentally friendly products tend to come at a higher cost.

Carbon offsetting is practice that addresses the environmental cost of flying. Carbon offsets "are certified emissions reductions or sequestration that can be purchased by an individual, business or government to offset the emissions resulting from their activities" (Brouwer et al., 2008). Carbon offsetting allows air travel passengers to help manage the impacts to the environment of flying through monetary consideration (Eslaminassab & Ehmer, 2021; Zhang et al., 2019).

Willingness-to-pay (WTP) for carbon offsets is the PEB that is the focus of this study. This research is to determine what influences the WTP for green air travel, which will help reduce aviation's impact on global GHG emissions. This is important to aid in the education of travelers on the environmental impact of air travel. Equally important is that air travelers are given the opportunity to address their concern for the environment through carbon offsetting, an economic sacrifice that allows them to act on their intention to protect the environment.

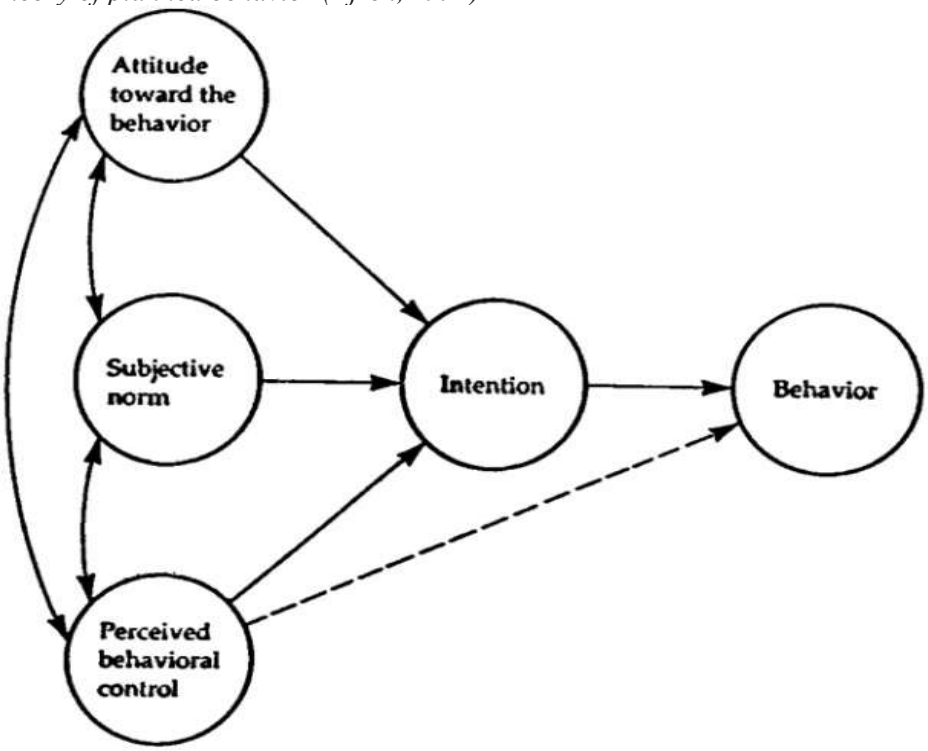
The value-belief-norm (VBN) theory offers a way to predict the best account for explaining PEB (Stern, 1999) and has been found to predict specific sustainable behaviors (Steg & Vlek, 2009). According to the VBN theory, concern for the environment is related to three types of value orientation - egoistic, social-altruistic (or altruistic), and biospheric values. People who predominantly exhibit egoistic values tend to support aspects of environmental protection that affect them personally, and have the tendency to oppose such protection if the costs to them personally are perceived as high. Social-altruistic values are evident in people who act on the account of costs or benefits for a community of people. Biospheric values emerge in people who act based on costs or benefits to ecosystems or the biosphere (Stern & Dietz, 1994).

The theory of planned behavior (TPB) helps identify factors that influence PEB (Yuriev et al., 2020). The theory posits that attitudes toward a behavior, subjective norms, and perceived behavioral control (PCB) predict intentions to perform a behavior. These intentions, along with PCB explain significantly the variance in the behavior (Ajzen, 1991).

Figure 1 Illustrates the theory of planned behavior.

Figure 1

Theory of planned behavior (Ajzen, 1991)



Theoretical Framework: Merging the VBN and the TPB

Explaining WTP was also pursued through the lens of the TPB and the VBN theory in an earlier study on park conservation (López-Mosquera & Sánchez, 2012). A unified model of the TPB and the VBN theory demonstrated superior ability to predict intention towards PEB in the study of green lodging (Han, 2015) and in the context of personal practices, such as energy conservation and sustainable consumption (Gkargkavouzi et al., 2019). Particularly, a conceptual model that merged constructs of the VBN theory and TPB was used in a study to explain the WTP for noise pollution reduction (Sánchez et al., 2018). A later study to explain the determinants of science educators' PEB also merged the VBN and TPB (Ateş, 2020).

Statement of the Problem

Given what literature has established as influences on purchase of green products, particularly those that are related to aviation, this study will focus on determining if value orientation and the constructs of the theory of planned behavior influence the WTP for green air travel. Hence, this study proposes the following research questions and hypotheses.

1. Do attitudes, subjective norms, perceived behavioral control, and value orientations directly influence WTP for green air travel (López-Mosquera & Sánchez, 2012; Han, 2015; Sánchez et al., 2018; Wang et al., 2018; Ateş, 2020)?
   H_1: Attitudes positively influence WTP.
   H_2: Subjective norms positively influence WTP.
   H_3: Perceived behavioral control positively influences WTP.
   H_4 : Egoistic values positively influence WTP.
   H_5: Altruistic values positively influence WTP.
   H_6: Biospheric values positively influence WTP.

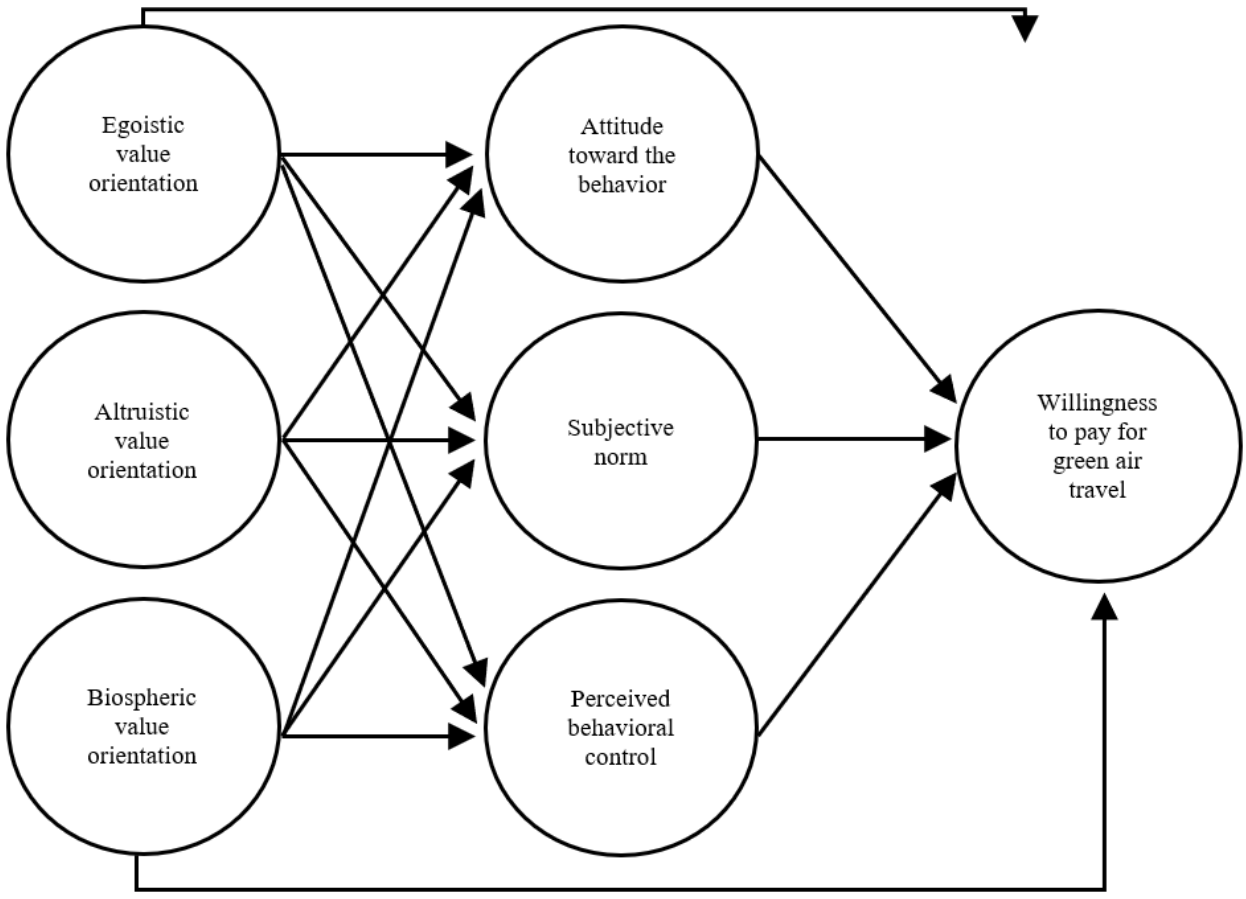
2. Do attitudes, subjective norms, and perceived behavioral control mediate the relationship between egoistic value orientation and WTP for green air travel (Sánchez et al., 2018)?
   H_7: The influence of egoistic values on WTP is mediated by attitudes.
   H_8: The influence of egoistic values on WTP is mediated by subjective norms.
   H_9: The influence of egoistic values on WTP is mediated by perceived behavioral control.

3. Do attitudes, subjective norms, and perceived behavioral control mediate the relationship between altruistic value orientation and WTP for green air travel (Sánchez et al., 2018)?
   H_{10}: The influence of altruistic values on WTP is mediated by attitudes.
   H_{11}: The influence of altruistic values on WTP is mediated by subjective norms.
   H_{12}: The influence of altruistic values on WTP is mediated by perceived behavioral control.

4. Do attitudes, subjective norms, and perceived behavioral control mediate the relationship between biospheric value orientation and WTP for green air travel (Sánchez et al., 2018)?
   H_{13}: The influence of biospheric values on WTP is mediated by attitudes.
   H_{14}: The influence of biospheric values on WTP is mediated by subjective norms.
   H_{15}: The influence of biospheric values on WTP is mediated by perceived behavioral control.

These proposed relationships of value orientations, the constructs of the TPB, and WTP for green air travel are illustrated in the conceptual framework in Figure 2.

Figure 2
Conceptual framework



Significance of the Study

The aim of this study is to establish how value orientation of tourist travelers and the constructs of the TPB influence WTP for green air travel. Additionally, this study also aims to establish the mediating effect of attitudes, subjective norms, and perceived behavioral control between values orientation of tourist travelers and their WTP for green air travel. By determining influences on the WTP for carbon offsets, local airlines could benefit from the results of this research as they consider implementing such a program. Finally, results of this research could also be useful in understanding WTP for other green products that target other segments of the tourist market, and which can be important contributors towards mitigation of the impacts of tourism-related emissions to overall emissions.

Methodology

Research Design

To investigate the influence of value orientations, attitudes, subjective norms, and perceived behavioral control on WTP for green air travel, quantitative research approach using a correlational research design was employed.

Population and Sampling Technique

Participants included contacts from the personal and professional network of the author from social media platforms Facebook and Linkedin, in which the author had 1,399 contacts and 1,151 contacts, respectively. Participants spent between five to 10 minutes to complete the survey over a single session. The actual online survey was initiated in January 2023 and data were collected through the early part of February 2023 through the Google Forms platform. No monetary consideration or other compensation was provided for participating in the survey. A total of 344 survey responses were gathered from the participants. 305 participants returned complete and usable responses. Age range was between 21 and 71 years old, with an average age of 37 years. 93% of the respondents were working. Based on monthly income, 5% were classified poor, 12% were low income, 46% were middle class, 19% had upper middle income, 10% had high income, and 8% were classified rich. As far as average frequency of air travel for vacation was concerned, 16% of the respondents did not travel, 33% travelled once a year, 30% travelled two times a year, and 21% travelled three or more times a year. 305 participants were sufficient for conducting the data analyses required for this study (Wilson Vanvoorhis & Morgan, 2007; Bin Ahmad & Binti Halim, 2017).

Instrumentation

This research study used two scales, a shortened version of Schwartz's value scale for measuring value orientation (de Groot & Steg, 2008; Sánchez et al., 2018), and the TPB scales used by Sánchez et al. (2018) and by López-Mosquera et al. (2014). The value scale, which formed part one of the questionnaire, measured egoistic, altruistic, and biospheric value orientations. It included 13 values identified from the Schwartz Value Survey (Schwartz, 1992) as most relevant to understanding PEB. Each value was rated by the participants on a nine-point Likert scale ranging from -1 (opposed to my values) to 7 (of supreme importance). Part two of the questionnaire contained attitudinal related questions to measure attitudinal profile of the survey participants regarding their intention to pay for carbon offsets. Participants rated each question on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Data Analysis

The software platforms IBM SPSS Statistics Version 29 and Jamovi were used to conduct the relevant statistical analysis. Cronbach's alpha was calculated to establish each construct's internal consistency and reliability, which must exceed the cutoff point of 0.70 to meet the acceptable validity threshold (Nunnally, 1978). Exploratory factor analysis was undertaken to determine the factor structure of the instrument and evaluate its internal reliability. Regression analysis was conducted to study the relationship between value orientation, attitudes, subjective norms, and perceived behavioral control on the one hand, and WTP for

green air travel on the other hand. Finally, mediation analysis was done to determine the strength of the proposed mediators.

Ethical Considerations

Clearance from the University Research Ethics Office (UREO) of the Ateneo de Manila University was obtained prior to data collection. Consent and ethical treatment of survey respondents was ensured through Informed Consent Information at the beginning of the survey questionnaire. Voluntary participation, anonymity, and confidentiality were likewise strictly observed through the same.

Results and Discussion

Both the value scale and the TPB scale were subjected to internal consistency and validity analyses using Cronbach's alpha and exploratory factor analysis. Both scales satisfied internal consistency using Cronbach's alpha coefficient, composite reliability test, and the average variance extracted values. Overall, both scales exhibited high reliability. Each of the scale items has a Cronbach's alpha coefficient higher than 0.7, composite reliability test higher than 0.7, and average variance extracted values of close to or above 0.5.

Correlation matrix was found not to be random based on results of Bartlett's test of sphericity ($\chi 2$ = 2,756, $p < 0.000$), which meant that there was significant relationship among the variables (Bartlett, 1954). The KMO statistic was 0.845, which signified that data were good and indicated that correlation matrix was appropriate to proceed with conducting factor analysis (Kaiser, 1974).

Based on Eigevalues, components one and two explained 92% of the variability. This was supported in the Scree Plot, with the elbow point also noted at component two. Under component one, attitudes, subjective norms, perceived behavioral control, and intention had high correlations (0.972, 0.962, 0.955, and 0.939, respectively). Biospheric values, egoistic values, and altruistic values had high correlations as well under component two (0.955, 0.972, and 0.957, respectively). Lastly, under the Component Correlation Matrix, components one and two were found to be statistically correlated. These results indicated that the data and groupings were valid.

The overall regression model showed a good fit with the data, $F(6, 298) = 210.736$, $p < .005$. The six independent variables explained a significant 80.9% of variance for intention. The regression coefficients are summarized in Table 1.

Table 1

Regression coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	p-value
		B	Std. Error	Beta		
1	(Constant)	0.966	0.338		2.854	0.005
	Biospheric Values	0.029	0.021	0.082	1.381	0.168
	Egoistic Values	-0.012	0.032	-0.028	-0.378	0.705
	Altruistic Values	-0.002	0.026	-0.004	-0.071	0.944
	Attitudes	0.419	0.043	0.675	9.851	0.000
	Subjective Norms	0.201	0.069	0.201	2.893	0.004
	Perceived Behavioral Control	0.028	0.072	0.026	0.390	0.696

a. Dependent Variable: Intention (Willingness-to-pay for green air travel)

TPB constructs and value orientations as influences on WTP for green air travel

Attitudes and subjective norms were shown to positively influence WTP with p-values of 0.000 and 0.004, respectively, which are both less than 0.05. Attitudes had the strongest significant direct influence on WTP (β=0.419, t=9.851, p<.001). Subjective norms likewise had a highly significant direct influence on WTP (β=0.201, t=2.893, p<.05). These results indicate that H1 and H2 were supported. H3, H4, H5, and H6 were rejected because the p-values for perceived behavioral control (β=0.028, t=0.390, p-value = 0.696), egoistic values (β=-0.012, t=-0.378, p-value = 0.705), altruistic values (β=-0.002, t=-0.071, p-value = 0.944), and biospheric values (β=0.029, t=1.381, p-value = 0.168) were all greater than 0.05, and therefore have no significant influence on WTP.

TPB Constructs as Mediating the Relationship between Value Orientations and WTP for Green Air Travel

The results of the mediation analysis are summarized in Table 2.

Table 2

Mediation analysis

Independent Variables	Mediator	Dependent Variable	a		b		Sobel test	p-value	indirect effect
			B	Std. Error	B	Std. Error			
Egoistic Value	Attitude	Intention	0.197	0.030	0.906	0.029	6.426	0.000	0.178
Egoistic Value	Subjective Norms	Intention	0.199	0.031	0.824	0.032	6.229	0.000	0.164
Egoistic Value	Perceived Behavioral Control	Intention	0.198	0.029	0.861	0.036	6.565	0.000	0.170
Altruistic Value	Attitude	Intention	0.154	0.031	0.911	0.028	4.911	0.000	0.140
Altruistic Value	Subjective Norms	Intention	0.161	0.032	0.834	0.031	4.946	0.000	0.134
Altruistic Value	Perceived Behavioral Control	Intention	0.151	0.030	0.867	0.035	4.933	0.000	0.131
Biospheric Value	Attitude	Intention	0.156	0.031	0.906	0.028	4.972	0.000	0.141
Biospheric Value	Subjective Norms	Intention	0.169	0.032	0.831	0.031	5.182	0.000	0.140
Biospheric Value	Perceived Behavioral Control	Intention	0.175	0.030	0.870	0.036	5.670	0.000	0.152

Results showed that the total influence of egoistic values on WTP was mediated by attitudes (β=0.178, Sobel's=6.426, p<0.05), by subjective norms (β=0.164, Sobel's=6.229, p<0.05), and by perceived behavioral control (β=0.170, Sobel's=6.565, p<0.05). This indicated support for H7, H8, and H9. Likewise, results showed that the influence of altruistic values on WTP was mediated by attitudes, subjective norms, and perceived behavioral control. The total influence of altruistic values on WTP was mediated by attitudes (β=0.140, Sobel's=4.911, p<0.05), by subjective norms (β=0.134, Sobel's=4.946, p<0.05), and by perceived behavioral control (β=0.131, Sobel's=4.933, p<0.05). This would then indicate support for H10, H11, and H12. Finally, H13, H14, and H15 were also supported, i.e., the influence of biospheric values on WTP was mediated by attitudes, subjective norms, and perceived behavioral control. The total influence of biospheric values on WTP was mediated by attitudes (β=0.141, Sobel's=4.972, p<0.05), by subjective norms (β=0.140, Sobel's=5.182, p<0.05), and by perceived behavioral control (β=0.152, Sobel's=5.670, p<0.05).

Effects of Value Orientation, Attitudes, Subjective Norms, and Perceived Behavioral Control on WTP for Green Air Travel are Summarized in Table 3.

Table 3
Summary of direct and indirect effects

Hypothesis	β	
Direct Effect		
H1: Attitudes positively influence WTP.	0.419	With Direct Effect
H2: Subjective norms positively influence WTP.	0.201	With Direct Effect
H3: Perceived behavioral control positively influences WTP.	0.028	No Direct Effect
H4 : Egoistic values positively influence WTP.	-0.012	No Direct Effect
H5: Altruistic values positively influence WTP.	-0.002	No Direct Effect
H6: Biospheric values positively influence WTP.	0.029	No Direct Effect
Indirect Effect		
H7: The influence of egoistic values on WTP is mediated by attitudes.	0.178	With Indirect Effect
H8: The influence of egoistic values on WTP is mediated by subjective norms.	0.164	With Indirect Effect
H9: The influence of egoistic values on WTP is mediated by perceived behavioral control.	0.170	With Indirect Effect
H10: The influence of altruistic values on WTP is mediated by attitudes.	0.140	With Indirect Effect
H11: The influence of altruistic values on WTP is mediated by subjective norms.	0.134	With Indirect Effect
H12: The influence of altruistic values on WTP is mediated by perceived behavioral control.	0.131	With Indirect Effect
H13: The influence of biospheric values on WTP is mediated by attitudes.	0.141	With Indirect Effect
H14: The influence of biospheric values on WTP is mediated by subjective norms.	0.140	With Indirect Effect
H15; The influence of biospheric values on WTP is mediated by perceived behavioral control.	0.152	With Indirect Effect

The results of this study confirm that merging constructs of the VBN and of the TPB into a combined conceptual framework is helpful in describing tourists' intention to pay a premium to allow for carbon offsetting (Oreg & Katz-Gerro, 2006; Han, 2015; Gkargkavouzi et al., 2019). Taken together, value orientations, attitudes, subjective norms, and perceived behavioral control influenced their WTP for green air travel (i.e. carbon offsetting) and combined, explained 80.9% of the variance for WTP. Furthermore, the conceptual framework in this study offers a useful, relevant, and effective model to evaluate what influences WTP.

Results for each of the six constructs' influence on WTP portrayed differential outcomes. Individually, attitudes and subjective norms were shown to influence WTP, which is consistent with other studies on the TPB and its influence on PEB (López-Mosquera & Sánchez, 2012; López-Mosquera et al., 2014; Wang et al., 2018). Tourists who have favorable attitudes towards the environment are more inclined to pay for carbon offsetting as a pro-environmental behavior, relevant with research that concludes that VCO contributes to flighting climate change (Eslaminassab & Ehmer, 2021). Similarly, social norms also play a crucial role in positively influencing WTP for carbon offsetting. That means that tourists take into account

and are influenced by what other people think or do in the intention to perform PEB. This is consistent with literature establishing subjective norms as a strong predictor of behavioral intention for PEB (Han, 2015; Wang et al., 2018).

On the other hand, perceived behavioral control had no significant effect on WTP for green travel. Notably, as PBC takes into account previous experience (Ajzen, 1991) and perhaps because of the fact that no such program is currently being offered by any domestic airline in the Philippines, it can be surmised that the participants' lack of knowledge and experience with such behavior influenced their PBC. This is supported by the lower mean (on a 5-point scale) of 3.23 and 3.13 for the measures "It would be easy for me to pay to offset carbon emissions from air travel for my next vacation" and "I have the resources, time, and opportunities to pay to offset carbon emissions from air travel", respectively, denoting lower perception on the ease to perform the behavior. Other studies on PEB also arrived at the same inference, that perceived behavioral control had no significant influence on WTP (Fielding et al., 2008; Hinds & Sparks, 2008; López-Mosquera et al., 2014). This is aligned with the research that identified availability, along with products price, performance, and quality, as having the most significant impacts on intention to pay a premium for green products (Biswas, 2016).

As far as the value orientation constructs of the VBN are concerned, they did not have any significant influence on WTP for green air travel from the perspective of tourists. This indicates that the respondents' values do not come into play when it comes to willingness to pay for green travel, similar to findings that values, as well as moral norms, may not be the better predictors of WTP compared to the constructs of the TPB (López-Mosquera & Sánchez, 2012; Sánchez et al., 2018). These findings may relate to the observation above on PCB, that WTP for green air travel is such a novel concept among Filipino air travelers and tourists. It may seem that WTP to pay for green travel is currently seen as transactional in nature and is not yet viewed as value oriented behavior that can help the environment, unlike with such popular behaviors like recycling and purchase of organic of "environment friendly" products.

However, the results show that egoistic values, altruistic values, and biospheric values significantly influence tourists' WTP for green air travel when mediated by attitudes, subjective norms and perceived behavioral control, signifying full mediating effect (Wang et al., 2016), for attitudes and subjective norms, in the case of this research. This outcome is supported by similar results in other research that found value orientations indeed have indirect influence on WTP to reduce noise pollution in road transportation through attitudes and perceived behavioral control (Sánchez et al., 2018; Han, 2015).

This latter finding from the study can be viewed with a pragmatic perspective. Given the participants' apparent lack of any experience with carbon offsetting as explained above, their attitudes, subjective norms, and PCB will play a crucial role for the intention to manifest, even if, for example, they exhibit strong biospheric or altruistic values. In other words, people that strongly manifest biospheric or altruistic value orientation, which were found to be related to the practice of sustainable behavior (Hiratsuka et al., 2018; Passafaro et al., 2015), will likely exhibit intention to do carbon offsetting only if they view it favorably (attitudes), feel social pressure from their network (subjective norms), or feel that they can easily engage in it (perceived behavioral control). The results show that any of these three circumstances need to be in place for the various value orientations to have an influence on the intention to participate in any carbon offsetting program.

This study adds to the growing literature on the combined influence of the constructs of the TPB and the VBN on predicting pro-environmental behavior (Oreg & Katz-Gerro, 2006; López-Mosquera & Sánchez, 2012; Han, 2015; Wang et al., 2016; Sánchez et al., 2018; Gkargkavouzi et al., 2019; Ateş, 2020; Zhang et al., 2020).

The results of this present study likewise offer practical implications for businesses who offer green products for tourists and air travelers. First, in designing a green air travel product, the purchase of the product or service offering must be positioned and communicated as a climate change mitigation behavior. By doing so, it will optimize the mediating effects of the TPB constructs between value orientation and WTP, which is along the lines of Zhang et al.'s (2020) findings that the VBN theory is better able to predict mitigation behavior.

Second, promotion and marketing of green air travel should appeal primarily to consumers' attitudes and subjective norms, and secondarily, to their value orientations (Oreg & Katz-Gerro, 2006). Carbon offsetting programs should be presented as an explicit translation into action of one's pro-environmental values. Broadly, advertising products and service for green air travel should focus on their benefits to the individual to appeal to egoistic values, to society to stir altruistic values, and to the environment to draw out biospheric values. To further influence WTP for green air travel, attention should be given on increasing the mediated impact of the various value orientations of the target audience. For example, craft advertising messaging for green air travel to focus on its contributing to healthier air to breathe (benefit to self), longer lifespan (benefit to others), or more livable planet (benefit to the environment), as opposed to highlighting the adverse impacts of the cost of inaction. Combined, these marketing strategies will take advantage of the key findings of this study that value orientations, attitudes, subjective norms, and perceived behavioral control explain as much as 81% one's pro-environmental behavior (i.e. WTP for green air travel through carbon offsetting).

Finally, marketers should utilize the effectiveness of social media in reaching and communicating with target audience, knowing fully well how significant the impact of social media is nowadays. As perceived social pressure is found to have significant influence on WTP, tapping social media influencers and celebrity endorsers, who have developed environmental credentials and are active in environmental advocacies, would be a strong pool of "brand ambassadors" in this area. With the prodding of these personalities, whose endorsements are deemed important by their followers, the influence of subjective norms to WTP could be further enhanced. This should specifically appeal to air travelers that identify themselves as sustainable tourists.

It is critical to highlight several limitations of this study. First, the sampling method employed was non-probability sampling, particularly convenience sampling, due to the non-random criteria used to select respondents (i.e. various contacts and networks of the researcher). Therefore, non-generalizability of this study is presumed. Future related research could be pursued to establish statistical generalizability. Sampling should be expanded, both in size and scale, to generate representative responses for the entire population of air travel tourists in the Philippines.

Second, this research did not measure actual behavior (i.e. purchase of carbon offset). Future research could focus on determination of how much air travel passengers would actually be willing to pay for green air travel, possibly via the contingent valuation method (CVM) (López-Mosquera & Sánchez, 2012; López-Mosquera et al., 2014). Through the CVM, estimates of economic values, in this case, the amount that air travel passengers would be willing to pay to offset associated carbon emission generated from their flight, would be directly asked through a survey, similar to studies conducted by Choi & Ritchie (2014), Seetaram et al. (2018), Rotaris et al. (2020), and Tao et al. (2021). Determination of actual amounts that passengers are willing to pay would be a better approximation of actual behavior. Income maybe a critical element here. In this regard, another future area of study could be the moderating effect of income on WTP. Third, tourists across cultures and nationalities may have varying perspectives about WTP for green air travel (Oreg & Katz-Gerro, 2006). Therefore, along the lines of Han's (2015) recommendation, further research that takes into account national culture should be considered. Moreover, a bigger sampling size should be considered to make the research participants completely representative of the entire population being studied (i.e. Filipino tourists who travel by air).

The conceptual framework presented in this study which merges value orientations and attitudes, subjective norms, and perceived behavioral control to predict or influence intention towards PEB, contributes to the growing body of literature that focuses on understanding the influences on willingness to pay a premium for green products. It also provides a better appreciation of the economic sacrifice people are willing to undergo to enable them to act on their intention to help the environment. The findings could be considered by businesses in designing green products, crafting messaging calling for increased pro-environmental behavior, and evaluating the premium customers are willing to pay to patronize green products or to behave pro-environmentally.

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HUMANITIES

Investment Behaviors and Preferences of School Teachers in Lucena City

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Abstract

The study aimed to comprehend the investment behavior and preferences of school teachers in Lucena City, employing a descriptive design with a quantitative approach. Utilizing Chi-square and Analysis of Variance (ANOVA) tests, the research examined differences in respondent behavior and preferences regarding investment. A total of 351 teachers from both private and public schools in Lucena City participated in the survey, selected through random sampling.The majority of respondents were female, aged 28–34, single, with monthly incomes ranging from PHP 25,000 to PHP 35,000, employed in private schools, and without any current investments. The study identified factors influencing investment decisions, including Life Stage, Personality, and Source of Wealth. It discovered that teachers were primarily driven by the desire to accumulate wealth and secure future financial needs such as children's education, retirement, and other obligations. Moreover, the research unveiled that teachers' investment decisions were influenced not only by rational considerations but also by emotions. Bias and discrimination were evident in teachers' investment behavior, indicating that decisions were shaped by a combination of rational and emotional factors. Additionally, the study identified savings accounts, insurance, and stocks as the top three investment priorities among teachers, suggesting a lack of awareness about alternative investment options. To empower teachers in making informed decisions, the study recommends the organization of financial literacy training and capacity-building programs. These initiatives can equip teachers with the knowledge and skills necessary to navigate various investment opportunities effectively.

Keywords: *investment, investment behavior, investment preference*

Every individual wants to invest money to get a return for the productive use of the money. For businessmen, it is easier for them to invest in various types of investment assets such as fixed deposits, equity shares, bonds, real assets and saving certificates and others due to several sources and earnings from their business. As far as salaried individuals are concerned, their investment choices are restricted due to fixed salary packages. Salaried employees seek a return, safety, liquidity, convenience and affordability and tax benefits (Parihar et al.., 2012).

Traditional investment theory suggests that individuals invest rationally with the intention of maximizing their utility for a given risk. If this were to hold true, all investment decisions would be taken rationally. In practice, this may not be adhered to due to many other factors influencing individual investment decisions. By 2030 more than two-thirds of all global investment and half of the global accumulated capital stocks will flood developing countries in sharp contrast with recent events. In 2000, the developing countries‘ share in global investments was only 20% whereas now, almost 70% of the world‘s capital stock resides in the developed world.

Today, the financial services sector has become highly diversified offering investors with a wide range of investment avenues. With proper investment strategies and financial planning, investors can increase personal wealth which will contribute to higher economic growth. Economic growth is one of the most vital factors affecting the quality of life that people lead in a country. Three variables that measure the growth of an economy are income, savings, and investment. Money saved is of no use if it is not invested in some productive assets or capital goods.

According to the report from Shanaka Jayanath Peiris, IMF resident representative to the Philippines after the World Economic Outlook (WEO) forum, the Philippines is expected to maintain its strong GDP growth momentum registered in 2016 into 2017 at a pace of about 6.8 %, supported by a fiscal budget deficit which widens towards the 3 % of GDP target. Peris noted that the IMF forecast falls within the government‘s 6.5 percent to 7.5 percent official target this year. Reflecting the pick-up in global growth and commodity prices, exports are also expected to recover. (Caraballo, 2017) also added that the medium-term growth outlook would depend on the more uncertain global economic outlook and the passage of the administration tax reform proposals that would be important to continue to raise public infrastructure investment and social spending to benefit from the demographic dividend.

If the Philippines maintains the strong growth of GDP, it will create a huge investment opportunity for all international and domestic investors, but it depends on their decision where to really put the money. Investment decisions can be made by investors and investment managers. Investors perform investment analysis by making a use of fundamental analysis, technical analysis, judgment and mostly supported by decision tools. Information is assumed structure and the factors in the market systematically influence individuals‘ investment decisions as well as market outcomes. Investors’ market behavior derives from psychological principles of decision making to explain why people acquire investment. These factors focus on how investors interpret and act on the available information to make investment decisions.

Based on the study of conducted by (Maginn et al., 2007) they identified some characteristics of investors goal that seem lead to recognizable tendencies such as; Starting (25-40), eliminating debt, saving for capital expenditures, and investing in employee benefits, Accumulating (40-65) managing debt, diversifying and building equity, and saving for retirement and estate planning, Spending (65 - 80) relying on retirement income, reducing investment risk and preserving or reinvesting capital, and Gifting (80+) eliminating risk and distributing wealth. In each stage of life, the goal and risk tolerance are both the ability and willingness to assume risk – change. The further you are from retirement and the loss of your wage income, the more risk you take with your investment, having another source of income. As you get closer to retirement, you become more concerned with preserving your investment value so that it can generate income when

it becomes the sole source of income in your retirement, thus causing you to be less risk tolerant. After retirement, the risk tolerance decreases even more, until the end of your life when you are more concerned with dispersing than preserving your wealth (Panda & Panda., 2013).

In the study of Mutswenje.(2014) it was found out that investors are assumed to be rational wealth-maximizers, following basic financial rules, and basing their investment strategies purely on the risk-return consideration. However, in practice, the level of risk investors are willing to undertake is not the same and depends mainly on their personal attitudes towards risks.

Holden & Vanderhei.(2003) stated in their study that biases are one of the investors behaviors that leads to unexpected decisions, a predisposition to a view that inhibits objective thinking. Biases can affect investment decisions such as the availability, representative, overconfidence, anchoring and ambiguity aversion. They also added that investors behaviors can also be characterized such as: Framing in which it is the way investors see alternatives and define the context in making decisions. Examples of framing errors are loss aversion and choice segregation. Framing can affect investors' risk tolerance. Investors may be more willing to take risk to avoid a loss if you are loss averse. It also influences how investors manage making more than one decision simultaneously. If presented with multiple but separate choices, more people tend to decide on each separately, mentally segregating each decision. By framing choices as separate and unrelated, however, you may miss making the best decisions, which may involve comparing or combining choices. Lack of diversification or overdiversification in a portfolio may also result.

The City of Lucena – Region IV A CALABARZON is well known to be a highly urbanized city as announced by the Bureau of Finance last 2010. Lucena City has become the center of trade and business for crafts, agriculture, banking, financing, and recreation. Due to this fast development, restaurants, malls, and banks abound in the said city. Many of the investors are encouraged to invest and do business. In terms of financial ventures, Lucena City has a wide range of investments such as commercial banks, life insurance, mutual funds, stocks exchanges, pawnshop and cooperative. These are just a small number of financial institutions that provide a variety of investments in the City of Lucena. Due to a surge of business ventures in the said city, it provides an open employment opportunity not just for Lucena folks but also from other nearby towns confirming the fact that Lucena City is a well-developed City in Quezon Province. In the light of this development, it fully opens many open doors for all financial sectors to engage in business not just to sell products or services but also provide free seminars and financial literacy. This financial sector encourages the public to make an investment so that money will work for them for their future. Aside from fast-paced development, a door for investment scam was open.

In August 2014, (Mallari, 2014) reported in Inquirer.net that many citizens of Lucena were victimized by investment scam. It started to spread like wildfire in this city, the scheme that gave sizable fortunes to early members of the high-yielding investment scheme that was offered to the public by Grand Alliance of Business Leaders Associations Inc. (GABAI), attracting vendors, drivers, employees, soldiers, teachers and even policemen. Citizens of Lucena were encouraged to invest in GABAI because of very promising returns like a person was allowed to invest a minimum of Php 350.00 and a maximum of Php 35,000.00 every day. The investor received a passbook with handwritten records of the investment. The Php 35,000.00 investment supposedly would continuously earn Php 15,000.00 every week if the principal remained with GABAI. The investor also earned one account, or 1 point, for every Php 350.00 investment (Php 35,000.00 is equivalent to 100 accounts, which the investor could use to buy from sellers of all kinds of merchandise inside the compound. Upon further investigation with the said incident, the researcher found out that most of the victims of the investment scam were teachers. Some of them are in private school and most of them are from public schools. This is the reason why the researcher wanted to determine the reasons why schoolteachers of Lucena are easily encouraged to invest their money given the fact that there are various

financial institution/company that provide free financial literacy or seminar and why some are afraid to invest even though there are varieties of legit investment opportunities offers to the public. The study also determines the investors‘ preferences in choosing investment products, thus, the rationale for conducting this study entitled Investment Behaviors and Preferences of School Teachers in Lucena City.

This research aimed to explore the investment behaviors and preferences of school teachers in Lucena City. Specifically, the study sought to address the following objectives:

1. To determine the profile of the respondents in terms of:
    1.1. Demographic Profile
        1.1.1. Sex
        1.1.2. Age
        1.1.3. Civil Status
        1.1.4. Monthly Income (Include Other Sources of Income)
        1.1.5. Institution as to type of employer (Private of Public)
    1.2. Investment Profile/Status
        1.2.1. With Investment
        1.2.2. Without Investment
        1.2.3. With a Plan to Invest
2. To determine the factors that influence investment decision of school teachers in Lucena City in terms of:
    2.1. Life Stage
    2.2. Personality
    2.3. Source of Wealth
3. To determine the respondents' behavior towards different investment products in terms of:
    3.1. Bias
        3.1.1. Availability
        3.1.2. Representative
        3.1.3. Overconfidence
        3.1.4. Anchoring
        3.1.5. Ambiguity
    3.2. Framing
        3.2.1. Loss Aversion
        3.2.2. Choice Segregation
4. To determine the respondent's level of preference towards different investment product type in terms of:
    4.1. Mutual Funds
    4.2. Savings Accounts
    4.3. Insurance
    4.4. Stocks
    4.5. Real Properties
    4.6. Gold/Precious Metals
5. To determine if there is a significant relationship between investment decisions of the respondent when grouped according to demographic profile.
6. To propose financial literacy / seminar for school teachers.

Methodology

Research Design

The research study employed a descriptive survey method, which proved to be the most effective tool for investigating the investment behaviors and preferences of school teachers in Lucena City. This research design facilitated the collection and presentation of data gathering procedures, involving the recording, gathering of facts, analysis, and interpretation of data. Through this approach, the researcher was able to systematically examine and describe the investment landscape among teachers, providing valuable insights into their behaviors and preferences.

Population and Sampling Technique

The researcher used random sampling techniques to arrive with a total of 351 registered school teachers based on the list of the Department of Education Statistics of the School Division Office – Lucena City, Region IVA – CALABARZON as of 2017 – 2018. Using the Sloven's Formula, n=2,897 / 1 + (2,897)(5%)2 with a margin of error of 5%.

Instrumentation

The data has been gathered by the researcher through a survey questionnaire. Written instructions were provided for each of the survey questions and respondents were informed about the purpose of the study by a cover letter attached to the instruments.

Data Analysis

The study utilized a self-constructed questionnaire, distributed in printed format, and structured on a 4-point scale. The scale ranged from "highly influenced/strongly agreed" to "not influenced/disagreed," allowing respondents to express their opinions. Data gathered from the questionnaire were manually tabulated, tallied, and computed. Various statistical methods including frequency, percentage, weighted average mean (WAM), analysis of variance, and Chi-Square were employed to examine the relationship between respondents' demographics, behaviors, and investment preferences.

Ethical Consideration

The study adheres to ethical standards outlined in general research ethics and complies with the Data Privacy Act of 2012. To ensure transparency and informed participation, the researcher communicated the study's purpose through a cover letter to the participants. Subsequently, respondent data were securely stored and later disposed of in accordance with established protocols.

Results

The analysis and interpretation of the data gathered through the questionnaire were presented in this section in relation to the issues of the study. The results were laid up in tabular form and discussed in the text.

Demographic Profile of the Respondents

The survey received 351 responses, and the general respondent profile is shown in Table I. The same table also shows the frequency distribution of some variables that are thought to have significant findings.

Table 1

Frequency and Percentage Distribution of the Respondents' Profile

Variable	Options	Frequency	Percentage
Sex	Male	155	44
	Female	196	56
Age	21-27 years old	90	26
	28-34 years old	155	44
	35-41 years old	100	28
	42-49 years old	6	2
	50 years old and up	0	0
Civil Status	Single	140	40
	Married	211	60
Monthly Income	Below 10,000	6	2
	10,000 – 15,000	34	10
	15,000 – 25,000	108	31
	25,000 – 35,000	198	56
	35,000 – 45,000	5	1
	45,000 and above	0	0
Institution as Type of Employer	Private	229	65
	Government	122	35
Status of Investment	With Investment	130	37
	Without Investment	168	48
	With plan to make an investment	53	15

Factors that Influence Investors Decision Making

Based on the data presented in Table 2, the investment preferences of teachers vary across different demographic factors. Regarding sex, female teachers exhibited the highest preference for savings accounts, with 177 respondents, followed by insurance with 165, and stocks with 106. This indicates a prevalent inclination among female teachers towards savings accounts as their primary investment choice. Similarly, among teachers aged 28-34, 136 opted for savings accounts, 127 for insurance, and 83 for stocks, highlighting a strong preference for savings accounts within this age group. Married teachers also showed a notable preference for savings accounts, with 185 choosing this option, followed by insurance with 168, and stocks with 199. Likewise, among teachers earning between Php 25,000.00 and Php 35,000.00 per month, 174 favored savings accounts, 162 opted for insurance, and 144 for stocks, indicating a preference for savings accounts in this income bracket. Furthermore, teachers employed in private schools exhibited a clear preference for savings accounts, with 200 choosing this option, followed by insurance with 193, and stocks with 128. Notably, teachers with no prior investment experience also leaned towards savings accounts, with 148 respondents, followed by insurance with 144, and stocks with 10. Overall, the data suggests that savings accounts are the primary investment avenue for teachers in Lucena City across all demographic profiles. This underscores the importance for researchers to enlighten teachers about alternative investment products and educate them on the benefits and advantages of diversifying their investment portfolio beyond savings accounts.

Table 2

Investor Investment Preferences Cross Tabulation

Variables	Mutual Funds	%	Savings Accounts	%	Insurance/s	%	Stocks	%	Real Properties	%	Golds/Precious Metals	%	Total	Total %
1.1. Sex														
Male	75	16%	130	28%	128	27%	90	19%	32	7%	12	3%	467	100%
Female	105	18%	177	30%	165	28%	106	18%	28	5%	5	1%	586	100%
Total	180	17%	307	29%	293	28%	196	19%	60	6%	17	2%	1053	100%
1.2. Age														
21-27 years old	44	16%	76	27%	80	29%	55	20%	19	7%	3	1%	277	100%
28-34 years old	82	18%	136	29%	127	27%	83	18%	26	6%	9	2%	463	100%
35-41 years old	53	18%	90	30%	81	27%	54	18%	14	5%	5	2%	297	100%
42-49 years old	1	6%	5	31%	5	31%	4	25%	1	6%	0	0%	16	100%
50 years old and up		0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Total	180	17%	307	29%	293	28%	196	19%	60	6%	17	2%	1053	100%
1.3 Civil Status														
Single	76	18%	122	29%	124	29%	77	18%	23	5%	4	1%	426	100%
Married	104	17%	185	30%	169	27%	119	19%	37	6%	13	2%	627	100%
Total	180	17%	307	29%	293	28%	196	19%	60	6%	17	2%	1053	100%
1.4 Monthly Income														
below 10,000	4	19%	5	24%	5	24%	5	24%	2	10%	0	0%	21	100%
10,000.00 - 15,000.00	18	17%	30	29%	30	29%	18	17%	7	7%	0	0%	103	100%
15,000.00 – 25,000.00	53	16%	93	29%	91	28%	58	18%	23	7%	7	2%	325	100%
25,000.00 – 35,000.00	101	17%	174	30%	162	28%	114	19%	28	5%	10	2%	589	100%
35,000.00 – 45,000.00	4	27%	5	33%	5	33%	1	7%	0	0%	0	0%	15	100%
45,000.00 and above		0%		0%		0%		0%		0%		0%	0	0%
Total	180	17%	307	29%	293	28%	196	19%	60	6%	17	2%	1053	100%
1.5 Institution as type of Employer														
Private	126	18%	200	29%	193	28%	128	18%	35	5%	10	1%	692	100%
Government	53	15%	107	30%	100	28%	69	19%	25	7%	7	2%	361	100%
Total	179	17%	307	29%	293	28%	197	19%	60	6%	17	2%	1053	100%
1.6 Status of Investment														
With Investment	74	19%	114	29%	107	27%	65	16%	27	7%	8	2%	395	100%
Without Investment	82	16%	148	29%	144	28%	104	21%	19	4%	9	2%	506	100%
With Plan to make an investment	25	16%	45	30%	42	28%	26	17%	14	9%	0	0%	152	100%
Total	181	17%	307	29%	293	28%	195	19%	60	6%	17	2%	1053	100%

Table 3

Respondents' Profile and Factors that Influence Investors' Investment Decision Making Cross Tabulation

Respondents Profiles / Factors that Influence Investors Investment Decision Making				
Respondents Profiles	Life Stage	Personality	Source of Wealth	Total
1.1 Sex				
Male	87	37	31	155
Female	145	35	16	196
Total	232	72	47	351
1.2 Age				
21-27 years old	41	32	17	90
28-34 years old	75	60	20	155
35-41 years old	43	32	25	100
42-49 years old	4	1	1	6
50 years old and up	0	0	0	0
Total	163	125	63	351
1.3 Civil Status				
Single	88	34	18	140
Married	189	13	9	211
Total	277	47	27	351
1.4 Monthly Income				
below 10,000	3	2	1	6
10,000.00 - 15,000.00	16	13	5	34
15,000.00 – 25,000.00	57	43	8	108
25,000.00 – 35,000.00	123	49	26	198
35,000.00 – 45,000.00	4	1	0	5
45,000.00 and above	0	0	0	0
Total	203	108	40	351
1.5 Institution as type of Employer				
Private	168	48	13	229
Government	71	36	15	122
Total	239	84	28	351
1.6 Status of Investment				
With Investment	76	26	28	130
Without Investment	96	43	29	168
With Plan to make an investment	40	5	8	53
Total	212	74	65	351

Table 3 displays a cross-tabulation of respondents' demographic profiles alongside factors influencing their investment decisions. Among female teachers, Investor Life Stage garnered the highest score of 145. In terms of age, teachers aged 28-34 favored the Investor Life Stage, scoring 75. Similarly, married teachers leaned towards the Investor Life Stage, scoring 189. Regarding monthly income, those earning between Php 25,000.00 and Php 35,000.00 scored 123 in favor of the Investor Life Stage. Private school teachers showed

a preference for the Investor Life Stage, scoring 168. Additionally, teachers without investments scored 96 for the Investor Life Stage. These findings suggest that the Investor Life Stage significantly influences school teachers' investment decision-making, especially as they age, reflecting a growing concern for securing future financial needs.

Polinar, Cabatingan, and Delantar (2022) argue that teachers require additional income beyond their pensions to sustain desired lifestyles and support their children's future needs. However, many teachers, being conservative, are hesitant to take investment risks. They anticipate relying primarily on their pension income supplemented by modest additional funds. Yet, government-provided retirement funds often fall short of meeting teachers' financial needs upon retirement.

Table 4

Cross Tabulation of Respondents Profile and Investor Behavior

Respondents Profiles / Investors Behavior								
Respondents Profiles	Availability	Representative	Over-confidence	Anchoring	Ambiguity	Loss Aversion	Choice Segregation	Total
1.1 Sex								
Male	22	5	40	8	20	38	22	155
Female	29	6	35	10	29	35	52	196
Total	51	11	75	18	49	73	74	351
1.2 Age								
21-27 years old	13	2	15	5	8	20	27	90
28-34 years old	23	4	35	7	23	15	48	155
35-41 years old	15	27	13	9	15	3	18	100
42-49 years old	0	0	1	3	0	0	2	6
50 years old and up	0	0	0	0	0	0	0	0
Total	51	33	64	24	46	38	95	351
1.3 Civil Status								
Single	21	4	32	7	21	32	43	160
Married	31	6	45	10	31	48	65	236
Total	52	10	77	17	52	80	108	396
1.4 Monthly Income								
below 10,000	0	0	1	0	1	1	3	6
10,000.00 - 15,000.00	5	1	8	1	5	4	10	34
15,000.00 – 25,000.00	16	3	25	5	16	10	33	108

{table continues on the next page}

25,000.00 – 35,000.00	30	5	45	13	29	15	61	198
35,000.00 – 45,000.00	1	0	0	1	1	0	2	5
45,000.00 and above	0	0	0	0	0	0	0	0
Total	52	9	79	20	52	30	109	351
1.5 Institution as type of Employer								
Private	34	6	38	11	34	42	64	229
Government	18	3	28	6	15	15	37	122
Total	52	9	66	17	49	57	101	351
1.6 Status of Investment								
With Investment	19	2	21	4	19	25	40	130
Without Investment	23	4	35	8	25	30	43	168
With Plan to make an investment	7	1	10	2	7	12	14	53
Total	49	7	66	14	51	67	97	351

Table 4 presents a cross-tabulation of respondents' profiles and their investor behavior. Among female teachers, Choice of Segregation received the highest score of 52. Similarly, teachers aged 28-34 favored Choice of Segregation, scoring 48. Married teachers also leaned towards Choice of Segregation, scoring 65. Among those earning between Php 25,000.00 and Php 35,000.00 per month, Choice of Segregation was preferred, scoring 61. Additionally, teachers employed in private schools showed a preference for Choice of Segregation, scoring 64. Furthermore, teachers with no prior investment experience also favored Choice of Segregation, scoring 43.

These findings indicate that teachers' predominant behavior is Choice of Segregation when it comes to investment. This suggests that teachers tend to segregate their ideas and opinions about investment, rather than adhering strictly to available investment information. They recognize the importance of diversifying their investments to minimize risk and maximize opportunities for profit and growth.

Table 5

Ranking of Investors Investment Preferences

No.	Investment Avenue	Total	Percentage	Rank
1	Savings Accounts	307	29%	1
2	Insurance/s	293	28%	2
3	Stock/s	196	19%	3
4	Mutual Funds	180	17%	4
5	Real Properties	60	6%	5
6	Gold/Precious Metals	17	2%	6
7	Others (please specify)	0	0%	7
	Total	1053	100%	

Table 5 displays the ranking order of investors' investment preferences. Savings emerged as the top choice with a total of 307 or 29%, securing the first rank. Following closely is insurance, with 293 or 28%, earning the second rank. Stocks ranked third with a total of 196 or 19%, while mutual funds obtained the fourth rank with 180 or 17%. Real properties garnered a total of 60 or 6%, placing it at the fifth rank, while gold/precious metals ranked sixth with a total of 17 or 2%.

These results indicate that among the investment options presented, savings accounts are the preferred choice among teachers in Lucena City, comprising the majority of their investment portfolio. This preference can be attributed to their familiarity with savings accounts and their understanding of how they operate. Additionally, the data suggests that teachers may have limited knowledge and information about alternative investment avenues, leading to their reluctance to explore other options beyond savings accounts.

Table 6

Summary of Factors that Influence Investors Investment Decision

Indicator	WAM	Verbal Interpretation
Investor Life Stage	3.62	Highly Influenced
Investor Personality	3.43	Highly Influenced
Investor Source of Wealth	3.57	Highly Influenced
Overall WAM	3.54	Highly Influenced

Legend: Highly influenced = 3.26-4.00; Moderately influenced = 2.51-3.25; Slightly influenced = 1.76-2.50; Not influenced = 1.00-1.75

Table 6 presents the results of the assessment of factors influencing investor investment decisions. The investor life stage attained the highest weighted arithmetic mean of 3.62, followed closely by the investor's source of wealth with a weighted arithmetic mean of 3.57. In contrast, investor personality ranked the lowest with a weighted arithmetic mean of 3.43.

These findings highlight that the investor life stage holds the greatest influence on teachers' investment decision-making processes among the factors assessed. This suggests that teachers' investment choices are significantly impacted by considerations related to their current life stage or circumstances.

Table 7

Summary of Investors Behavior Towards Investment

Indicator	WAM	Verbal Interpretation
Availability	3.53	Strongly Agreed
Representative	3.35	Strongly Agreed
Overconfidence	3.55	Strongly Agreed
Anchoring	3.53	Strongly Agreed
Ambiguity	3.43	Strongly Agreed
Loss Aversion	3.53	Strongly Agreed
Choice Segregation	3.58	Strongly Agreed
Overall WAM	3.50	Strongly Agreed

Legend: Strongly agreed = 3.26-4.00; Agreed = 2.51-3.25; Least agreed = 1.76-2.50; Disagreed = 1.00-1.75

Table 7 displays the results of the assessment of investors' behaviors toward investment. Among the behaviors assessed, Choice of Segregation garnered the highest weighted arithmetic mean of 3.58, indicating its prominent influence. Following closely is Overconfidence, with a weighted arithmetic mean of 3.55. Availability Bias, Anchoring, and Loss Aversion all attained the same weighted arithmetic mean of 3.53,

suggesting comparable levels of influence. Ambiguity ranked slightly lower with a weighted arithmetic mean of 3.43. The behavior with the least influence, according to the assessment, is Representative, with a weighted arithmetic mean of 3.35.

These findings suggest that teachers exhibit behavioral biases in their investment decisions, with a particularly strong inclination towards Choice of Segregation and Overconfidence. This underscores the importance of recognizing and addressing these biases to make more informed and rational investment choices.

Table 8

Chi – Square analysis for Factors that Influence Investors Investment Decision and Respondents Sex

Sex	Investors Behavior			Total
	Life stage	Personality	Source of Wealth	
Male	102.45	31.79	20.75	155
Female	129.55	40.21	26.25	196
Total	232.00	72.00	47.00	351

The critical value = 5.9915, Chi-Square Statistics = 14.7549, p-Value = 0.0006

Table 8 shows that the calculated chi-square is greater than the critical value. It means that there is a significant relationship between the factors that influence investors' decisions and respondents' sex.

Table 9

Chi – Square analysis for Factors that Influence Investors Investment Decision and Respondents Age

Age	Investors Behavior			Total
	Life stage	Personality	Source of Wealth	
21-27 years old	41	32	17	90
28-34 years old	75	60	20	155
35-41 years old	43	32	25	100
42-49 years old	4	1	1	6
50 years old and up	0	0	0	0
Total	163	125	63	351

The critical value = 15.5073, Chi-Square Statistics = 7.3323, p-Value = 0.5012

The table 9 shows that the calculated chi-square is less than the critical value. It means that there is no significant relationship between the factors that influence investors' decisions and respondents' age.

Table 10

Chi – Square analysis for Factors that Influence Investors Investment Decision and Respondents Civil Status

Civil Status	Investors Behavior			Total
	Life stage	Personality	Source of Wealth	
Single	88	34	18	140
Married	189	13	9	211
Total	277	47	27	351

The critical value = 5.9915, Chi-Square Statistics = 53.1250, p-Value = 0.000

Table 10 shows that the calculated chi-square is greater than the critical value. It means that there is a significant relationship between the factors that influence investors' decisions and respondents' Civil Status.

Table 11
Chi – Square Analysis for Factors that Influence Investors Investment Decision and Respondents Monthly Income

Monthly Income	Investors Behavior			Total
	Life stage	Personality	Source Of Wealth	
below 10,000	3	2	1	6
10,000.00 - 15,000.00	16	13	5	34
15,000.00 – 25,000.00	57	43	8	108
25,000.00 – 35,000.00	123	49	26	198
35,000.00 – 45,000.00	4	1	0	5
45,000.00 and above	0	0	0	0
Total	203	108	40	351

The critical value = 18.3070, Chi-Square Statistics = 11.3741, p-Value = 0.3291

Table 11 shows that the calculated chi-square is less than the critical value. It means that there is no significant relationship between the factors that influence investors' decisions and respondents' monthly income.

Table 12
Chi – Square analysis for Factors that Influence Investors Investment Decision and Respondents Institution as type of Employer

Institution as type of Employer	Factors			Total
	Life Stage	Personality	Source of Wealth	
Private	168	48	13	229
Government	71	36	15	122
Total	239	84	28	351

The critical value = 5.9915, Chi-Square Statistics = 18.1003, p-Value = 0.0001

The table 12 shows that the calculated chi-square is greater than the critical value. It means that there is a significant relationship between the factors that influence investors' decisions and respondents' Institution as type of Employer.

Discussion

The majority of respondents in Lucena City are female teachers, predominantly aged between 28 to 34 years old, single, earning monthly incomes ranging from Php 25,000 to Php 35,000, employed in private schools, and lacking prior investment experience. These teachers feel a strong urge to invest for various reasons, including securing their future financial needs, ensuring their children's education, saving for retirement, and meeting financial obligations.

Teachers in the study acknowledge their biased behavior towards investments, demonstrating tendencies such as representativeness, overconfidence, anchoring, ambiguity, and loss aversion. This inclination suggests that their investment decisions may be influenced more by personal perceptions and emotions than objective criteria.

The preferred investment choices among teachers are savings accounts, followed by insurance and stocks. This preference is largely driven by their familiarity with savings accounts and limited exposure to alternative investment avenues.

The Chi-Square analysis revealed significant relationships between respondents' gender, marital status, type of employer, and factors influencing investment decisions. However, factors like age, monthly income, and current investment status showed no significant correlation with these decision-making factors.

In conclusion, teachers in Lucena City are motivated to invest not only for financial gain but also to provide security for their families and meet future obligations. To support them in making informed investment decisions, the researcher recommends implementing financial literacy programs tailored to teachers' needs. These initiatives aim to broaden their knowledge and understanding of investment opportunities and benefits.

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Communication Barriers, Sources of Information, and Beliefs of Parents on COVID-19 Children Vaccination

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Abstract

While vaccines are widely considered effective tools to combat viruses, the rapid development of coronavirus vaccines led to parental vaccine refusal. Parents' acceptance of COVID-19 vaccination for children has been a public health challenge, influenced by their personal beliefs and perceptions of the pandemic. This study aimed to identify communication barriers, sources of information, and parents' beliefs about COVID-19 vaccination for children, and to explore the relationships between these factors and socio-demographic variables such as age, sex, and family income. Using a quantitative approach with a descriptive-correlational research design, questionnaires were distributed to 174 parents in Binan, Laguna during the second semester of 2023-2024. Results imply that parents experienced moderate communication barriers and slightly utilized information sources. Individual, interpersonal, and organizational communication barriers are significantly correlated to parents' beliefs about COVID-19 vaccination for children, while information sources did not have a significant association. Additionally, sex did not significantly moderate beliefs about vaccination, but parents with lower incomes held different beliefs about the vaccine's threat to children.

Keywords: *communication barriers, sources of information, health beliefs, parents, children's vaccination*

Vaccines have long been considered effective tools against viruses. However, during the COVID-19 pandemic, the rapid development of coronavirus vaccines led to vaccine refusal among many parents. With varying personal views and impressions about the pandemic, parents' acceptance of their children's COVID-19 vaccination has been low, posing a threat to public health and vaccination programs. The world was unprepared for the first wave of the sudden and widespread coronavirus disease. According to the World Health Organization (WHO, 2020), "The pandemic has been one of the greatest health crises in recorded history." In an effort to end the pervasive coronavirus, vaccine manufacturers quickly developed COVID-19 vaccines, which created immense public doubt. This unprecedented virus affected almost everyone worldwide, including the younger population, impacting their health, social, and material well-being.

Vaccination has been globally recognized as a cost-effective public health intervention for reducing childhood mortality and morbidity (WHO, 2009). However, rapid vaccine development led to rising vaccine hesitancy among some Filipinos, especially caregivers (Landicho-Guevarra, 2021). The Philippines once had high vaccine uptake among neighboring countries, but confidence drastically dropped in 2018 due to the politicized Dengvaxia vaccine (Alfonso et al., 2021). Approved for individuals aged 9-16 who had previously had dengue, Dengvaxia was part of a national school-based immunization program but was later withdrawn to prevent inoculating uninfected children (Larson et al., 2018).

Children are also susceptible to viruses like COVID-19, prompting the Philippine government to invest in vaccines for the younger population. The FDA authorized the Pfizer-BioNTech vaccine for emergency use in children aged 5-11 (FDA, 2021). With an estimated 13.5 million children in the Philippines, the government aimed to vaccinate 1.7 million children aged 5-11.However, as of February 26, 2022, only 5% of this group had been vaccinated, with 95% still unvaccinated (DOH, 2021).

Studies have surveyed and interviewed parents to identify factors and barriers leading to vaccine refusal or delay. Former NTF chief Secretary Carlito Galvez Jr. emphasized the need to address vaccine hesitancy to combat emerging variants and support economic recovery (Kabagani, 2021). WHO Senior Health Advisor Dr. Philippe Duclos highlighted the growing issue of vaccine hesitancy, citing concerns about vaccine safety, negative beliefs based on myths, misinformation, and mistrust in healthcare systems (WHO, 2019). A UK study found that misinformation decreased vaccination intent, although other studies showed no correlation between misinformation and vaccine uptake (Loomba et al., 2021).

The spread of misinformation on social media led the WHO to coin the term "infodemic" (Skaffle et al., 2022). Poor communication can weaken vaccine confidence, making effective communication crucial for successful vaccination programs (Goldstein et al., 2015). Communication and vaccination must go hand in hand to meet public health goals (Shimp, 2004).

Addressing vaccine hesitancy requires continuous efforts to combat misinformation and strengthen positive perceptions through strategic communication. The current study will describe parents' characteristics regarding communication barriers, sources of information, and beliefs about children's COVID-19 vaccination. This study aims to answer the following questions:

1. How do parents assess the following communication barriers in relation to COVID-19 vaccination?
   a. Individual Communication Barriers
   b. Interpersonal Communication Barriers
   c. Organizational Communication Barriers
2. How do parents utilize the following sources of information on COVID-19 children's vaccination?
   a. Interpersonal sources
   b. Traditional media sources
   c. New media sources
3. How do parents assess their beliefs on COVID-19 children's vaccination in terms of the following?
   a. benefits of COVID-19 children vaccination
   b. efficacy of COVID-19 children vaccination
   c. threat of COVID-19 children vaccination

4. Is there a significant relationship between the following variables:
   a. communication barriers and beliefs on COVID-19 vaccination
   b. sources of information and beliefs on COVID-19 Vaccination
5. Is there a significant relationship between age and the beliefs of parents on COVID-19 children's vaccination?
6. Is there a significant difference in the beliefs of parents regarding COVID-19 children vaccination in terms of:
   a. sex
   b. family income

Methodology

Research Design

This study employed a descriptive-correlational research design. Descriptive studies are used when there is a lack of knowledge about a certain occurrence or phenomenon. The researcher's role is to observe, describe, and record various aspects of an event, classifying and detailing what is truly present and estimating the frequency of occurrences. In this study, the descriptive design was used to apply the health belief model to variables such as communication barriers, sources of information, and parents' beliefs about COVID-19 children's vaccination. It described how parents assessed communication barriers, their beliefs about COVID-19 children's vaccination, and how they utilized their sources of information.

Additionally, the study incorporated a correlational design, which is typically a cross-sectional study that systematically explores the associations between variables. This design determines whether changes in one or more variables are connected to changes in another variable or variables. The correlational design was used to examine whether communication barriers and sources of information are related to parents' beliefs about COVID-19 children's vaccination. Furthermore, socio-demographic variables of parents, such as age, sex, and family income, were analyzed to identify any significant differences in their beliefs about COVID-19 children's vaccination.

Population and Sampling Techniques

The researchers conducted the study in the City of Binan, Laguna. Participants were Filipino parents with at least one child between the ages of 5 and 17. A total of 174 respondents participated in the survey. Roscoe (1975) suggests that a sample size larger than 30 but fewer than 500 is appropriate for most behavioral research.

The study's respondent distribution was predominantly female, with 52% of respondents being women and 48% men. Parental income was categorized into five groups: poor (below ₱10,957), low-income but not poor (₱10,957 to ₱21,914), lower middle (₱21,914 to ₱43,828), middle (₱43,828 to ₱76,669), and upper middle (₱76,669 to ₱131,484). The highest percentage of the respondents, 50%, fell into the poor income category, followed by 22% classified as low-income but not poor. Additionally, 17% of respondents were categorized as lower middle income, while 7% fell into the middle-income bracket, and 4% were classified as upper middle income.

Instrumentation

Self-administered questionnaires were used in this study to gather data on respondents' communication barriers, sources of information, and beliefs about COVID-19 vaccination. According to Jesus Garcia et al. (2009), questionnaires are tools designed to test factors that are often theoretical or abstract concepts. Valid questionnaires must be simple, reliable, and feasible.

The first section collected demographic information about the respondents, including gender, age, educational attainment, number of children, and family income. The second section contained a series of questions to assess how parents evaluated communication barriers. It included 12 items on a five-point Likert scale, ranging from strongly disagree (1) to strongly agree (5). The questions addressed individual,

interpersonal, and organizational communication barriers. The third section aimed to determine how parents utilized various sources of information, including interpersonal, traditional, and new media sources. This section included 11 items, with respondents rating their media use from never (1) to always (5). The final section measured how parents assessed their beliefs about COVID-19 and vaccination for children. This section included 15 items, also using a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5).

Table 1 summarizes the reliability of scales used in the study on communication barriers, sources of information, and beliefs regarding COVID-19 vaccination among parents. The scales for individual and interpersonal communication barriers showed excellent reliability, with Cronbach's Alpha values of 0.929 and 0.964, respectively. The scale for organizational communication barriers demonstrated good reliability at 0.862. Regarding sources of information, traditional media had an acceptable reliability score of 0.765, while new media and interpersonal media had similar reliability scores of 0.766 and 0.712, respectively.

Beliefs about COVID-19 vaccination showed strong reliability across different aspects: beliefs (0.936), efficacy (0.831), and threat (0.937). Overall, the combined scale measuring communication barriers, sources of information, and beliefs about COVID-19 vaccination among parents had a Cronbach's Alpha of 0.859, indicating very good internal consistency across the study's constructs. These reliability scores affirm the scales' effectiveness in assessing the targeted variables in the research.

Table 1
Reliability of the Questionnaire

Items	Number of Items	Cronbach Alpha
Individual Communication Barrier	5	.929
Interpersonal Communication Barrier	4	.964
Organizational Communication Barrier	3	.862
Traditional Media	3	.765
New Media	4	.766
Interpersonal Media	3	.712
Beliefs	5	.936
Efficacy	4	.831
Threat	6	.937

The parent's income was divided into 5 groups: poor (₱10,957 below), low-income but not poor (₱10,957 to ₱21,914), lower middle (₱21,914 to ₱43,828), middle (₱43,828 to ₱76,669) and upper middle (₱76,669 to 131,484). In terms of frequency of income, table 10 shows that the highest percentage belongs to poor with 50%, 22% belongs low-income but not poor, and 17% belongs to lower middle and 7% belongs to middle and 4% belongs to upper middle.

Data Gathering Procedures

In Biñan, Laguna, from March to April 2023, the researchers collaborated with the local government to distribute questionnaires that covered socio-demographic characteristics and perceptions related to COVID-19 children's vaccination. Following an introduction by the researchers, the questionnaires were administered to respondents. Data collection took place over a span of one to two weeks.

Ethical Considerations

Prior to dissemination, ethical considerations were addressed, and the study received approval from the University's Ethics Review Board. The study ensured participant confidentiality and anonymity, with data collected solely for academic and research purposes. Participants were informed about the purpose of

the study, their rights, and were given the option to decline participation if they felt uncomfortable. These measures aimed to uphold ethical standards and respect participants' rights throughout the research process.

Analysis of Data

The study systematically processed its data through coding, classification, quantification, tabulation, and analysis, all aligned with its research objectives. Descriptive statistics, including mean and standard deviation, were employed to characterize how parents assessed communication barriers and beliefs regarding COVID-19 vaccination. These measures also helped in understanding how parents utilized various sources of information about COVID-19 vaccination

To examine relationships between variables, Spearman's rho correlation was used to explore associations between communication barriers, media use, and beliefs about COVID-19 vaccination. The study also utilized the Mann-Whitney U test to investigate gender differences in parental beliefs about COVID-19 vaccination for children. Additionally, Spearman's rho was applied to assess the relationship between age and parental beliefs.

Moreover, the study employed the Kruskal-Wallis test to analyze significant differences in parental beliefs across different income levels. These analytical methods were chosen to comprehensively address the research questions and provide valuable insights into the factors influencing parental perceptions and attitudes towards COVID-19 vaccination among children.

Results and Discussion

Assessment of Communication Barriers

This section of the study focused on assessing how parents perceived communication barriers related to COVID-19 vaccination. It aimed to describe these barriers in terms of three categories: (1) individual communication barrier, (2) interpersonal communication barrier, and (3) organizational communication barrier. The assessment used mean and standard deviation (SD) as metrics to quantify and define the extent of these communication barriers experienced by parents in relation to COVID-19 vaccination for children.

Individual Communication Barriers

The individual communication barriers of the respondents are measured using four descriptive statements and these are presented in Table 2. The four statements are described by the respondents as "slightly agree" with a grand mean of 3.16 and an overall standard deviation of 1.058. Thus, the respondents have a "moderate" assessment of individual communication barrier.

Table 2

Descriptive Statistics for Individual Communication Barrier

	Mean	SD	Scale Response	Verbal Interpretation
I know the benefits of the COVID-19 children's vaccine to children's health against Coronavirus disease	3.27	1.108	Slightly agree	Moderate
I understand what I read about the COVID-19 children's vaccination information.	3.32	1.128	Slightly agree	Moderate
I have enough knowledge of the COVID-19 children's vaccination information.	3.14	1.237	Slightly agree	Moderate
I can draw insights from the information that I have read about COVID-19 children's vaccination.	2.96	1.150	Slightly agree	Moderate
Grand Mean	3.16	1.058	Slightly agree	Moderate

Scoring System: 1.00 – 1.49 Strongly Disagree/Very Low; 1.50 – 2.49 Disagree/Low; 2.50 – 3.49 Slightly Agree/Moderate; 3.50 – 4.49 Agree/High; 4.50 – 5.00 Strongly Agree/Extremely High

The moderate regard to the individual communication barrier of the respondents indicates their moderate knowledge and information on the Covid-19 children's vaccination. These results imply that the parents who participated in this study, have a moderate tendency to be hesitant on COVID-19 children's vaccination. Thus, it is still important for healthcare professionals to educate and inform the parents more to boost parent's confidence on COVID-19 children's vaccination and increase vaccine acceptance.

According to Ruggiero et al. (2021), there is a significant barrier among the parents, and this includes the parent's understanding of the information on Covid-19 children's vaccination due to the lack of communication and information from the health providers. Likewise, Akgun et al. (2022) studies exploring the attitudes and knowledge regarding the COVID-19 vaccine of parents have found that parents don't have enough knowledge on COVID-19 children's vaccination due to a lack of COVID-19 children's vaccination information.

Interpersonal Communication Barriers

The interpersonal communication barriers of the respondents are measured using four descriptive statements and these are presented in Table 3. The four statements are described by the respondents as "*slightly agree*" with a grand mean of 3.32 and an overall standard deviation of 1.036. Thus, the respondents have a "moderate" assessment of interpersonal communication barrier.

Table 3

	Mean	SD	Scale Response	Verbal Interpretation
I trust what my family members say about COVID-19 children's vaccination even without any factual basis.	3.43	1.087	Slightly agree	Moderate
I trust what my relatives say about COVID-19 children's vaccination even without any factual basis.	3.33	1.100	Slightly agree	Moderate
I trust what my friends say about COVID-19 children's vaccination even without any factual basis.	3.26	1.069	Slightly agree	Moderate
I trust what my neighbors say about COVID-19 children's vaccination even without any factual basis.	3.26	1.150	Slightly agree	Moderate
Grand Mean	3.32	1.036	Slightly agree	Moderate

Scoring System: 1.00 – 1.49 Strongly Disagree/Very Low; 1.50 – 2.49 Disagree/Low; 2.50 – 3.49 Slightly Agree/ Moderate; 3.50 – 4.49 Agree/High; 4.50 – 5.00 Strongly Agree/Extremely High

The moderate regard to the interpersonal communication barrier of the respondents indicates their moderate trust of information on the Covid-19 children's vaccination in terms of trusting social network. These results imply that the parents who participated in this study tend to be misinformed. Thus, intervention from the public health to educate more the individuals are crucial as number of parents have somehow trusted their family, friends, and neighbors as their source of COVID-19 children's vaccination information.

Wang et al. (2021) studies on COVID-19 children's vaccination among healthcare parents has been proven that interpersonal factors such as information exposure through interpersonal communication, and peers' experiences with COVID-19 vaccination all had a substantial impact on healthcare workers' acceptance of COVID-19 immunization for their children. Families and friends have a huge impact on a decision of an individual who hesitates to accept Covid-19 vaccines. According to Cochran et al. (1993) parents consider their social network (family, friends, and relatives) as social support being the source of information as they have impacts of the broader social context on the security of child-parent attachment.

Organizational Communication Barrier

The organizational communication barriers of the respondents are measured using three descriptive statements and these are presented in Table 4. The three statements are described by the respondents as "slightly agree" with a grand mean of 3.00 and an overall standard deviation of 0.846. Thus, the respondents have a "moderate" assessment of organizational communication barrier.

Table 4

Descriptive Statistics for Organizational Communication Barrier

	Mean	SD	Scale Response	Verbal Interpretation
The healthcare workers are not well-trained communication personnel for COVID-19 children's vaccination rollouts in the local health offices.	2.93	0.912	Slightly agree	Moderate
The healthcare workers use specialized words or difficult vocabulary on COVID-19 children's vaccination information.	3.09	0.908	Slightly agree	Moderate
The healthcare providers couldn't communicate the intent of the COVID-19 children's vaccination.	2.99	1.026	Slightly agree	Moderate
Grand Mean	3.00	0.846	Slightly agree	Moderate

Scoring System: 1.00 – 1.49 Strongly Disagree/Very Low; 1.50 – 2.49 Disagree/Low; 2.50 – 3.49 Slightly Agree/ Moderate; 3.50 – 4.49 Agree/High; 4.50 – 5.00 Strongly Agree/Extremely High

The result explained that the healthcare providers' skills in communication and their use of difficult vocabulary or specialized words are moderate. Despite the outcome, a number of parents find it challenging to comprehend, especially healthcare workers who lack communication skills.

The results also imply that the healthcare system has lack well-trained communication personnel at the local level and it was because health communication was funded inadequately in the healthcare system (Oku et al.,2016).Garcia et al. (2014) concluded, that to increase the demand for immunization services a better understanding of communication immunization barriers is necessary to help the EPI or Expanded Program on Immunizations to adjust communication strategies. Healthcare professionals must start to see the need to build trust between themselves and the parents to increase vaccine acceptance.

In general, parents' assessment communication barriers were interpreted as moderate as presented in Table 5. These result does show significant concern to the parents' perception on COVID-19 children's vaccination information. Therefore, the grand mean has a compelling result to draw the attention of public health professionals and address the moderate barrier before to people especially to parents.

Table 5

Descriptive Statistics for Communication Barriers

	Mean	SD	Scale Response	Verbal Interpretation
Individual Communication Barrier	3.16	1.058	Slightly agree	Moderate
Interpersonal Communication Barrier	3.32	1.036	Slightly agree	Moderate
Organizational Communication Barrier	3.00	0.846	Slightly agree	Moderate
Grand Mean	3.16	0.604	Slightly agree	Moderate

Scoring System: 1.00 – 1.49 Strongly Disagree/Very Low; 1.50 – 2.49 Disagree/Low; 2.50 – 3.49 Slightly Agree/ Moderate; 3.50 – 4.49 Agree/High; 4.50 – 5.00 Strongly Agree/Extremely High

Utilization of Sources of Information

This part explains research question 2, "how parents utilized the sources of information on COVID-19 children's vaccination" sources of information of parents which were specified in terms of: (1) traditional media; (2) new media; and (3) interpersonal. The mean, and standard deviation (SD) served as the basis to define sources of information on COVID-19 children's vaccination of the respondents.

Traditional Media

The traditional media sources of information on COVID-19 children's vaccination of the respondents are measured using three traditional media and these are presented in Table 6. The three media sources are described by the respondents as "sometimes" with a grand mean of 2.63 and an overall standard deviation of 0.929. Thus, the respondents have "slightly utilized" traditional media sources.

Table 6

Descriptive Statistics for Utilization of Traditional Media

	Mean	SD	Scale Response	Verbal Interpretation
Radio	3.17	1.180	Sometimes	Slightly Utilized
Newspaper	2.60	1.106	Sometimes	Slightly Utilized
Magazines	2.11	1.047	Rarely	Least Utilized
Grand Mean	2.63	0.929	Sometimes	Slightly Utilized

Scoring System: 1.00 – 1.49 Never/Not Utilized; 1.50 – 2.49 Rarely/Least Utilized; 2.50 – 3.49 Sometimes/ Slightly Utilized; 3.50 – 4.49 Often/Utilized; 4.50 – 5.00 Always/Highly Utilized

According to Pitch et al. (2021), Individuals (parents) who receive information via traditional media sources such as national and local newspapers, and radio were most likely to accept the COVID-19 vaccine for their children. In contrast, Puri et al., (2020) promote social media as a drive that allows individuals to rapidly create and share content like Covid-19 children's vaccination information widely with their own opinion without editorial oversight. The result could help the public health programs bridge the gap of knowledge about the children's vaccination for viral infection and re-consider utilizing radio the respondents' most utilized traditional form of media to air educational message to the public especially those parents who do not have access to other media sources of COVID-19 vaccine information.

New Media

The new media sources of information on COVID-19 children's vaccination of the respondents are measured using four new media and these are presented in Table 7. The four media sources are described by the respondents as "often" with a grand mean of 3.50 and an overall standard deviation of 0.901. Thus, the respondents have "utilized" new media sources.

Table 7

Descriptive Statistics for Utilization of New Media

	Mean	SD	Scale Response	Verbal Interpretation
Facebook	4.22	0.990	Often	Highly utilized
Instagram	3.05	1.199	Sometimes	Slightly utilized
TikTok	2.97	1.292	Sometimes	Slightly utilized
YouTube	3.76	1.170	Often	Utilized
Grand Mean	3.50	0.901	Often	Utilized

Scoring System: 1.00 – 1.49 Never/Not Utilized; 1.50 – 2.49 Rarely/Least Utilized; 2.50 – 3.49 Sometimes/Slightly Utilized; 3.50 – 4.49 Often/Utilized; 4.50 – 5.00 Always/Highly Utilized

Chan et al. (2020), stated that social media could be a vehicle to promote and motivate the public to take up COVID-19 vaccination by dispersing appropriate data and updating information about the COVID-19 vaccination approach. However, Puri et al. (2020) said that social media has continued to be a vehicle for the spread of COVID-19 misinformation.

Social media being the most utilized sources of information of the respondents, yet much fake news-prone media calls the attention of the professionals to help new media users especially the parents to learn the reliable sources of information and good enough to recognize misinformation that plagues media platform.

Interpersonal

The interpersonal sources of information on COVID-19 children's vaccination of the respondents are measured using three interpersonal relationships and these are presented in Table 8. The three interpersonal sources of COVID-19 children's vaccination are described by the respondents as "often" with a grand mean of 3.92 and an overall standard deviation of 0.828 Thus, the respondents have a verbal interpretation on their utilization of new media as "utilized" of the interpersonal sources.

Table 8

Descriptive Statistics for Utilization of Interpersonal Sources

	Mean	SD	Scale Response	Verbal Interpretation
Friends	3.92	1.109	Often	Utilized
Relatives	3.97	0.985	Often	Utilized
Healthcare Professionals (Doctors, Nurses, etc.)	3.87	1.133	Often	Utilized
Grand Mean	3.92	0.828	Often	Utilized

Scoring System: 1.00 – 1.49 Never/Not Utilized; 1.50 – 2.49 Rarely/Least Utilized; 2.50 – 3.49 Sometimes/Slightly Utilized; 3.50 – 4.49 Often/Utilized; 4.50 – 5.00 Always/Highly Utilized

The result illustrates that parents' sources of information in terms of interpersonal was higher in relatives and friends followed by the healthcare practitioners. In contrast, according to Latkin et al. (2021), many people have high trust in several sources of COVID-19 information, trust in certain information sources such as the CDC and the health care providers associated with being vaccinated. Li and Zhou (2022) said that opinion leaders are crucial sources for encouraging parents to vaccinate their children since they boost the vaccination and emphasize the focus of COVID-19 vaccination promotion is to strengthen parent's trust in the authority publicizing the efficacy and side effects of vaccines.

Despite the gigantic effort of the healthcare system to educate people about the vaccines they must continue to strategize may it be traditional or novel way to reach people who do not have the access to hear accurate information about the issues and crisis that the community is facing.

Table 9 show the grand mean of overall utilization of the sources of information of the parent's on COVID-19 children's vaccination as slightly utilized. The result interprets despite the low utilization to some sources of the media specifically in traditional sources parents find new media and interpersonal useful as these got scored the most. Public health professionals and other experts may reach these people in circles and build rapport and learn why these media been most utilized as their sources of information and least on traditional media on COVID-19 children's vaccination information.

Table 9

Descriptive Statistics on for Utilization of Sources of Information

	Mean	SD	Scale Response	Verbal Interpretation
Traditional Media	2.63	0.929	Sometimes	Slightly Utilized
New Media	3.50	0.901	Often	Utilized
Interpersonal Sources	3.92	0.828	Often	Utilized
Grand Mean	3.35	0.685	Sometimes	Slightly Utilized

Scoring System: 1.00 – 1.49 Never/Not Utilized; 1.50 – 2.49 Rarely/Least Utilized; 2.50 – 3.49 Sometimes/Slightly Utilized; 3.50 – 4.49 Often/Utilized; 4.50 – 5.00 Always/Highly Utilized

Assessment of Parents' Beliefs on Covid-19 Children Vaccination

This area aims to determine how parents assess their beliefs on COVID-19 children's vaccination". Beliefs of parents on COVID-19 children's vaccination was illustrated and quantified in terms of: (1) benefits; (2) efficacy; and (3) threat. The mean, and standard deviation (SD) served as the basis to define beliefs of parents on COVID-19 children's vaccination of the respondents.

Benefits

The respondents' beliefs on the benefits of COVID-19 vaccination for children are measured using five descriptive statements, as shown in Table 10. On average, respondents "slightly agree" with these statements, resulting in a grand mean of 3.22 and an overall standard deviation of 1.117. Therefore, the respondents perceive the benefits of COVID-19 vaccination for children to be "slightly beneficial."

Table 10

Descriptive Statistics for Assessment on Benefits of COVID-19 Children's Vaccination

	Mean	SD	Scale Response	Verbal Interpretation
COVID-19 vaccination helps protect my child/ children from getting COVID-19 and other variants of the virus.	3.24	1.182	Slightly agree	Slightly beneficial
COVID-19 children vaccination helps protect the people who are not allowed to be vaccinated for some health conditions such as allergies and HIV.	3.16	1.152	Slightly agree	Slightly beneficial
COVID-19 children vaccination reduced the risk of spreading the disease among my family members, schoolmates or colleagues, friends, neighbors, and other people in my community.	3.28	1.204	Slightly agree	Slightly beneficial
COVID-19 children vaccination protects my child/ children who had/hadn't COVID-19 and prevents them from being hospitalized from a new infection.	3.20	1.139	Slightly agree	Slightly beneficial
COVID-19 vaccination prevents my child/children from dying if they get infected with COVID-19 and other variants of the virus.	3.23	1.216	Slightly agree	Slightly beneficial
Grand Mean	3.22	1.117	Slightly agree	Slightly beneficial

The outcome signifies that having slightly beneficial Covid-19 children vaccination made the respondents cope with the covid-19 children vaccination to obtain positive preventive and care measure through vaccination, which if not taken into consideration can lead to complications or even death of the victim. A study done in Israel on parental perception of COVID-19 children vaccination testing the mediating

role of the perceived COVID-19 vaccine benefits found that parents' willingness to vaccinate their children was extremely high and assumed that the general adult population level of knowledge regarding COVID-19 vaccination was also high with higher compliance with childhood vaccination, and higher perception of vaccination benefits such as be able to resume children's pre-COVID-19 routine (Gallè et al., 2021).

Efficacy

The respondents' beliefs on the efficacy of COVID-19 vaccination for children are measured using four descriptive statements, as shown in Table 10. On average, respondents "slightly agree" with these statements, resulting in a grand mean of 3.16 and an overall standard deviation of 1.074. Therefore, the respondents perceive the efficacy of COVID-19 vaccination for children to be "slightly efficient."

Table 10

Descriptive Statistic for Assessment on Efficacy of COVID-19 Children's Vaccination

	Mean	SD	Scale Response	Verbal Interpretation
COVID-19 children vaccination is an effective tool to prevent my child/children from getting infected with COVID-19.	3.22	1.192	Slightly agree	Slightly efficient
Getting a single dose of the COVID-19 children's vaccine is enough to protect my child/children from getting COVID-19.	3.04	1.119	Slightly agree	Slightly efficient
Getting a second dose of the COVID-19 children's vaccine could provide full protection to the child's/ children's well-being against COVID-19.	3.22	1.137	Slightly agree	Slightly efficient
Getting a COVID-19 booster shot for my child/ children could give my child/children full protection against COVID-19.	3.16	1.126	Slightly agree	Slightly efficient
Grand Mean	3.16	1.074	Slightly agree	Slightly efficient

Scoring System: 1.00 – 1.49 Strongly Disagree/Not Beneficial; 1.50 – 2.49 Disagree/Least Beneficial; 2.50 – 3.49 Slightly Agree/Slightly Beneficial; 3.50 – 4.49 Agree/Beneficial; 4.50 – 5.00 Strongly Agree/Highly Beneficial

All the statement were verbally perceived as "slightly efficient" this expresses the beliefs of parents on the efficacy of COVID-19 children's vaccines as slightly effective and competent for their children according to the data's result. However, in a study on COVID-19 vaccine efficacy on children the FDA (Food and Drug Administration) reviewed a vaccine study of thousands of children who were being on and were previously diagnosed negative for COVID-19 various children's groups were given COVID-19 shots such as Pfizer-BioNTech and the other groups of children were given an inactive shot also called a placebo. Children who received the COVID-19 vaccine were observed for at least 2 months after the second dose has been administered. COVID-19 cases in groups who received COVID-19 shots were lower than in children who were given the placebo.

Threat

The respondents' beliefs on the threat of COVID-19 vaccination for children are measured using six descriptive statements, as shown in Table 11. On average, respondents "slightly agree" with these statements, resulting in a grand mean of 2.74 and an overall standard deviation of 1.042. Therefore, the respondents perceive COVID-19 vaccination for children to be a "slight threat."

Table 11

Descriptive Statistics for Assessment on Threat of COVID-19 Children's Vaccination

	Mean	SD	Scale Response	Verbal Interpretation
Getting a Covid-19 children vaccine will cause my child/children to test positive for COVID-19.	2.89	2.89	Slightly agree	Slightly Threatened
Getting the COVID-19 vaccine could alter my child/children's DNA.	2.64	2.64	Slightly agree	Slightly Threatened
Getting the COVID-19 children vaccine for my child/children is dangerous to his/her/their health.	2.86	2.86	Slightly agree	Slightly Threatened
Getting the COVID-19 children's vaccine could make my child/children sick.	2.70	2.70	Slightly agree	Slightly Threatened
COVID-19 children vaccine could cause autism in my child/children.	2.59	2.59	Slightly agree	Slightly Threatened
COVID-19 children's vaccine contains toxic ingredients.	2.62	2.62	Slightly agree	Slightly Threatened
Grand Mean	2.74	1.042	Slightly agree	Slightly Threatened

Scoring System: 1.00 – 1.49 Strongly Disagree/Not Beneficial; 1.50 – 2.49 Disagree/Least Beneficial; 2.50 – 3.49 Slightly Agree/Slightly Beneficial; 3.50 – 4.49 Agree/Beneficial; 4.50 – 5.00 Strongly Agree/Highly Beneficial 4.49 Threatened; 4.50 – 5.00 Highly Threatened

The overall results were verbally interpreted as "Slightly Threatened" which leads to parents' doubt about the vaccines. Respondents' confidence in the vaccine was dropping due to the fear and feeling threatened of the possible side effects of the Covid-19 vaccines for their children. Though, in a study on COVID-19 Vaccination Intention, Fernandes et al, (2021) explained that parents perceived the threat of COVID-19 to their children as lower and the advantages of receiving vaccines are inferior to the vaccine's potential adverse side effects to their children.

The results in Table 12 indicate that the parents' beliefs on COVID-19 children were slightly beneficial, slightly efficient, and slightly threatened. Belief of the parents' overall score interprets that their confidence to COVID-19 vaccine for children were low. The result signifies that vaccine providers and other health professionals' efforts were insufficient to elevate the confidence of parents on COVID-19 vaccine for children.

Table 12

Descriptive Statistics for Assessment of Parents' Beliefs on COVID-19 Children

	Mean	SD	Scale Response	Verbal Interpretation
Beliefs	3.22	1.117	Slightly Agree	Slightly Utilized
Efficacy	3.16	1.074	Agree	Utilized
Threat	2.26	1.042	Agree	Utilized
Grand Mean	2.88	0.998	Slightly Agree	Slightly Utilized

Scoring System: 1.00 – 1.49 Strongly Disagree/Not Beneficial; 1.50 – 2.49 Disagree/Least Beneficial; 2.50 – 3.49 Slightly Agree/Slightly Beneficial; 3.50 – 4.49 Agree/Beneficial; 4.50 – 5.00 Strongly Agree/Highly Beneficial

Relationship Between Communication Barrier and Sources of Information and Beliefs of Parents on COVID-19 Children's Vaccination

Table 12 shows that respondents' individual communication barrier has a significant relationship with the respondents' beliefs on COVID-19 children's vaccination. This implies that parents' perceptions of the benefits, efficacy, and threat of COVID-19 vaccines for children were affected by their knowledge and understanding. Additionally, respondents' interpersonal communication barrier influences their beliefs about the efficacy of the COVID-19 vaccine for children therefore, the result indicates that their social relationships with family, relatives, friends, and neighbors affect the respondents' beliefs on the efficiency of COVID-19 vaccination for children.

Table 12

Correlation Matrix on the Relationship of Communication Barrier and Sources of Information and Parents' Beliefs on COVID-19 Children's Vaccination

		1	2	3	4	5	6	7	8
1. Individual Communication Barrier	r	__							
	p	__							
2. Interpersonal Communication Barrier	r	0.077	__						
	p	0.317	__						
3. Organizational Communication Barrier	r	-0.006	0.288	__					
	p	0.940	<.001	__					
4. Traditional Media	r	0.174	0.110	0.124	__				
	p	0.022	0.151	0.104	__				
5. New Media	r	0.134	0.375	0.236	0.306	__			
	p	0.082	<.001	0.002	<.001	__			
6. Interpersonal	r	0.100	0.465	0.387	0.437	0.306	__		
	p	0.190	<.001	<.001	<.001	<.001	__		
7. Benefits	r	0.708	0.137	-0.071	0.044	0.023	0.053	__	
	p	<.001	0.074	0.352	0.566	0.771	0.487	__	
8. Efficacy	r	0.690	0.168	0.038	0.083	0.019	0.093	__	__
	p	<.001	0.028	0.623	0.273	0.807	0.222	<.001	__
9. Threat	r	-0.655	-0.024	0.203	0.044	0.048	0.040	-0.728	-0.730
	p	<.001	0.753	0.007	0.561	0.540	0.597	<.001	<.001

However, respondents' beliefs in the benefits and threats of COVID-19 vaccines are not affected by their trust in the people around them. Moreover, respondents' organizational communication barrier impacts their beliefs on the threat of the COVID-19 vaccine for children, nevertheless, their beliefs on the benefits and efficacies of COVID-19 vaccine for children do not affect their organizational communication barrier. Consequently, respondents' sources of information for COVID-19 vaccination do not affect their beliefs in the benefits, efficacy, and threat of COVID-19 vaccines for children.

Relationship of Age and Parents' Beliefs on COVID-19 Children's Vaccination

Table 13 illustrates that the age of the respondents did not affect their beliefs on COVID-19 vaccine benefits, efficacy, and threat to children with p-value of 0.36 (benefit), and 0.24 (efficacy), and 0.57 (threat). Therefore, the result has found that the age of the respondents is not associated with the belief of parents on COVID-19 vaccination for children.

Table 13

Correlation Matrix on the Relationship of Age and Parents' Beliefs on COVID-19 Children's Vaccination

		Benefit	Efficacy	Threat	Age
Beliefs	r	—			
	p	—			
Efficacy	r	0.894	—		
	p	<.001	—		
Threat	r	-0.728	-0.730	—	
	p	<.001	<.001	—	
Age	r	0.069	0.088	-0.043	—
	p	0.365	0.246	0.573	—

Comparison of Parents' Beliefs on COVID-19 Children's Vaccination in Terms of Sex

Mann-Whitney U test was used to determine whether sex/gender has a significant difference. Table 13 reveals that the male and female parents do not have any significant differences in their beliefs on COVID-19 children's vaccination with p-value of 0.304 (benefits), and (0.873 (efficacy), 0.738 (threat).

Table 13

Independent Samples T-test for Parents' Beliefs on COVID-19 Children's Vaccination in Terms of Sex

		Statistic	p-value
Beliefs	Mann-Whitney U	3305	0.304
Efficacy	Mann-Whitney U	3620	0.873
Threat	Mann-Whitney U	3563	0.738

Comparison of Parents' Beliefs on COVID-19 Children's Vaccination in Terms of Income

Table 14 shows the p-value of the respondents' beliefs on the benefit, efficacy, and threat in terms of family income using Kruskal-Wallis. The data illustrates that the parents who receive salary below between 10,957.00 which classified as poor of socio-economic status of the country affect their beliefs on COVID-19 children's vaccination benefits and efficacy with p-value of 0.01 (benefits) and 0.01 (efficacy). However, in terms of belief threat the respondents' salary did not have a significant difference to their belief on the threat of COVID-19 vaccine for children. This demonstrates that poor families do not have enough confidence in the COVID-19 vaccine's benefits and efficacies, thus this group of parents are hesitant to have their children be vaccinate with COVID-19 vaccines.

Table 14

Kruskal-Wallis for Parents' Beliefs on COVID-19 Children's Vaccination in Terms of Sex

	x^2	df	p
Beliefs	14.45	4	0.006
Efficacy	13.06	4	0.011
Threat	6.40	4	0.172

The pairwise comparison on Table 15 shows that parents who receive salary below between 10,957.00 which classified as poor of socio-economic status of the country affect their beliefs on COVID-19 children's vaccination benefits. This demonstrates that poor families do not recognize COVID-19 vaccine for their children as beneficial.

Table 15
Pairwise Comparisons - Benefits

		W	p
10,957.00 – 21,914.00	10,957.00 – below	4.313	0.019
10,957.00 – 21,914.00	21,914.00 – 43,828.00	0.956	0.962
10,957.00 – 21,914.00	43,828.00 – 76,669.00	3.809	0.055
10,957.00 – 21,914.00	76,669.00 – 131,484.00	0.148	1.000
10,957.00 - below	21,914.00 – 43,828.00	-2.475	0.403
10,957.00 - below	43,828.00 – 76,669.00	2.071	0.586
10,957.00 - below	76,669.00 – 131,484.00	-1.670	0.763
21,914 – 43,828.00	43,828.00 – 76,669.00	2.873	0.251
21,914.00 – 43,828.00	76,669.00 – 131,484.00	-0.467	0.997
43,828 – 76,669.00	76,669.00 – 131,484.00	-2.685	0.318

Table 16 shows the p-value of the respondents' beliefs on the efficacy with 0.01. The data shows that the parents who receive salary below between 10,957.00 which classified as poor of socio-economic status of the country affect their beliefs on COVID-19 children's vaccination efficacy. This demonstrates that poor families do not conclude COVID-19 vaccine for their children as efficient for their children's health.

Table 16
Pairwise Comparison - Efficacy

		W	p
10,957.00 – 21,914.00	10,957.00 – below	4.210	0.024
10,957.00 – 21,914.00	21,914.00 – 43,828.00	1.155	0.926
10,957.00 – 21,914.00	43,828.00 – 76,669.00	3.683	0.070
10,957.00 – 21,914.00	76,669.00 – 131,484.00	0.534	0.996
10,957.00 - below	21,914.00 – 43,828.00	-2.196	0.528
10,957.00 - below	43,828.00 – 76,669.00	1.943	0.645
10,957.00 - below	76,669.00 – 131,484.00	-1.406	0.858
21,914.00 – 43,828.00	43,828.00 – 76,669.00	2.751	0.294
21,914.00 – 43,828.00	76,669.00 – 131,484.00	-0.220	1.000
21,914.00 – 43,828.00	76,669.00 – 131,484.00	-2.201	0.526

Conclusions and Recommendations

Communication barriers, sources of information, and parental beliefs play crucial roles in the acceptance of COVID-19 vaccination for children. Clear and effective communication is essential to provide accurate and accessible information about vaccine safety, efficacy, and benefits. Accordingly, there is a significant relationship between individual communication barriers and parents' beliefs in the benefits, efficacy, and threat of COVID-19 vaccination for children. However, organizational barriers do not significantly affect these beliefs. No significant relationship exists between sources of information and parents' beliefs regarding the vaccine. Age does not significantly correlate with parents' beliefs, but income does. Lastly, low-income families lack confidence in the vaccine's benefits and efficacy for their children.

Addressing individual communication barriers is crucial to improving parents' beliefs in COVID-19 vaccination for children. Efforts should also focus on providing accurate and trustworthy information, especially to low-income families. The Health Belief Model (HBM) supports this study by emphasizing that

a person's belief in the threat of illness and the effectiveness of a health behavior predicts the likelihood of adopting that behavior. Development communication plays a vital role in addressing the needs of vulnerable populations through quality communication. To close gaps in immunization programs, educating and empowering parents to make informed decisions about their children's health is essential. Promoting equity and inclusivity in vaccine distribution and access is critical. By continuously evaluating and adapting our approaches, we can overcome barriers to vaccination and ensure the health and well-being of all children in our communities.

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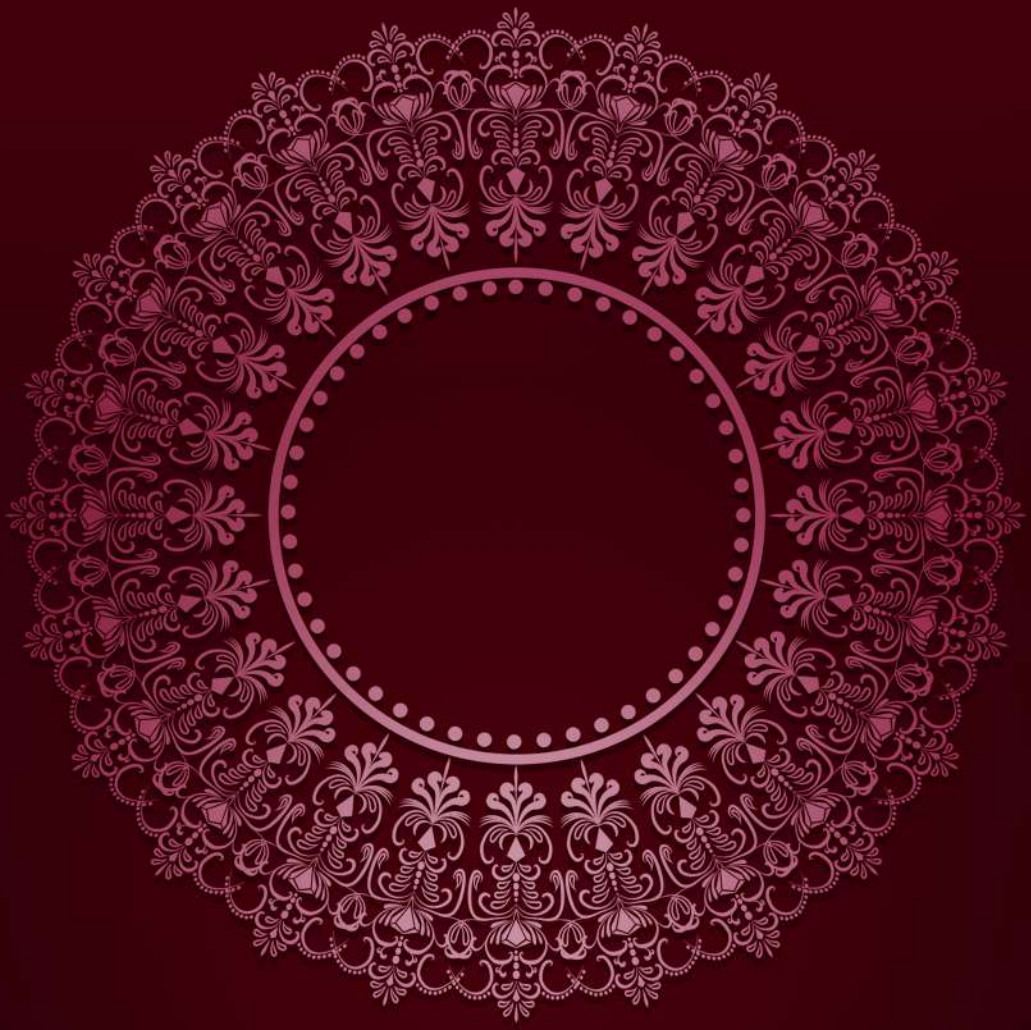

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