

DisKURS

INTERNATIONAL MULTIDISCIPLINARY RESEARCH JOURNAL



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The DisKURSO International Multidisciplinary Research Journal is published quarterly, meaning four issues are released each year. This schedule allows for regular sharing of research findings and developments, while providing enough time for peer review and editorial work. By publishing quarterly, the journal ensures a balance between timely updates and high-quality content.

Each issue covers a range of topics, offering valuable research that is both relevant and impactful. The quarterly schedule also gives authors time to improve their work based on feedback, maintaining the journal's credibility and integrity. Overall, this regular publication cycle keeps the academic community updated on the latest research and supports ongoing scholarly growth.

ABOUT THE PUBLISHER

The DisKURSO International Multidisciplinary Research Journal reflects the institution's commitment to fostering cross-disciplinary research and facilitating academic exchange. As a respected publication, it provides a platform for scholars, researchers, and professionals from various fields to share their findings, insights, and innovations. Published by Zas Digital Institute Training and Development Services (DITADS), the journal focuses on the dissemination of high-quality research spanning a broad array of disciplines, including but not limited to economics, business management, public administration, and other related fields.

The journal serves as a vital resource for advancing knowledge and facilitating dialogue among researchers, practitioners, and policymakers. By embracing interdisciplinary research, DisKURSO aims to address the complex issues of today's global society. It seeks to provide well-rounded solutions and perspectives by integrating ideas from various sectors of knowledge, enabling more holistic approaches to solving contemporary challenges.

Through its rigorous peer-review process and commitment to academic excellence, the DisKURSO International Multidisciplinary Research Journal aims to contribute significantly to the global research community. The journal offers valuable insights into contemporary challenges and solutions, pushing the boundaries of academic inquiry in its focus areas. By providing a forum for the exchange of diverse ideas and research, it continues to promote innovation, foster intellectual growth, and inspire new thinking across disciplines.

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With its well-established credentials and adherence to national and international standards, DisKURSO stands as a cornerstone for academic excellence, bridging diverse fields of study and facilitating a global exchange of knowledge and ideas.

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RATIONALE

The DisKURSO International Multidisciplinary Research Journal was established to serve as a dynamic platform for the exchange of knowledge and ideas across various fields of study. With the growing need for interdisciplinary research that addresses complex global challenges, this journal aims to foster collaboration among scholars, researchers, and professionals from diverse academic backgrounds. By providing a space for high-quality research in fields such as education, health, business, social sciences, and technology, DisKURSO contributes to the development of solutions that are both innovative and comprehensive.

The journal's primary goal is to enhance academic discourse and promote the dissemination of cutting-edge research, offering valuable insights that can inform policy, improve practices, and inspire future studies. By including a wide range of topics, from educational development to socioeconomic issues, the journal reflects the diverse and interconnected nature of today's globalized world. Its multidisciplinary approach allows for the examination of issues from different angles, helping to create more robust and holistic solutions.

DisKURSO also plays a crucial role in advancing the academic community by providing a platform for emerging voices and encouraging scholarly engagement across borders. Through its peer-review process, the journal ensures that only well-researched, impactful, and scientifically rigorous articles are published, maintaining its academic integrity and reputation. The journal not only supports researchers but also engages a broader audience, including policymakers and practitioners, by bridging the gap between academic research and real-world application.

In line with the vision of Zas Digital Institute Training and Development Services (DITADS), DisKURSO aims to contribute significantly to both local and global research communities. It is committed to promoting academic excellence and fostering a deeper understanding of contemporary issues that affect societies worldwide.

This journal represents a vital tool for the ongoing development of knowledge and innovation, making it an indispensable resource for researchers, academics, and professionals who are committed to making a positive impact on society.

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Development of School Forms Generator System for the Department of Education

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ABSTRACT

The School Forms Generator System is specially developed for Puerto National High School located in Puerto Cagayan de Oro City. The main purpose of the system is to address the inefficiencies of the current manual process. The manual system is time-consuming, prone to errors, and can lead to inaccurate records. The researchers used the Modified Waterfall Model in System Development Life Cycle methodology that served as a guide for the development of the system. The system is accessible online via web browser, providing users. The system's effectiveness and usability were determined through testing and evaluation. Therefore, the researchers had concluded that the developed system was effective and addressed the identified problems. The system generates the two major reports that include the student's grades, the school form 9 and school form 10, simplifying the process and improving record accuracy. Additionally, the implementation of this computerized system not only ensures a seamless and organized workflow but also brings about a significant improvement in overall processes and operational effectiveness.

INTRODUCTION

Progress report cards play a vital role in a student's academic journey, serving as a communication tool between schools and parents regarding students' academic performance and classroom behavior. These documents contain subject grades, which are derived from students' scores in various assessments set by teachers and are later transmuted into numerical or letter grades.

In the Philippines, teachers are responsible for preparing and submitting multiple academic documents, including progress report cards (School Form 9) and permanent records (School Form 10), alongside other required school forms. While the Department of Education's Learners Information System (LIS) generates some records, such as attendance and student monitoring, teachers still manually complete these critical forms. This manual process is time-consuming, error-prone, and contributes significantly to teacher workload, particularly in schools with large student populations. Puerto National High School, for example, has 1,600 students and 56 advisers, leading to delays and challenges in grade submission and documentation (Mingoa, 2017).

The LIS, established through DepEd Order 26, S. 2015, was designed to create an accurate registry of students and schools, ensuring data availability for planning and resource allocation (DepEd, 2015). However, its limitations require teachers and registrars to continue handling numerous records manually, adding to administrative burdens. The registrar's office, responsible for maintaining transcripts and curriculum records, also faces difficulties in managing and retrieving large volumes of student data.

To address these challenges, educators are increasingly seeking technological solutions that streamline school management processes. Automated systems for budget and grade

management have been recognized as essential tools for improving efficiency (Means, Roschelle, Penuel, Sabelli, & Haertel, 2014). Integrating technology into administrative tasks not only reduces paperwork but also enhances accuracy, timeliness, and overall productivity. As 21st-century education continues to evolve, teachers are expected to leverage technology to maximize their effectiveness (Ertmer & Ottenbreit-Leftwich, 2010).

This study aims to design, develop, and evaluate a computer-based system for Puerto National High School that will provide an efficient platform for teachers to manage students' grades. Specifically, it seeks to:

- Determine and analyze system requirements for development.
- Design a system that automatically consolidates student grades from different subject teachers.
- Develop a computerized system based on user and system requirements.
- Test the system to verify its design.
- Evaluate its functionality and usability in terms of effectiveness and efficiency.

By automating the management of student records, this system aims to alleviate teachers' administrative workload, enhance accuracy in grade processing, and improve overall efficiency in school operations.

TECHNICAL BACKGROUND

Badaza (2020) highlighted the importance of report card management systems for providing accurate and timely information to aid decision-making in secondary schools. Kamugisha et al. (2022) emphasized report cards as key communication tools between advisers, students, and parents, helping to convey students' academic progress.

Lubanga et al. (2018) discussed the shift from paper-based to web-based student information systems, improving efficiency in managing student data. Sterbini (2020) focused on online grading systems, which streamline grading and reduce administrative tasks in educational institutions.

Balinton et al. (2018) demonstrated that computerized systems for generating school forms are more reliable and efficient than manual methods. Bobiles et al. (2019) developed a student information system to automate record-keeping, ensuring data security and reliability. Bustamante et al. (2020) implemented a Student Information System (SIS) that simplified the retrieval and management of student data, while Laroa (2023) introduced an automated grading system to reduce human error and expedite grade reporting.

Plata (2020) created a web-based Pupils' SCHOOL FORM 10-E Information System to simplify the management of student academic records. Agapito (2022) explored online grading systems that enable professors to efficiently submit grades and access records. The proposed system aligns with these studies by automating grade management and reducing administrative workload, improving accuracy and efficiency in handling student records and grades.

MATERIALS AND METHODS

In this part of the study, the researcher used the System Development Life Cycle (SDLC) to ensure all necessary steps were taken to develop the computerized system. This process involved several phases, including gathering and analyzing requirements, design, development, testing and evaluation, and deployment. By following this process, it ensured that all necessary steps were taken to create a fully functional, effective system.

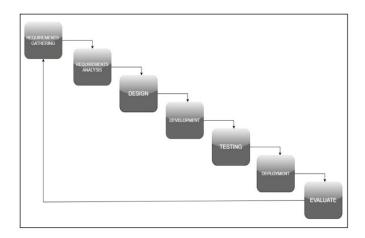


Figure 1. Modified Waterfall Model of SDLC

Requirements Gathering and Analysis Phase

In this phase, the researcher collected information that was important in the development of the computerized system. Requirement gathering and analysis is the first and important step in software development activities. To achieve this, the researcher prepared a letter of intent that was addressed to the Principal of Puerto National High School. The researcher also prepared a set of guide questions to conduct interviews with the advisers. The researcher analyzed the responses from the interviews. The purpose of these interviews was to identify any problems the advisers had encountered. The problems that were identified during the interview were addressed through the implementation of the system.

Design Phase

In the design phase, the researcher provided a detailed design of the system that helped users understand the entire concept of the system. During this phase, a context-level diagram was used to depict the system's flow and define how the user and the system interacted. The context level diagram gave the researchers an idea of what the system was all about and helped them understand how it worked. To do this, the researcher used a few other diagrams, such as the Entity- Relationship Diagram (ERD), which showed how different things in the system were connected, a Use-Case Diagram, which showed how different users would use the system, and the Data Flow Diagram, which showed how data moved through the system, including how it got in and out.

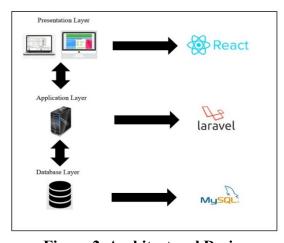


Figure 2. Architectural Design

Development Phase

In this phase, the system's architectural design was developed, as it is only accessible online. A web hosting was configured for the ICT administrator to manage the system. To design the presentation layer, the researchers used ReactJS Framework and CSS to create a visually appealing graphical design. Additionally, they applied the Laravel Framework for the application layer, which is the second layer of the system. Finally, to store and retrieve data, the researcher used the MySQL database for the Data Layer.

Testing Phase

During the testing phase of the system, the developed system was tested for its functionality to check for any faults and failures. Any bugs that were discovered during this process were addressed and fixed before moving on to the next stage. All of the modules developed in the implementation phase were tested individually, and they were integrated into the complete system. The system was then tested to ensure that all modules worked together seamlessly. During the testing phase, faults or failures in the system were identified and addressed promptly. After solving all issues, the entire system was tested again to ensure that it functioned smoothly and met the necessary requirements.

Evaluation Phase

In this phase, the system was tested and evaluated to determine its consistency. The researcher invited five random advisers to use the system, while an ICT administrator acted as a user for the admin. Each user evaluated the system's usability using the System Usability Scale, a standardized metric, to help the researcher identify and verify the system's usability. The ICT administrator and advisers asked if the overall functionalities had been met. The researcher provided guidance and instructions on the appropriate usage of each functionality. The evaluation was necessary to test the system and meet the users' expectations initially. The system was open for necessary changes, adjustments, and enhancements to address any particular problem. The researcher used various testing methods to conduct the evaluation.

Deployment Phase

Several steps were taken during the deployment phase. The system was first packaged for distribution. In order to make it simple for users to install the software, all required files, dependencies, and documentation were put together. The system was complete and ready to be accessed on users' devices through the packaging process. Once packaging was finished, there were various ways to distribute the system. It might have been made available online or sent directly to people via email or another form of contact.

In addition to the distribution process, it was essential to provide training and documentation to the users. This ensured that they understood how to use the system effectively and maximized its benefits. Training was conducted through the manual that was given to the ICT administrator and adviser. Based on this feedback, necessary adjustments and improvements were made to address any issues, bugs, or feature requests that were not identified during the testing phase.

RESULTS AND DISCUSSION

Requirements Gathering

An interview was conducted to gather user requirements. The Interview was attended by the school principal, a teacher, and a staff member from the registrar's office. The

researcher asked for the different school forms used in the school, like the school form 10, which is the permanent record of the student, and the school form 9, which contains the grade of the student per school year or per semester. The researcher also asked for the school's registration form, which is used when a student enrolls in the school. The principal gave the researcher a template of the different school forms. The information gathered by the researcher was used to formulate the system requirements involved in the study. The data that were gathered were the data that were fed to the system.

Process Definition

For the school form 9 manual process, the teacher inputs all students' grades for each subject, then inputs learners' grades for the grading period, and calculates the GPA (Grade Point Average). The teacher comments on students' academic performance and behavior, inputs all the students' details, and finally signs the report card before it is released. Next, for the school form 10, all the grades of the students are gathered from each subject for all the school years. The teacher inputs learners' grades for all the grading periods and calculates the WAG (Weighted Average Grade). The teacher inputs all the students' details, signs the report card, and finally, the school form 10 will be released. These forms will be given to the parent or guardian of the student.

Requirement Analysis Functional Requirements

Functionality requirements serve as the fundamental capabilities of the system. The functional requirements of each user involved in the system are shown in Table 1 for the ICT Administrator and Table 2 for the Adviser. The functional requirements list for each user is included in these tables along with the requirements name and a brief summary.

Table 1. Functional Requirement for ICT Administrator

Requirement Name	Description	
Login	ICT Admin shall input username and password to access the system.	
Load list	The ICT administrator can view the load list	
Manage Sections	The system allows the ICT admin to update, add, and view sections. Also, it can add students and set subject details.	
Grade Settings	The system allows the ICT administrator to lock and unlock specific quarter or section.	
Manage Students	The system allows the ICT admin to update, view, add, and delete students.	
Manage Subjects	The ICT admin can update, view, and add, subjects.	
Manage Scho Year	oThis system allows ICT admin to manage the school year. ICT admins can view a list of all users in the system and their school year coverage.	
Manage Rooms	The ICT admin can update, view, and add, rooms.	
Manage Account	The ICT Admin can update and view the details of his/her profile in the settings.	
View Analytics	The administrator can view the analytics	

Table 1 shows the functional requirements for the ICT administrator. The login requirement shall require the input of username and password to access the system. The system shall allow the ICT admin to add, view, and update the student's information. In the functional requirements, the system shall allow the ICT admin to add a new student to the system; the ICT administrator would need to create a new student record. This would include the student's name, contact information, and other relevant information. To create a new section for a new class, the ICT administrator would need to create a new section record. This would include the name of the section, the adviser's name, and the subject being taught. Also, it can import subjects,

update, and view the existing subjects in the list. The system shall allow for managing rooms by viewing what rooms are assigned to each section, and can add and change rooms. In managing the school year, the system shall allow the ICT admin to view a list of all accounts in the system and their school year coverage. The system will allow managing accounts that can view, update, and add accounts, as well as their roles as admin or adviser. Lastly, to manage the profile of the ICT admin, who can update and view the details of the profile in the settings.

Table 2. Functional Requirement for Adviser

Requirement Name	Description
Login	Adviser shall input username and password to access the system.
View Section	The adviser can view the assigned section.
Upload Attendance	The system allows the adviser to upload a file that contains attendance data for their students.
Upload Behavioral	The system allows the adviser to upload a file that contains behavioral data about their students.
Upload Grades	The adviser can upload grades and total attendance data to track student progress and generate reports.
Update Profile	The user/adviser can update and view the details of his/her profile in the settings.
Print 138 form	The system allows the adviser to print the school form 9 for students.
View Load	The adviser can view the assign subject.

Table 2 shows the functional requirements for the Adviser. The login requirement shall require the input of username and password to access the system. The system shall allow the Adviser to update, view, and delete the student's information. In the functional requirements, the system shall allow the adviser to manage a student's section that can view the section's students. In uploading grades, the adviser will track the total attendance data to see the student's progress and generate reports. In managing the profile of an adviser, they can update and view the details of their own profile settings. And lastly, the system will allow the adviser to print the 137/138 form for students.

Non-Functional Requirements

In this part, the researchers illustrated the non-functional requirements of the system. A brief description of each non-functional requirement is shown in Table 3.

Table 3. Non-Functional Requirements of the System

Requirement Name	Description
Accessibility	The system is a web-based application which can be accessed over a network connection using https.
Availability	The system will be available anytime, if there is a stable internet connectivity.
Reliability	The system should be reliable and available 24/7.
Security	The system should be secure and protect user data from unauthorized access.
Usability	The system should be easy to use for both ICT administrators and advisers.
Documentation	The system should be well-documented so that users and developers can easily understand how to use it.
Training	The system should come with training materials so that users can learn how to use it.

System Design

This part shows the design of the system to illustrate the process flow with the use of flow charts, context level diagrams, use case diagrams, and database designs. The figure below depicts the Flowchart Diagram for the ICT Administrator. Before using the system, the administrator must first log in with their username and password. The system checks the ICT Administrator's credentials to make sure they are valid. If the credentials are valid, the system logs the ICT Administrator in and displays the dashboard. The dashboard contains a menu of options that the ICT Administrator can select to perform different actions, such as manage users, account settings, manage sections, manage section students, import students, manage school year, and the admin can also assign subjects, an adviser, and update grades.

DATA FLOW DIAGRAM

The figure below shows the flow of data in the system. The entities involved are the advisers and the ICT Administrator. The common process of the two is the Login process.

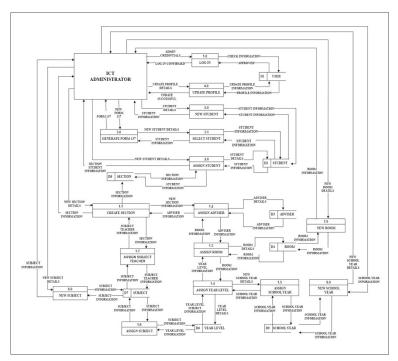


Figure 3. Data Flow Diagram for ICT Administrator

The figure above depicts the Data Flow Diagram for the ICT Administrator. To begin, the ICT administrator must log in. If the account exists in the user database, the administrator will allow access to the system. Once logged in, the administrator can create a section. To create a section, first, assign an advisor. Select a specific advisor for every section and assign a room. Then, assign a schedule and school year. Finally, assign the quarter and student. Once these steps are complete, the section will be created.

Next, to update a grade, the ICT administrator needs to have the student information, quarter information, and subject information. Once this information is gathered, the administrator can update the grade. Additionally, the ICT administrator can also update profiles.

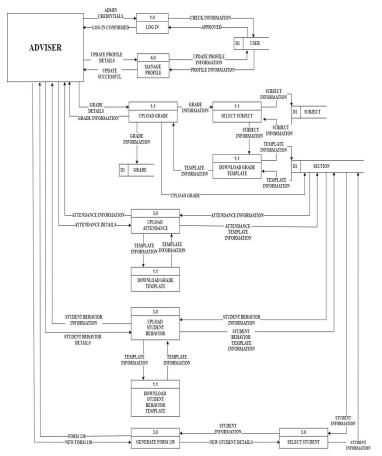


Figure 4. Data Flow Diagram for Adviser

The figure above illustrates the Data Flow Diagram for the Adviser. To begin, the adviser must log in. If the account exists in the user database, the adviser will be allowed access to the system. Once logged in, the adviser can perform various tasks. To generate forms 137 and 138, the adviser will need student information, subject information, and grade information. Once this information is gathered, the forms will be generated and printed. To upload grades, the adviser will need student information, subject information, and grade information. Once this information is gathered, the grades can be uploaded to the system. To upload attendance, the adviser will need to select the student. Once the student is selected, the attendance can be uploaded.

The figure above depicts the Use Case Diagram for Adviser. For the actor Adviser, they should log in first to the system to gain access. Afterwards, the adviser can now have access to the main functionalities, namely: Manage section students, Print School form 10 and 138, Account settings. In the Manage section students, the adviser can view section students and upload grades which can upload the total attendance of the students. In the Account settings, the adviser can also view their profile and update their details.

DATABASE DESIGN

The researcher illustrated an Entity-Relationship Diagram to represent the system's entities and their relationships using the Firebase real-time database. See the presented figure below:

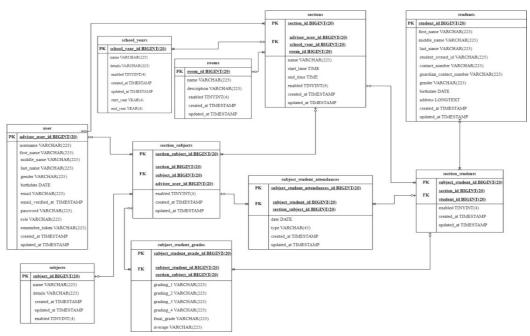


Figure 5. Logical Entity Relationship Diagram

The figure above shows the Logical Entity Relationship Diagram. The admin and adviser have accounts, and the admin can assign the adviser to have a section. Then, the section has a subject that has a specific year level, school year, and a room. The subject has students and has a grade, while the grade is uploaded by the adviser.

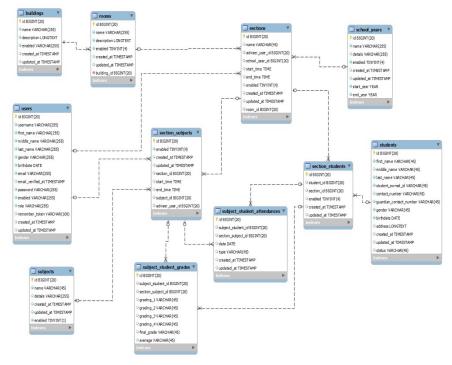


Figure 6. Physical Entity Relationship Diagram

Development

In this phase, the architectural design of the system is presented since the system is only accessible online. A web hosting was configured for the ICT administrator to manage the system. To design the presentation layer, the researchers used React JS Framework and CSS

to create a visually appealing graphical design. Additionally, they applied the Laravel Framework for the application layer, which is the second layer of the system. Finally, to store and retrieve data, the researcher used the MySQL database for the Data Layer.

Testing and Evaluation

In order for the system to be evaluated, a demonstration deployment was conducted. This is to simulate the system on a selected group of participants, ensure that the functionalities conform to user requirements, and evaluate how usable the system is. The usability of the system was measured by measuring its effectiveness, efficiency, and satisfaction. A standardized metric was used for measuring the usability of the system, the System Usability Scale.

A usability study plan was drafted, and the plan served as a guide during the usability testing. The results of the usability testing are presented below. To assess the system's usability rating, the testing was carried out using a total of 6 respondents for Advisers and two respondents for ICT Admin. The values of the testing results are graded from 1 to 5 (Strongly Disagree – Strongly Agree). The raw score of the System Usability Scale is shown in Table 6; meanwhile, Table 7 is the computed score of the System Usability Scale.

Table 6. SUS Raw Score

					Participants				
Item #	School form 10 and 138 Generator System for Secondary School	P-1	P-2	P-3	P-4	P-5	P-6	P- 7	P- 8
1	I think that I would like to use this system frequently	5	5	3	5	4	4	5	5
2	I found the system unnecessarily complex	4	2	2	1	1	1	1	4
3	I thought the system was easy to use	5	5	4	4	5	5	5	3
4	I think that I would need the support of a technical person to be able to use this system	4	1	4	2	1	1	3	5
5	I found the various functions in this system were well integrated	5	5	4	4	5	5	4	1
6	I thought there was too much inconsistency in this system	2	1	2	3	1	1	1	2
7	I would imagine that most people would learn to use this system very quickly	5	5	3	5	5	5	4	2
8	I found the system very cumbersome to use	2	2	3	3	1	1	1	3
9	I felt very confident using the system	4	5	3	3	5	5	5	3
10	I needed to learn a lot of things before I could get going with this system	2	1	2	3	1	1	3	4
	TOTAL	38	32	30	33	29	29	32	32

Legend: (Strongly Disagree); 2(disagree); 3(Neutral); 4(Agree) 5(Strongly Agree)

Table 7. SUS Computed Score

		•	•	•		Par	ticipan	its	
Item #	School form 10 and 138 Generator System for Secondary School	P-1	P-2	P-3	P-4	P-5	P-6	P- 7	P- 8
1	I think that I would like to use this system frequently	4	4	3	3	4	2	4	4
2	I found the system unnecessarily complex	1	4	4	4	4	3	3	1
3	I thought the system was easy to use	2	4	4	4	3	3	4	4
4	I think that I would need the support of a technical person to be able to use this system	0	2	4	4	3	1	4	1
5	I found the various functions in this system were well integrated	0	3	4	4	3	3	4	4
6	I thought there was too much inconsistency in this system	3	4	4	4	2	3	4	3
7	I would imagine that most people would learn to use this system very quickly	1	3	4	4	4	2	4	4
8	I found the system very cumbersome to use	2	4	4	4	2	2	3	3
9	I felt very confident using the system	2	4	4	4	2	2	4	3
10	I needed to learn a lot of things before I could get going with this system	1	2	4	4	2	3	4	3
	TOTAL	16	34	39	39	29	24	38	30
	AVERAGE SCORE				7	8			

Legend: (Strongly Disagree); 2(disagree); 3(Neutral); 4(Agree) 5(Strongly Agree)

Table 8. Grades and Adjectives to Describe SUS Score

Grade	SUS	Adjectival Rating	Acceptable/Not Acceptable
A+	84.1-100	Best Imaginable	Acceptable
A	80.8-84.0	Excellent	Acceptable
A-	78.9-80.9		Acceptable
B+	77.2-78.8		Acceptable
В	74.1-77.1		Acceptable
B-	72.6-74.0		Acceptable
C+	71.1-72.5	Good	Acceptable
C	65.0-71.0		Marginal
C-	62.7-64.9		Marginal
D	51.7-62.6	OK	Marginal
F	25.1-51.6	Poor	Not Acceptable
F	0-25	Worst Impossible	Not Acceptable

The System Usability Scale (SUS) score is shown in Table 8. The score was calculated by subtracting one from each odd-numbered question's score, subtracting the even-numbered question scores from five, summing these, and multiplying by 2.5. The final usability score is 78, indicating the system is highly usable with a good rating. The highest average score of 38, from the first adviser, reflects their ease with technology. The lowest average score of 29, from the second adviser and one ICT admin, is due to unfamiliarity with the system and

numerous suggestions for improvement. Success rates and task efficiency are detailed in the tables below. Admin 2's usability study results in Table 16 show difficulties in system access, account creation, updating, finding the download template for grades and attendance, and printing School Form 9. However, Admin 2 completed all tasks after thorough exploration.

Open-ended questions were used in order to understand more about the reactions and opinions of the participants straight from themselves. The majority of the participants like the user friendliness of the system, especially the interface, but some are a bit confused about the functionality since it is unfamiliar and new to them. Also, most respondents using the system have suggestions because there are some features that they want to be automated. However, the majority of the participants felt happy in using the system because it can make their job easier. Overall, they appreciate the system, especially in generating the School form 9 and 137. Also, a comparison test was conducted in which the manual process of creating the forms and the computerized system were compared.

Deployment

Several steps were taken during the deployment phase. The system was first packaged for distribution. In order to make it simple for users to install the software, all required files, dependencies, and documentation were put together. The system was complete and ready to be accessed on users' devices through the packaging process. Once packaging was finished, there were various ways to distribute the system. It might have been made available online or sent directly to people via email or another form of contact.

In addition to the distribution process, it was essential to provide training and documentation to the users. This ensured that they understood how to use the system effectively and maximized its benefits. Training was conducted through the manual that was given to the ICT administrator and adviser. Based on this feedback, necessary adjustments and improvements were made to address any issues, bugs, or feature requests that were not identified during the testing phase.

CONCLUSION

In conclusion, the Development Department Education School's form 10 and 137 Generator System for Secondary School successfully addressed the challenges faced by advisers and ICT administrators in the manual process of handling student records. By adopting a design and development approach, the study meticulously gathered data, designed interfaces, implemented these designs, and rigorously tested the system's functionalities. This iterative process ensured that the system met all necessary requirements.

The usability study, which resulted in a score of 78, indicated that the application is effective, efficient, and well-accepted by users, despite some initial navigation challenges. Comparisons between the system and the manual process demonstrated significant improvements in addressing errors, inconsistencies, and time management.

Finally, the web-based application provides a robust solution for advisers and subject teachers, enhancing their productivity and making their tasks easier to accomplish. The system has met and even exceeded its objectives, showcasing a clear improvement in time efficiency and productivity for its users.

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Divorce Bill in the Philippines: Perspective of Religious Sectors in the Municipality of Tagoloan, Misamis Oriental

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ABSTRACT

This study explored the perspectives of various religious sectors in the Municipality of Tagoloan, Misamis Oriental, on the proposed Divorce Bill in the Philippines. It aimed to analyze how religious beliefs, doctrines, and moral principles influenced local attitudes toward the legalization of divorce. Utilizing a descriptive-quantitative research design, data were gathered from 169 respondents representing different religious denominations through a researcher-made survey questionnaire. The study focused on key areas such as legal grounds, financial settlement, and child custody and support, along with the moral, doctrinal, and social implications of the Divorce Bill. Findings revealed a generally moderate level of support for the Divorce Bill among respondents, with variations observed based on demographic profiles such as age, gender, religious affiliation, and educational attainment. Statistical analysis showed significant differences in perspectives when grouped according to these demographic factors. Furthermore, a significant relationship was found between the extent of religious perspectives and their stance on the provisions of the Divorce Bill. The results highlighted the influential role of religious beliefs and cultural values in shaping public opinion on marital legislation. The study concluded that understanding these perspectives was essential for framing inclusive and balanced policies on divorce that considered both legal rights and deeply rooted moral convictions within Filipino communities.

INTRODUCTION

The issue of divorce has been a significant topic in various countries, as many societies have adjusted their legal systems to accommodate the changing nature of marriage and family life. In several Western nations, such as the United States and the United Kingdom, divorce laws have evolved to grant individuals more autonomy in dissolving marital unions that are no longer functional or are harmful to the well-being of the involved parties. These changes reflect broader shifts towards individual rights and the recognition of marital breakdowns as a complex social issue that requires legal recourse. Divorce has also been framed as a crucial means of safeguarding the personal happiness and safety of individuals, especially in cases involving domestic violence or irreconcilable differences (Amato & James, 2020).

In contrast to countries that have liberalized their divorce laws, the Philippines remains one of the few nations where divorce is not legally recognized. It has been a long-standing issue in the Philippines, as it is one of the last remaining countries where divorce is not legally recognized, alongside the Vatican. This lack of legal recourse for marital dissolution reflects the strong influence of the Catholic Church, which continues to uphold the sanctity and indissolubility of marriage. While annulment and legal separation are options, they are seen as insufficient by many advocates who argue that these processes are expensive, lengthy, and fail

to address the needs of ordinary citizens who are trapped in unhealthy marriages (Lichauco-de Leon, 2019).

The introduction of various versions of the Divorce Bill in the Philippine Congress over the years has reignited discussions on whether or not the country should legalize divorce. In 2018, the House of Representatives approved a version of the Divorce Bill, marking a significant step forward. However, its progress in the Senate has been slow, largely due to opposition from religious groups and conservative sectors. Other religious denominations, including various Christian sects and Muslim groups, have had differing views, adding complexity to the national debate (Nuguid, 2021).

The religious dimension was central to the discourse on the Divorce Bill in the Philippines. Religious institutions, particularly the Catholic Church, argued that marriage was a sacred bond that should not be broken, aligning with the Church's teachings on the permanence of marital union. Surveys conducted over the years showed that while many Filipinos, especially Catholics, maintained conservative views about marriage, there was also growing public support for divorce, particularly among younger generations and those living in urban areas (Mangahas & David, 2020). This trend suggested that while religious beliefs remained influential, societal attitudes were gradually shifting toward a more pragmatic view of marriage, one that acknowledged the realities of domestic abuse, infidelity, and the breakdown of marital relationships.

While annulment and legal separation existed as legal remedies, these processes were costly, time-consuming, and not accessible to the majority of Filipinos. In rural areas such as Tagoloan, Misamis Oriental, access to these options was further limited by geographic, economic, and cultural factors. As in many parts of the Philippines, marriage in Tagoloan was viewed not only as a legal contract but also as a deeply sacred union, strongly influenced by religious beliefs. The Roman Catholic Church, which had a significant presence in Tagoloan, was vocal in its opposition to the Divorce Bill, adhering to the belief that marriage was a lifelong covenant. This perspective aligned with the Catholic doctrine on the indissolubility of marriage, where divorce was seen as undermining the sanctity of the family. Other Christian denominations in the area, such as the Iglesia ni Cristo and evangelical groups, may have shared similar sentiments, though there were nuances in their doctrinal interpretations (Nuguid, 2021).

Despite the ongoing national debate on the Divorce Bill in the Philippines, there was limited research that focused specifically on the views of religious sects at the local level, particularly in municipalities like Tagoloan, Misamis Oriental. Most studies on the Divorce Bill primarily examined the perspectives of legislators, women's rights advocates, and broader social groups, but very few delved into how religious groups in smaller, rural settings shaped public opinion on this issue. This created a gap in understanding how local religious beliefs, which were integral to many rural communities, influenced attitudes toward divorce legislation (Bernal, 2019). Examining the views of religious sects in Tagoloan could fill this gap by offering localized insights that might not be captured in national surveys or policy discussions.

The main purpose of this study was to examine and analyze the views of various religious sects in the Municipality of Tagoloan, Misamis Oriental, regarding the proposed Divorce Bill in the Philippines. The aim was to understand how religious beliefs influenced local opinions on divorce legislation and to identify any potential impact these views may have had on the broader national debate.

MATERIALS AND METHODS

The study employed a descriptive-quantitative research design to systematically assess the perspectives of religious sectors in the Municipality of Tagoloan. A structured survey questionnaire was distributed to 169 respondents across different denominations, including Roman Catholic, Iglesia ni Cristo, Born Again Christians, Muslims, and others. The instrument measured perceptions across three key domains: Legal Grounds, Financial Settlement, and Child Custody and Support. Demographic data such as age, gender, religious affiliation, civil status, education, cultural background, and family income were also collected.

Data were analyzed using frequency and percentage distributions, mean, and Analysis of Covariance (ANCOVA) to determine differences in perspectives among groups. Ethical standards were observed, including informed consent and confidentiality of responses.

RESULTS AND DISCUSSION

1. What is the profile of the respondents in terms of Age, Gender, Religious Affiliation, Educational Attainment, Civil Status, Cultural Background, and Family Income?

Age Range	Frequency (f)	Percent (%)
18-22	22	13.02
23-27	19	11.24
28-32	20	11.83
33-37	19	11.24
38-42	27	15.98
Over 43 years old	62	36.69
Total	169	100

Table 4. Distribution of Respondents in Terms of Age Profile

Table 4 reveals that the majority of respondents were over 43 years old, comprising 36.69% of the total 169 participants, indicating that mature adults dominate the religious sector in Tagoloan. This finding implies that religious activities and decision-making are largely influenced by older individuals who often hold leadership and advisory roles within their organizations. Their age and extensive experience contribute to more conservative perspectives on issues such as the Divorce Bill, reflecting long-held values that uphold the sanctity of marriage. The dominance of older respondents suggests that discussions and attitudes toward divorce within religious circles are guided by traditional beliefs rather than progressive or liberal views. Such a demographic trend may hinder acceptance of legal reforms related to divorce due to the influence of conservative leaders. Consequently, the limited representation of younger adults highlights a generational gap in perspectives, suggesting that future dialogue on the Divorce Bill may evolve only as younger members become more engaged in religious and social discourse.

Table 5. Distribution of Respondents in Terms of Gender

Gender	Frequency (f)	Percent (%)
Male	78	46.15
Female	91	53.85
Total	169	100

Table 5 reveals that the majority of respondents were female, accounting for 53.85% of the total 169 participants, while males comprised 46.15%, indicating a slightly higher representation of women in the religious sectors of Tagoloan. This finding suggests that women are more active participants in church-based activities, community outreach, and faith-related discussions, which made them more visible and engaged in the study. Their active involvement

in family and moral issues may have also influenced their willingness to express views on sensitive topics such as marriage and divorce. The predominance of female respondents implies that discussions surrounding the Divorce Bill within religious groups may have leaned toward nurturing, empathetic, and family-centered perspectives. Conversely, the slightly lower male participation hints at a potential underrepresentation of more traditional or patriarchal standpoints often associated with male leadership in religious settings. Overall, the gender composition underscores the importance of female voices in shaping the moral and emotional discourse on divorce, while also highlighting the need for gender balance to capture a more inclusive understanding of religious perspectives on marital and family issues.

Table 6. Distribution of Respondents in Terms of Religious Affiliation

Religious Affiliation	Frequency (f)	Percent (%)
Roman Catholic	35	20.71
Iglesia Filipina Independiente	22	13.02
United Church of Christ in the Philippines	16	9.47
Seventh Day Adventist	12	7.10
Iglesia Ni Cristo	42	24.85
Islam	8	4.73
Born Again Christian	34	20.12
Total	169	100

Table 6 indicates that the majority of respondents belonged to Iglesia Ni Cristo (INC), accounting for 24.85% of the total 169 participants, showing the group's strong religious presence and active engagement in Tagoloan. This dominance highlights the organizational structure and unity of INC members, who often participate collectively in civic and moral discussions due to their centralized leadership and shared doctrinal beliefs. Their strong adherence to traditional teachings on marriage likely influenced the overall conservative tone of opinions expressed toward the Divorce Bill. The results suggest that the religious discourse in Tagoloan may have been shaped predominantly by Christian perspectives, particularly those of the INC, which historically opposes divorce. The limited participation of minority religions such as Islam, which permits divorce under Sharia law, points to a lack of diversity in viewpoints. Consequently, future studies should consider broader religious inclusion to ensure a more balanced and representative understanding of moral and social issues, such as the legalization of divorce in the Philippines.

Table 7. Distribution of Respondents in Terms of Education Attainment

Education Attainment	Frequency (f)	Percent (%)
High School Level	9	5.33
High School Graduate	32	18.93
Elementary Level	3	1.78
Elementary Graduate	6	3.55
College Level	54	31.95
College Graduate	60	35.50
Master's Degree	4	2.37
Doctorate Degree	1	0.59
Total	169	100

Table 7 reveals that the majority of respondents were college graduates, comprising 35.50% of the total 169 participants, indicating that a substantial portion of Tagoloan's religious sector was composed of individuals with higher education. This suggests that many participants possessed the knowledge and analytical skills necessary to engage in discussions about complex social and legal issues such as the Divorce Bill. Educated individuals are generally more exposed to diverse viewpoints and tend to approach moral debates with a balance of

critical thinking and empathy, leading to more informed perspectives. The predominance of college-educated respondents implies that the religious discourse surrounding divorce may have been influenced by participants who understood both the moral teachings of their faith and the societal implications of legal reform. However, the minimal representation of doctoral holders suggests a limited presence of advanced theological or academic analysis within the group. Overall, the data imply that education played a vital role in shaping how the religious community in Tagoloan perceived the Divorce Bill, with higher educational attainment correlating to more engaged and informed participation in moral and social discussions.

Civil Status	Frequency (f)	Percent (%)
Single	53	31.36
Married	93	55.03
Widowed	18	10.65
Separated	5	2.96
Total	160	100

Table 8. Distribution of Respondents in Terms of Civil Status

Table 8 reveals that most respondents were married, accounting for 55.03% of the total 169 participants, indicating that more than half of the religious sector in Tagoloan viewed the Divorce Bill through the lens of personal marital experience. This finding suggests that respondents' perspectives were influenced by their own relationships, religious convictions, and perceptions of marriage as either a sacred or reformable union. Married individuals often hold strong beliefs about the sanctity and permanence of marriage, which may lead to resistance toward divorce legalization, particularly among devoutly religious groups. However, some may also recognize divorce as a compassionate legal option for individuals trapped in toxic or abusive marriages, reflecting a nuanced and experience-based understanding. The dominance of married respondents highlights how lived marital realities, rather than purely doctrinal positions, shaped attitudes toward the Divorce Bill. Overall, their insights reflected a balance between moral principles and practical realities, demonstrating how marital status played a crucial role in defining the moral and social stance of Tagoloan's religious community on divorce.

Table 9. Distribution of Respondents in Terms of Cultural Background Profile

Cultural Background	Frequency (f)	Percent (%)
Traditional	105	62.13
Moderate	34	20.12
Liberal	14	8.28
Mixed	16	9.47
Total	169	100

Table 9 reveals that the majority of respondents, or 62.13% of the total 169 participants, came from a traditional cultural background, showing that conservative values strongly shaped the religious sector in Tagoloan. This dominance suggests that most respondents held deeply rooted beliefs regarding marriage as a sacred and lifelong union, guided by religious doctrines and societal expectations. Such traditional orientations likely contributed to resistance toward the Divorce Bill, as many perceived it as a threat to moral order and family unity. The small number of liberal respondents reflected a limited openness to reform and modern perspectives that advocate for personal well-being and legal protection in failed marriages. The prevailing traditional mindset indicates that the social discourse in Tagoloan remains anchored in preserving marital permanence over promoting legal flexibility. Consequently, this cultural dominance emphasizes how traditional norms continue to influence community attitudes and

may slow the acceptance of progressive laws such as the Divorce Bill in religiously conservative settings.

Family Income	Frequency (f)	Percent (%)
Below 5,000	30	17.75
5,000-9,999	19	11.24
10,000-14,999	37	21.89
15,000-19,999	38	22.49
20,000-24,999	20	11.83
25,000-29,999	10	5.92
30,000 and above	15	8.88
Total	169	100

Table 10. Distribution of Respondents in Terms of Family Income Profile

Table 10 reveals that most respondents belonged to the ₱15,000–₱19,999 income bracket, comprising 22.49% of the total 169 participants, indicating that a large portion of Tagoloan's religious sector came from lower-middle-income families. This group's economic condition likely shaped their views on the Divorce Bill, balancing moral values with financial realities. Individuals within this range often experience moderate financial pressure, which may make them more cautious about supporting divorce due to concerns over added expenses, child support, and single-parent living costs. However, some may still recognize divorce as a necessary legal remedy for those in abusive or irreparable marriages, showing both empathy and practicality in their views. Their economic vulnerability underscores how financial stability influences attitudes toward social reforms, particularly those affecting family structures. Overall, the findings suggest that income level played a significant role in shaping perceptions of the Divorce Bill, as lower-income respondents tended to weigh both moral convictions and the potential economic consequences of divorce.

2. What is the extent of the Divorce Bill in the Philippines from the perspective of religious sectors in terms of Legal Grounds, Financial Settlement, and Child Custody and Support?

Table 11. Extent of Divorce Bill in the Philippines as the Perspective of Religious Sectors in Terms of Legal Grounds

	Indicators	Mean	SD	Interpretation
1.	The recognition of adultery as a valid ground for divorce ensures fairness in addressing marital infidelity.	2.92	1.16	Moderate Support
2.	The inclusion of domestic abuse as a legal ground for divorce provides necessary protection for spouses.	2.88	1.11	Moderate Support
3.	The consideration of abandonment as a justification for divorce acknowledges the emotional and financial impact on the abandoned spouse.	2.82	1.07	Moderate Support
4.	The presence of irreconcilable differences as a ground for divorce allows couples to part ways amicably when reconciliation is impossible.	2.62	1.03	Moderate Support
5.	The recognition of psychological incapacity as a reason for divorce ensures that unfit marriages can be legally dissolved.	2.66	1.05	Moderate Support

Table 11 presents the opinions of religious groups in the Municipality of Tagoloan regarding the proposed grounds for divorce under the Philippine Divorce Bill. The overall mean of 2.73 with a standard deviation of 1.07 indicates *moderate support*, reflecting a growing openness

among religious respondents to acknowledge legal remedies in cases of marital breakdown. Although traditional teachings continue to oppose divorce, many participants recognized its necessity in situations involving abuse, infidelity, or psychological harm. Indicators such as adultery (M=2.92), domestic violence (M=2.88), and substance abuse (M=2.82) received the highest support, suggesting a compassionate and practical stance that prioritized justice, safety, and emotional well-being over rigid adherence to doctrine. This finding aligns with Malonzo and Saavedra (2023), who emphasized that Filipino religious communities are gradually becoming receptive to laws protecting human dignity and equity within marriage.

Among the indicators, adultery emerged as the most supported ground for divorce, implying that religious individuals viewed betrayal of marital fidelity as a grave moral offense warranting legal recourse. This result highlights a balance between moral responsibility and fairness, where infidelity is seen not only as a sin but also as a legitimate breach of trust deserving legal acknowledgment. Tiglao and Perez (2023) observed a similar trend, noting that even among conservative religious groups, there is consensus that adultery undermines the moral core of marriage and justifies separation. On the other hand, moderate approval of grounds like domestic violence and psychological incapacity reflected a shift toward prioritizing safety and mental health within families, showing that religious respondents valued compassion and justice over mere marital endurance.

Conversely, the lowest mean score of 2.47 for continuous marital separation revealed moderate opposition, suggesting that many still believed prolonged estrangement alone was insufficient to dissolve a marriage. This resistance stems from deep-seated beliefs in the permanence of marital vows and the value of reconciliation, consistent with Guttierez's (2023) observation that religious communities prefer restoration over dissolution. However, as Reyes (2023) argued, denying separation as a valid ground overlooks the emotional suffering of estranged spouses who live in indefinite limbo. This finding underscores the tension between moral ideals and human realities—religious communities are not entirely opposed to divorce but remain selective, supporting it primarily when moral or physical harm is evident. Overall, these insights reflect a transitional phase in Tagoloan's religious sector—one that respects tradition but increasingly acknowledges divorce as a necessary safeguard for justice, safety, and dignity.

Table 12. Extent of Divorce Bill in the Philippines from the Perspective of Religious Sectors in Terms of Financial Settlement

	Indicators	Mean	SD	Interpretation
1.	The fair division of marital assets ensures financial stability for both parties after divorce.	2.82	1.07	Moderate Support
2.	The provision of spousal support helps maintain the financial well-being of the economically disadvantaged partner.	2.83	1.09	Moderate Support
3.	The legal framework for property division ensures that both spouses receive an equitable share of their jointly acquired assets.	2.79	1.05	Moderate Support
4.	The inclusion of financial support in divorce settlements helps protect the welfare of children involved.	2.93	1.14	Moderate Support
5.	The enforcement of financial obligations after divorce ensures accountability and fairness between ex-spouses.	2.90	1.08	Moderate Support
6.	The clear legal guidelines on debt division help prevent financial disputes between divorced individuals.	2.77	1.06	Moderate Support
7.	The consideration of each spouse's financial contribution in dividing assets promotes fairness in financial settlements.	2.88	1.10	Moderate Support
8.	The legal protection of a non-working spouse's financial rights ensures economic security after divorce.	2.74	1.10	Moderate Support
9.	The establishment of post-divorce financial agreements	2.66	1.06	Moderate Support

helps prevent long-term financial difficulties for parties. 10. The proper implementation of financial settlem				
can contribute to a smoother transition for divo	orced 2.7	72	1.16	Moderate Support
individuals.				
Overall	2.8	80	1.09	Moderate Support
Legend: 3.26 – 4.00 Strongly Agree/ Positive Support 1.76 – 2.50 Disagree/ Moderate Opposition			osition	
2.51 – 3.25 Agree/ Moderate Support	1.00 – 1.75 Strongly Disagree/ Strong Opposition			

Table 12 presents the perceptions of the religious sectors in Tagoloan regarding the financial settlement provisions in the proposed Divorce Bill, with an overall mean of 2.80 and a standard deviation of 1.09 interpreted as *Moderate Support*. This finding shows that respondents generally acknowledged the need for financial fairness in divorce proceedings, even though divorce itself remains a sensitive topic within faith-based communities. Religious participants seemed to recognize that, regardless of moral objections to divorce, it was essential to ensure just distribution of assets, spousal support, and protection for children. Their responses reflected a balanced perspective that viewed financial justice as a moral obligation aligned with compassion and family welfare rather than as a contradiction to religious belief. This gradual shift in perception echoes Reyes and Cruz (2024) and Smith and Tan (2023), who found that many religious groups now accept financial equity in divorce as an act of social responsibility and care for the vulnerable.

Notably, the strongest support centered on provisions that prioritized child welfare and fair economic treatment of both parties, demonstrating a collective moral concern for dependents affected by marital dissolution. These results implied that while the religious sector might not fully endorse the legalization of divorce, it strongly valued financial safeguards that protected children and financially dependent spouses from economic hardship. This alignment of moral and legal principles indicates that financial protection can serve as neutral ground between faith and law, promoting justice and stability without eroding the sanctity of marriage. As Mendoza and Almeda (2024) observed, well-structured financial regulations after divorce can minimize long-term conflicts and hardships, suggesting that religious groups are increasingly open to measures that uphold fairness while preserving moral integrity.

However, the lowest-rated indicator, "the establishment of post-divorce financial agreements," received a mean of 2.66 and showed lingering skepticism among respondents. This modest approval reflected discomfort with formal mechanisms that might appear to normalize or encourage divorce by planning for its aftermath. Many religious adherents continued to view marriage as a lifelong covenant, preferring reconciliation to legal separation, consistent with the cautions raised by Santos and Del Rosario (2023). Still, this tension highlights an evolving dialogue: religious communities may resist divorce ideologically yet support financial justice pragmatically. The findings, therefore, suggest that clear communication and education are needed to frame post-divorce financial provisions not as incentives for separation but as compassionate safeguards ensuring equity and dignity for all family members involved.

Table 13. Extent of Divorce Bill in the Philippines from the Perspective of Religious Sectors in Terms of Child Custody and Support

	Indicators	Mean	SD	Interpretation
1.	The well-being of children is the top priority in determining custody arrangements.	3.13	1.08	Moderate Support
2.	The legal system should ensure that both parents have fair opportunities to gain custody of their children.	3.14	1.08	Moderate Support
3.	The option for shared custody allows children to maintain strong relationships with both parents.	3.01	1.09	Moderate Support
4.	The financial support provided after divorce must	2.98	1.14	Moderate Support

	adequately cover children's education and healthcare			
	needs.			
5.	The parent with primary custody should receive sufficient	2.98	1.13	Madamata Symmout
	financial support to meet the child's daily needs.	2.98	1.13	Moderate Support
6.	The court should consider the emotional and			
	psychological needs of the child when deciding custody	3.07	1.07	Moderate Support
	arrangements.			11
7.	The enforcement of child support payments ensures	2.02	1.00	3.6.1
	financial stability for children after divorce.	3.02	1.08	Moderate Support
8.	The cooperation of both parents in custody agreements			
٠.	leads to better upbringing and stability for the child.	3.04	1.12	Moderate Support
9.	The proper legal framework for custody and support helps			
٦.	prevent conflicts between divorced parents.	2.83	1.02	Moderate Support
10	The best interests of the child should always guide custody			
10.	and financial support decisions.	2.96	1.05	Moderate Support
	11	2.02	1.00	Madauata Cummant
	Overall 1226 400 St. 1 A (P. W. S. 4 176 250)	3.02	1.09	Moderate Support

Legend: 3.26 – 4.00 Strongly Agree/ Positive Support
2.51 – 3.25 Agree/ Moderate Support
1.76 – 2.50 Disagree/ Moderate Opposition
1.00 – 1.75 Strongly Disagree/ Strong Opposition

Table 13 presents the perceptions of religious sectors in Tagoloan regarding the child custody and support provisions under the proposed Divorce Bill, with an overall mean of 3.02 and a standard deviation of 1.09, interpreted as *Moderate Support*. This finding indicates that while religious respondents maintained their belief in the sanctity of marriage, they nonetheless recognized the moral and social necessity of prioritizing children's welfare in divorce proceedings. The moderate level of support shows an emerging balance between faith-based ideals and practical compassion, suggesting that ensuring the well-being, stability, and protection of children transcends doctrinal opposition to divorce. Garcia and Mendoza (2024) observed that many religious groups in the Philippines have begun to accept child-focused custody and support measures as essential to social justice and moral duty. This demonstrates a gradual shift toward recognizing that upholding children's rights does not undermine religious values but rather fulfills them in a modern context aligned with global child welfare standards.

Among the indicators, the highest mean of 3.14 was recorded for the statement that both parents should have fair opportunities to gain custody of their children, also interpreted as *Moderate Support*. This reflects the respondents' acknowledgment of the importance of equal parental rights and responsibilities, showing growing acceptance of shared parenting as a fair and just approach. Religious communities appear to increasingly support the principle that children benefit most when both parents remain active participants in their upbringing, provided that their welfare remains the top priority. Santos and Villanueva (2024) emphasized that shared custody promotes family stability, fairness, and emotional security for children, aligning with global advocacy for joint custody arrangements. The finding suggests that religious groups may favor balanced custody systems that honor both parental rights and the moral obligation to protect the child's best interests, bridging the gap between legal fairness and faith-based compassion.

Conversely, the lowest mean of 2.83 for the statement on the legal framework's role in preventing parental conflicts reflects cautious skepticism among respondents. While the religious sector acknowledged the necessity of a proper legal structure for custody and support, they appeared doubtful about the law's ability to fully resolve emotional and relational challenges following divorce. This hesitation aligns with Gutierrez (2023), who argued that legal mechanisms alone cannot heal family rifts without mediation, counseling, and genuine cooperation between parents. The results suggest that religious groups viewed moral commitment and faith-based reconciliation as indispensable complements to legal processes.

Thus, while they supported child-focused provisions and fair custody arrangements, they remained wary of overreliance on the law to ensure lasting harmony. These insights underscore the importance of integrating both legal safeguards and value-driven, non-legal interventions to protect children's well-being while fostering a cooperative post-divorce environment.

Table 14. Summary Table on the Extent of the Divorce Bill in the Philippines from **Perspective of Religious Sectors**

Indicators	Mean	SD	Interpretation
Legal Grounds	2.73	1.07	Moderate Support
Financial Settlement	2.80	1.09	Moderate Support
Child Custody and Support	3.02	1.09	Moderate Support
Overall	2.85	1.08	Moderate Support

Legend: 3.26 – 4.00 Strongly Agree/Positive Support

1.76 – 2.50 Disagree/ Moderate Opposition

1.00 – 1.75 Strongly Disagree/ Strong Opposition 2.51 – 3.25 Agree/ Moderate Support

Table 14 summarizes the perspectives of religious sectors in Tagoloan regarding the proposed Divorce Bill, with an overall mean of 2.85 and a standard deviation of 1.08, interpreted as Moderate Support. This result indicates that while respondents upheld traditional religious beliefs about the sanctity of marriage, they also recognized the need to address real-life marital problems that cause harm or suffering. The moderate support suggests that the religious community was cautiously open to reforming marital laws, balancing moral convictions with compassion and practicality. As Santos and Villanueva (2024) emphasized, many faith-based groups in the Philippines are gradually acknowledging that legal reforms are necessary to protect individuals trapped in irreparable marriages. This shift aligns with broader Southeast Asian trends identified by Lim and Reyes (2023), where religious institutions are beginning to engage constructively in discussions about family law modernization.

Among the three areas assessed, the highest mean (3.02) was found in Child Custody and Support, reflecting the strongest support for provisions that prioritize children's welfare after divorce. This finding demonstrates that religious respondents were most concerned with protecting the physical, emotional, and financial needs of children, even when they opposed divorce on doctrinal grounds. Garcia and Santos (2024) observed that child-centered measures receive broad acceptance among religious communities because they align with universal moral values of compassion and responsibility. This moderate yet highest level of support suggests that faith-based groups could collaborate with policymakers in creating divorce laws emphasizing child protection and responsible parenting. Such shared advocacy could serve as a bridge between moral teachings and humanitarian goals, allowing religion and legislation to complement one another in addressing family welfare.

Conversely, the lowest mean (2.73) was recorded in Legal Grounds, indicating hesitation toward expanding the reasons legally justifying divorce. This cautious attitude stems from the enduring belief that marriage is sacred and permanent, as reinforced by Santos and Velasco (2024), who found that religious groups preferred annulment or legal separation to complete dissolution. However, Garcia and Ramirez (2023) argued that overly restrictive divorce grounds could perpetuate harm by trapping individuals in abusive relationships. This moral tension reveals that while the religious sectors advocate for compassion and protection, they remain wary of normalizing divorce as a solution. Overall, the moderate support reflected an evolving yet conflicted perspective—religious communities are not entirely resistant to legal change but seek reforms that uphold both moral integrity and human dignity, ensuring that compassion, justice, and faith coexist within the framework of Philippine family law.

3. What is the level of perspective among different religious sectors in the Municipality of Tagoloan regarding the Divorce Bill in the Philippines in terms of Moral Beliefs, Religious Doctrine, and Social Implications?

Table 15. Level of Perception Among Different Religious Sectors in the Municipality of Tagoloan, Misamis Oriental, Regarding the Divorce Bill in the Philippines in Terms of Moral Beliefs

	Indicators	Mean	SD	Interpretation
1.	The sanctity of marriage should be preserved as a lifelong commitment between spouses.	3.66	0.66	Strong Endorsement
2.	The value of forgiveness and reconciliation should be prioritized over divorce in marital conflicts.	3.44	0.79	Strong Endorsement
3.	The Divorce Bill challenges traditional moral values that emphasize the permanence of marriage.	3.38	0.75	Strong Endorsement
4.	The stability of the family unit is essential for upholding moral and ethical principles in society.	3.46	0.72	Strong Endorsement
5.	The religious teachings on marriage and family life strongly influence my views on divorce.	3.36	0.80	Strong Endorsement
6.	The moral responsibility of parents to their children should encourage efforts to keep marriages intact.	3.46	0.76	Strong Endorsement
7.	The Divorce Bill considers the ethical consequences of separating legally married couples.	3.34	0.80	Strong Endorsement
8.	The decision to divorce should align with moral and religious beliefs that promote family member interest.	3.24	0.89	General Support
9.	The community plays a role in reinforcing moral values that strengthen marriages.	3.27	0.84	Strong Endorsement
10.	The commitment made in marriage vows should be honored despite challenges in the relationship.	3.45	0.79	Strong Endorsement
	Overall	3.41	0.78	Strong Endorsement

Legend: 3.26 – 4.00 Strongly Agree/ Strong Endorsement 2.51 – 3.25 Agree/ General Support 1.76 – 2.50 Disagree/ General Opposition

1.00 – 1.75 Strongly Disagree/ Strong Rejection

Table 15 presents the perceptions of religious sectors in Tagoloan regarding the Divorce Bill in relation to moral beliefs, with an overall mean of 3.41 and a standard deviation of 0.78, interpreted as *Strong Endorsement*. This result indicates that moral and religious convictions strongly shaped the respondents' opposition to divorce, grounded in the belief that marriage is a sacred and lifelong covenant. The consistency of responses reflects a unified moral stance that views divorce not merely as a legal concern but as a moral challenge that contradicts longheld religious doctrines. Dela Cruz and Fernandez (2024) affirmed that Filipino faith communities consider marriage an unbreakable covenant, while Lim and Santos (2023) noted that across Southeast Asia, religious morality continues to anchor resistance to divorce reforms. These findings show that moral values—such as forgiveness, unity, and fidelity—remain deeply embedded in Tagoloan's religious culture and significantly influence public opinion on marital legislation.

The strongest endorsement (M = 3.66, SD = 0.66) was for the belief that "the sanctity of marriage should be preserved as a lifelong commitment between spouses." This consensus underscores the religious community's firm conviction that marriage transcends legal arrangements and represents a divine covenant that should not be dissolved by human law. Mendoza and Alonzo (2024) emphasized that such convictions fuel persistent resistance to divorce laws, viewing them as threats to moral order and family unity. Similarly, Torres and

Lim (2023) highlighted that many global faith traditions frame marriage as a sacred spiritual bond rather than a civil contract. The implication is clear: for most Tagoloan respondents, legalizing divorce would signify moral decline and the weakening of family foundations. Policymakers and reform advocates must therefore engage with religious leaders and moral educators to reconcile ethical principles with social realities, ensuring reforms do not disregard these deeply rooted beliefs.

Meanwhile, the lowest-rated item (M = 3.24, SD = 0.89) concerned the view that "the decision to divorce should align with moral and religious beliefs that promote family member interest," interpreted as General Support. Although still relatively high, this score reveals slight divergence within religious circles—some respondents recognized that in extreme cases, such as abuse or irreparable harm, divorce might align with moral duty if it protects family welfare. Reyes and Santos (2024) observed that a number of faith communities are adopting more compassionate interpretations of doctrine, while Lopez and Mariano (2024) noted growing acceptance among urban clergy that justice and human dignity may, at times, require legal separation. Nevertheless, Dela Cruz (2023) cautioned that many still fear such acceptance could erode marital sanctity. The overall pattern suggests a nuanced moral tension: while Tagoloan's religious groups continue to reject divorce as a norm, an emerging minority acknowledges that compassion and protection of the vulnerable are also moral imperatives—signaling a slow but meaningful shift toward a more empathetic moral dialogue on marriage and divorce.

Table 16. Level of Perception Among Different Religious Sectors in the Municipality of Tagoloan, Misamis Oriental, Regarding the Divorce Bill in the Philippines in Terms of Religious Doctrine

	Indicators	Mean	SD	Interpretation
1.	The teachings of my religion emphasize the lifelong commitment of marriage.	3.59	0.73	Strong Endorsement
2.	The belief in the sacredness of marriage influences my perspective on divorce.	3.36	0.92	Strong Endorsement
3.	The religious doctrines I follow discourage divorce as a solution to marital problems.	3.42	0.89	Strong Endorsement
4.	The Divorce Bill contradicts the core teachings of my faith regarding marriage.	3.41	0.81	Strong Endorsement
5.	The importance of family unity, as taught in my religion, should be upheld in all circumstances.	3.47	0.78	Strong Endorsement
6.	The guidance of religious leaders plays a vital role in shaping my views on divorce.	3.36	0.86	Strong Endorsement
7.	The principles of my faith encourage reconciliation and forgiveness over marital separation.	3.42	0.82	Strong Endorsement
8.	The religious scriptures I believe in provide clear teachings about the permanence of marriage.	3.41	0.76	Strong Endorsement
9.	The moral and spiritual consequences of divorce, as taught by my religion, influence my stance on the Divorce Bill.	3.29	0.80	Strong Endorsement
10.	The role of religious institutions is important in promoting strong and lasting marriages.	3.51	0.74	Strong Endorsement
	Overall	3.42	0.81	Strong Endorsement

Legend: 3.26 – 4.00 Strongly Agree/ Strong Endorsement 2.51 – 3.25 Agree/ General Support 1.76 – 2.50 Disagree/ General Opposition 1.00 – 1.75 Strongly Disagree/ Strong Rejection

Table 16 presents the perceptions of various religious sectors in Tagoloan regarding the Divorce Bill in terms of religious doctrine, with an overall composite mean of 3.42 and a standard deviation of 0.81, interpreted as *Strong Endorsement*. This finding indicates that religious teachings and doctrines played a decisive role in shaping attitudes toward divorce,

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emphasizing the sanctity, permanence, and spiritual significance of marriage. The consistent responses among participants reflected a unified conviction that moral and religious principles should govern decisions about marital dissolution. As Santos and Villanueva (2024) and Lim and Cruz (2023) both found, Filipino religious culture strongly anchors views on marriage within faith-based values such as forgiveness, unity, and fidelity. The results affirm that in Tagoloan, religion remains a dominant moral compass, deeply influencing public opinion on family issues and reinforcing traditional opposition to divorce.

The highest mean (M = 3.59, SD = 0.73) was associated with the indicator "The teachings of my religion emphasize the lifelong commitment of marriage," interpreted as Strong Endorsement. This response highlights that for most religious groups, marriage is viewed not merely as a legal bond but as a divine and lifelong covenant that must be preserved despite challenges. Garcia and Santos (2024) and Lim and Velasco (2023) both emphasized that such beliefs create a moral obligation among followers to honor marital vows and discourage separation. This conviction forms the central reason behind religious resistance to the Divorce Bill, as legal dissolution is perceived to undermine divine intent and weaken family values. Hence, the belief in marriage's permanence continues to serve as the strongest moral pillar in shaping religious communities' opposition to divorce legislation in Tagoloan and beyond.

Conversely, the lowest mean (M = 3.29, SD = 0.80) corresponded to the indicator "The moral and spiritual consequences of divorce influence my stance on the Divorce Bill," still interpreted as Strong Endorsement but with relatively greater variation. This suggests that while most respondents upheld religious doctrines, some exhibited nuanced understanding—acknowledging that in extreme cases like abuse or chronic infidelity, divorce might be morally justified. Santos and Cruz (2024) observed that certain faith communities are beginning to adopt compassionate interpretations, allowing divorce under exceptional circumstances, while Ramirez and Delgado (2023) maintained that traditional groups still view divorce as inherently immoral. This emerging diversity in interpretation reveals that religious perspectives are not entirely monolithic; rather, they are gradually evolving toward reconciling moral doctrine with compassion and realism. Such openness provides an opportunity for dialogue between religious institutions and policymakers to balance faith-based principles with humane and context-sensitive approaches to marital law.

Table 17. Summary Table on Level of Perception Among Different Religious Sectors in the Municipality of Tagoloan, Misamis Oriental, Regarding the Divorce Bill in the Philippines

Indicators	Mean	SD	Interpretation
Moral Beliefs	3.41	0.78	Strong Endorsement
Religious Doctrine	3.42	0.81	Strong Endorsement
Social Implications	3.20	0.92	General Support
Overall	3.35	0.84	Strong Endorsement

Legend: 3.26 – 4.00 Strongly Agree/ Strong Endorsement 2.51 – 3.25 Agree/ General Support 1.76 – 2.50 Disagree/ General Opposition 1.00 – 1.75 Strongly Disagree/ Strong Rejection

Table 17 presents the summary of perceptions from various religious sectors in Tagoloan, Misamis Oriental, regarding the Divorce Bill in the Philippines. The overall composite mean of 3.35 with a standard deviation of 0.84, interpreted as *Strong Endorsement*, indicated that religious respondents held well-defined and deeply rooted views on the issue. This strong perception reflected not necessarily full support for the Divorce Bill but a strong moral and spiritual stance—either in defense of traditional values or in cautious acknowledgment of needed reforms. The consistency of their responses suggests that religious groups were highly aware of the bill's potential implications for faith, morality, and family stability. Similar

findings by Santos et al. (2023) and Santos and Cruz (2024) revealed that Filipino religious communities often expressed strong, conviction-based positions on family-related laws, demonstrating active engagement in public discourse and an enduring influence of faith and tradition on societal attitudes.

Among the three dimensions assessed, *Religious Doctrine* garnered the highest mean of 3.42 with a standard deviation of 0.81, interpreted as *Strong Endorsement*. This indicates that religious beliefs and teachings served as the most dominant foundation shaping respondents' perceptions of the Divorce Bill. For most faith-based groups, marriage remained a sacred, lifelong covenant, and legalizing divorce was viewed as a challenge to this divine principle. Santos and Villanueva (2024) emphasized that religious doctrines continue to guide Filipino views on marital permanence, while Cruz and Ramirez (2023) noted that emerging societal pressures have prompted some re-evaluation of these traditional stances. The results underscore that in Tagoloan, religious doctrines still hold substantial authority in defining moral positions, influencing not only personal opinions but also community responses to legislative change. This highlights the importance of respectful engagement between policymakers and religious leaders when crafting family laws that intersect with spiritual values.

The lowest mean, 3.20 with a standard deviation of 0.92, was recorded in the area of *Social Implications*, interpreted as *General Support*, indicating that religious respondents were more flexible when considering the social effects of divorce. While many remained wary of potential family disintegration and cultural decline, others recognized divorce as a possible remedy for individuals in abusive or irreparable marriages. Cruz and Mendoza (2024) observed that some religious Filipinos expressed cautious approval for divorce when it protected vulnerable spouses, whereas Navarro (2024) found that many still feared it could erode family unity. This variation explains the higher standard deviation, reflecting a broader spectrum of opinions on the societal impact of divorce. Overall, the results suggest that although religious sectors remained firm in their doctrinal convictions, they displayed a growing awareness of modern social realities. Their perspectives point to an evolving moral landscape—one that continues to uphold faith-based values while beginning to accommodate compassionate and socially responsive interpretations of marriage and family life.

4. Is there a significant difference in the extent of the Divorce Bill in the Philippines from the perspective of religious sectors when grouped according to their respondents' profiles?

Table 19. ANOVA Test Results on the extent of the Divorce Bill in the Philippines from the perspective of religious sectors when grouped according to their respondents' profiles

Tests of Between-Subjects Effects				
Source	F	p-value	Decision	Interpretation
Corrected Model	2.26	0.00	Rejected	Significant
Age	1.14	0.29	Accepted	Not Significant
Gender	0.62	0.43	Accepted	Not Significant
Religious Affiliation	4.35	0.04	Rejected	Significant
Educational Attainment	9.55	0.00	Rejected	Significant
Civil Status	12.04	0.00	Rejected	Significant
Cultural Background	0.02	0.88	Accepted	Not Significant
Family Income	1.39	0.25	Accepted	Not Significant
Legal Grounds	0.69	0.83	Accepted	Not Significant
Financial Settlement	1.78	0.07	Accepted	Not Significant
Children Custody and Support	2.82	0.00	Rejected	Significant

 $R^2 = 0.882$ (Adjusted R Squared = 0.491); Dependent Variable: **MORAL BELIEFS**

Corrected Model	2.70	0.00	Rejected	Significant
Age	1.12	0.30	Accepted	Not Significant
Gender	0.05	0.82	Accepted	Not Significant
Religious Affiliation	5.24	0.03	Rejected	Significant
Educational Attainment	4.68	0.04	Rejected	Significant
Civil Status	4.59	0.04	Rejected	Significant
Cultural Background	0.00	0.99	Accepted	Not Significant
Family Income	0.04	0.85	Accepted	Not Significant
Legal Grounds	0.66	0.86	Accepted	Not Significant
Financial Settlement	2.03	0.04	Rejected	Significant
Children Custody and Support	2.07	0.03	Rejected	Significant

R²: 0.899 (Adjusted R Squared = 0.566); Dependent Variable: **RELIGIOUS DOCTRINE**

Corrected Model	2.22	0.00	Rejected	Significant
Age	0.43	0.52	Accepted	Not Significant
Gender	0.71	0.40	Accepted	Not Significant
Religious Affiliation	0.49	0.49	Accepted	Not Significant
Educational Attainment	17.49	0.00	Rejected	Significant
Civil Status	9.38	0.00	Rejected	Significant
Cultural Background	0.05	0.83	Accepted	Not Significant
Family Income	2.91	0.10	Accepted	Not Significant
Legal Grounds	1.64	0.08	Accepted	Not Significant
Financial Settlement	1.05	0.43	Accepted	Not Significant
Children Custody and Support	1.52	0.14	Accepted	Not Significant

 R^2 : 0.880 (Adjusted R Squared = 0.485); Dependent Variable: **SOCIAL IMPLICATIONS** Note: p < 0.05 (significant) and p > 0.05 (not significant)

Table 19 presents the ANOVA test results on the extent of perception of the Divorce Bill among religious sectors in Tagoloan when grouped according to their profile variables. The analysis examined whether respondents' demographic characteristics—such as age, gender, religion, education, and civil status—significantly influenced their perceptions in terms of *Moral Beliefs*, *Religious Doctrine*, and *Social Implications*. For *Moral Beliefs*, the model yielded a significant result (F = 2.26, p = 0.00), indicating that profile variables collectively affected respondents' moral views toward divorce. Religious affiliation, educational attainment, civil status, and child custody/support emerged as significant factors, while age, gender, cultural background, and family income showed no significant influence. These findings suggest that moral beliefs about divorce were shaped less by demographic traits and more by spiritual teachings, education, and lived experiences. Salazar and Lim (2023) noted that moral perspectives on divorce among Filipinos often reflect a blend of religious conviction and practical concern, especially for children's welfare, revealing that moral judgments extend beyond doctrine to include compassion and ethical responsibility.

In terms of *Religious Doctrine*, the ANOVA results were also significant (F = 2.70, p = 0.00), showing that the combined profile variables significantly influenced how respondents interpreted religious teachings about divorce. The adjusted R^2 value of 0.566 indicated that over half of the variance in doctrinal perception could be explained by these variables. Significant differences were found across religious affiliation, educational attainment, civil status, financial settlement, and child custody/support, while age, gender, and income remained non-significant. This outcome implies that faith communities share overarching beliefs about the sanctity of marriage, yet interpretations vary based on denominational doctrine, education,

and personal experiences. Garcia and Santos (2024) emphasized that while religious teachings portray marriage as sacred and permanent, exposure to real-life marital issues can foster more flexible doctrinal interpretations. The findings suggest that many religious individuals are reconciling theological ideals with practical realities, balancing devotion to doctrine with empathy toward those facing marital hardships.

For *Social Implications*, the model again produced significant results (F = 2.22, p = 0.00), indicating that respondents' profiles collectively influenced how they perceived divorce's societal effects. However, only educational attainment and civil status were significant, implying that formal learning and marital experience were key in shaping how participants viewed the broader social consequences of divorce. Respondents with higher education were more open to nuanced discussions about family and societal welfare, while those with marital experiences tended to approach divorce as either a necessary social remedy or a moral dilemma. Lopez and Delgado (2024) found that divorce could both disrupt family unity and serve as protection against abuse, depending on one's perspective and experiences. Overall, the ANOVA results revealed that while strong religious beliefs unified respondents' moral and doctrinal foundations, education and lived experiences diversified their social outlooks. These findings underscore the need for faith-based and legislative dialogue that acknowledges both the enduring authority of religious doctrine and the evolving realities of Filipino families navigating marital and social challenges.

5. Is there a significant relationship between the extent of perspective among religious sectors in the Municipality of Tagoloan and the level of Divorce Bill in the Philippines?

Table 20. Correlation Between the Extent of Perspective Among Religious Sectors in the Municipality of Tagoloan and the Level of Divorce Bill in the Philippines

Correlation Divorce Bill in the Philippines		Perspective of Religious Sectors					
		Moral Beliefs	Religious Social Doctrine Implications		Over- all	Decision	Interpretation
Legal Grounds	Pearson r	0.204	0.152	0.459	0.310	Reject Ho	Significant
	p-value	0.008	0.048	< 0.001	< 0.001	,	
Financial	Pearson r	0.233	0.228	0.511	0.369	Reject Ho	Significant
Settlement	p-value	0.002	0.003	< 0.001	< 0.001	y	
Child Custody and	Pearson r	0.198	0.231	0.399	0.314	Reject Ho	Significant
Support	p-value	0.010	0.002	< 0.001	< 0.001	3	
Legend : Relationship Strength		1(Perfect)		p < 0.05 (significant)			
Scale:	± 0.80 to ± 0.99 (Very Strong)			p > 0.05 (not significant)			
			±0.61 to ±0.7 ±0.41 to ±0.6 ±.21 to ±.40 ±.01 to ±.20	60 (Moderate) (Weak)			

Table 20 presents the correlation results between the perspectives of religious sectors in Tagoloan and their views on the Divorce Bill in the Philippines, focusing on three key aspects: *Legal Grounds, Financial Settlement*, and *Child Custody and Support*. The results revealed that all three components were significantly correlated with the respondents' moral beliefs, religious doctrines, and social perspectives, leading to the rejection of the null hypothesis in all

cases. For *Legal Grounds*, the correlations with moral beliefs (r = 0.204, p = 0.008), religious doctrine (r = 0.152, p = 0.048), and social implications (r = 0.459, p < 0.001) indicated a moderate overall relationship (r = 0.310, p < 0.001). These findings suggest that as understanding of legal justifications for divorce increased, such as in cases of abuse or abandonment, religious respondents became more open to its moral and social acceptability. Reyes and Morales (2024) supported this by noting that religious opposition softens when divorce addresses social harm and protects human dignity. Thus, while faith-based groups still uphold marital sanctity, they acknowledge the need for compassionate legal responses to protect individuals from suffering.

For *Financial Settlement*, the correlations were stronger—moral beliefs (r = 0.233, p = 0.002), religious doctrine (r = 0.228, p = 0.003), and social implications (r = 0.511, p < 0.001)—with an overall moderate correlation of r = 0.369 (p < 0.001). This shows that economic fairness and financial protection after divorce significantly influenced how religious sectors viewed its morality and societal impact. Villanueva and Santos (2023) found that when divorce laws ensure financial security, particularly for women and children, religious opposition tends to ease, reflecting a shift from moral condemnation to ethical concern for welfare. This correlation implies that financial justice serves as a bridge between moral conviction and social responsibility, allowing religious communities to support practical safeguards without compromising faith. It also suggests that divorce can be perceived less as moral failure and more as a legal mechanism for compassion and protection when grounded in equitable financial provisions.

Similarly, Child Custody and Support showed consistent significance, with weak but meaningful correlations with moral beliefs (r = 0.198, p = 0.010) and religious doctrine (r = 0.231, p = 0.002), and a stronger link with social implications (r = 0.399, p < 0.001), producing an overall correlation of r = 0.314 (p < 0.001). This pattern highlights that concerns for children's welfare strongly shaped religious respondents' moral and social stance on divorce. Garcia and Lopez (2022) emphasized that ensuring children's safety, emotional stability, and financial security remains a moral obligation across faith communities, influencing their support for child-centered divorce provisions. These results demonstrate that religious acceptance of divorce is highest when policies prioritize the protection of children and the vulnerable. Overall, the findings reveal that while religious doctrines remain rooted in traditional opposition, practical considerations—such as justice, equity, and compassion—significantly inform how moral and religious perspectives evolve. This evolving view points toward a more humane and socially responsive religious discourse on divorce, where safeguarding family well-being and dignity becomes central to faith-based participation in legal reform.

CONCLUSION

Based on the findings of the study, the following conclusions were drawn:

- 1. This study confirmed that the majority of respondents from the religious sectors in Tagoloan were mature, married women, predominantly from the Iglesia Ni Cristo (INC), with college education and traditional cultural values. Their perspectives on the Divorce Bill were shaped by their religious beliefs, life experiences, and socioeconomic background, which collectively influenced their cautious stance on legalizing divorce.
- 2. This study confirmed that the religious sectors in Tagoloan moderately supported the financial settlement provisions of the Divorce Bill, acknowledging the importance of fair asset division and child support despite moral reservations. While some respondents expressed

- skepticism, especially toward post-divorce arrangements, the overall responses reflected an understanding that financial justice is necessary if divorce is to be legalized.
- 3. This study confirmed that respondents from various religious sectors strongly upheld religious doctrine and moral beliefs that oppose divorce, viewing marriage as a sacred and lifelong commitment. While some accepted that divorce might be necessary in extreme cases and acknowledged potential social implications, the overall perspective remained largely rooted in faith-based opposition, with limited openness to specific circumstances.
- 4. This study confirmed that differences in perspectives on the Divorce Bill were significantly influenced by religious affiliation, educational background, civil status, and views on child custody and financial matters, particularly in terms of moral and doctrinal beliefs. However, variables such as age, gender, cultural background, and income did not lead to significant differences, indicating that moral and doctrinal positions were more affected by life experiences and religious teachings than by demographics alone.
- 5. This study confirmed that there was a significant relationship between the views of religious sectors on the Divorce Bill and their understanding of legal grounds, financial settlement, and child custody. Practical considerations, especially financial fairness and child welfare, influenced their moral and religious perceptions, suggesting that while religious teachings oppose divorce, real-life concerns led to some openness and nuanced perspectives.

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Employability of Tagoloan Community BEED Graduates of School Year 2018-2019

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ABSTRACT

This study examined the employability of Bachelor of Elementary Education (BEED) graduates from Tagoloan Community College, batch 2018–2019, through a mixed-methods approach involving 99 respondents. Findings revealed that 86.9% of the graduates were employed, with 72.73% working in nonteaching fields, indicating the adaptability of BEED graduates in diverse professions. The research explored variables such as demographic profiles, licensure exam results, employment types, job positions, income levels, and participation in training or seminars. Socio-economic challenges influencing career outcomes were identified, leading to recommendations for curriculum enhancement and support programs to better align education with workforce demands. Employing total population sampling, the study included all BEED graduates of the specified year and utilized instruments adapted from prior research on BSED English graduates. Data collection involved online surveys and interviews, ensuring ethical compliance and respondent confidentiality. Statistical analysis covered factors such as age, gender, civil status, licensure eligibility, and employment attributes, while triangulation combined quantitative and qualitative insights. The study concluded that continuous curriculum review, graduate support initiatives, and strengthened linkages with industry partners are vital to sustaining and improving the employability and career readiness of BEED graduates in an evolving labor market.

INTRODUCTION

This study, focused on the employability and outcomes of BEED graduates from 2018-2019, employs tracer research to gather comprehensive information about the graduates in attendance. By collecting demographics, educational, and employment data, the study aims to assess the suitability of the current BEED curriculum at Tagoloan Community College. The findings will inform innovative approaches to meet students' needs, extend support for the TCC College of Education's future initiatives, and aid in developing a modified curriculum for BEED program Quality Assurance. Furthermore, the study will assist the organization in designing policies and programs beneficial to graduates, deepening its interest in future researchers, and offering insights into competitiveness and job market preparation.

Employability has been a major worry for higher education institutions, according to the literature. It is well known that the more opportunities that were missed, the longer each graduate waited to find a job. The cost of unemployment was reported by the International Monetary Fund in 2020. In light of this, "unemployment imposes its value extends beyond money. Enormous costs on individuals, society, and the nation. With time, it might cause one to become skeptical. Education and training would eventually lose value among the unemployed people (Simpson, 2020).

Ulanday (2021) reported the top three employability skills: communication, planning and organizing, and problem-solving. One study reported that competency in researching and presenting was highly valued and is marketable. This was taken from the department chairs' perspectives who valued higher-order thinking skills (e.g., critical thinking and metacognition). Accordingly, these findings indicate that these educators are unconcerned with the rudiments, such as communicating and working together. The emergence of disruptive technology and the introduction of educational reforms have made a rapid change in the workplace, according to Oy (2021). These changes place value on employability and literacy for ensuring success in a degree program and as a career element (International Journal of Innovation; Scientific Research & Review, 2022). Therefore, a scoping review was conducted to explore the existing literature on the employability skills of Teacher Education graduates in the Philippines.

Many studies have looked at what employability is and pointed out major elements that enable people to be successful in the labor market. Smith et al (2019) report that a mixture of technical abilities, soft skills, and work-related expertise largely improves employability. Furthermore, Brown and Johnson (2019) emphasized lifelong learning and adaptability in order to maintain employability. In addition, Jones (2020) focused on establishing networks and developing professional contacts as a way of promoting employment prospects. The results in total summarize what it takes to be employable in today's world by indicating that there are many aspects of employability.

The study stresses that today's demands of the job market are changing so fast that even an undergraduate finds it difficult to obtain a decent position. It highlights the challenge of getting employment that matches one's degree, especially for recent graduates. The study stresses the importance of advanced qualifications like master's and doctoral degrees, especially in scientific and professional, technical, and government employment.

METHODS

This study used mixed-method research. This study was conducted at Tagoloan Community College, Baluarte, Tagoloan, Misamis Oriental. There are 99 participants in all. The approval to conduct this study was secured through a letter of permission from the dean of the College of Education of Tagoloan Community College. The letter is presented first to the Registrar to obtain information about the graduates of the school year 2018-2019 of Tagoloan Community College and locate them on social media platforms, request permission to participate, and, upon their agreement, provide them with the online questionnaire.

RESULTS AND DISCUSSION

The employment situation for BEED students is analyzed in detail with regard to how graduates penetrate the labor market during the period of 2018-2019. It investigates the complex interconnection between education, skill, and the labor market through a sequential analysis of structured data aimed at enhancing current debates about education and employment.

The result reveals that 86.9% of participants are employed, potentially securing good jobs immediately and performing well in the board examination, while a smaller proportion of 13.1% consists of unemployed individuals facing challenges such as financial difficulties, discrimination, and unemployment related to Covid-19. The employment outcomes for Bachelor of Elementary Education BEED graduates reveal a noteworthy distribution, with 27.27% opting for a career in the teaching profession, while a substantial 72.73% have ventured into non-teaching professions. This divergence prompts an exploration into the alignment and potential mismatch between the education they received and the career paths they pursued. The

findings suggest a significant proportion of BEED graduates are diverging into non-teaching professions, prompting a deeper examination of the alignment between their education and chosen careers. The observed patterns may be influenced by socio-economic challenges, signaling a need for a nuanced understanding of the factors shaping career decisions. Moreover, the competent integration of BEED graduates into non-teaching roles underscores the versatility of their skill set, emphasizing the potential for these graduates to contribute meaningfully across diverse professional domains.

Anderson & Tomlinson (2021). Transitioning into the first career destination requires individuals to demonstrate their worthiness, while employers must differentiate among graduates with similar qualifications. This is the qualitative phase of the study that explores deeper into rich narratives, discovering their views towards challenges and opportunities. The research will be carried out through thematic analysis, which is aimed at drawing important inferences on various factors that constitute their career paths. The contemporary job market presents multifarious issues such as financial issues, work environment, job availability, eligibility, competitive job market, and self-efficacy. The major themes that our participants encountered are as follows.

Social Economic Challenges

Job availability, working conditions, financial matters, and tough competition for the job are among the socio-economic problems confronting Bachelor of Elementary Education (BEED) graduates. Employability of BEED graduates is hampered by the challenge of lack of employment opportunities, which result from fluctuation in demand for teachers due to different socio economic factors. In addition, the working environment may pose problem to the educators. While dealing with an insufficient supply of materials, crowded classrooms or changing teaching approaches. Apart from this, financial problems are added on, as salaries at times fail to match educators' critical contribution towards molding the society tomorrow. Given the competitiveness of the job market, BEED graduates should remain up to date with relevant trends on education and development and continuously upgrade their craft. Accordingly, there will be need for focused research and the development of strategic measures that will assist in making BEED graduates competitive enough to succeed in the ever-changing socio-economic terrain of education.

"Before I got this job, most of my problems were about financial related ones, pressure by people around me etc. And now that I have this job, the problems that I usually encounter are work related problems like meeting the deadlines, performing the job poorly, and misunderstanding with co-workers etc. Though, this job cannot sustain my needs but it at least, somehow, alleviate and lighten up the burden I got when it comes to financial related problems." (Participant 49 lines 142-150)

Competence

Competencies for employability of BEED graduates encompass self-efficacy and eligibility. Competency is formed by self-efficacy, which is about believing that an individual is able to complete the task at hand and meet any particular objectives. This research investigates the way that BEED graduate students use themselves as an educational tool and their conception of self-efficacy during a classroom engagement program. However, at the same time, the research examines what makes a graduate competent, including obtaining the appropriate skills, knowledge, and qualifications needed to be competent enough in elementary education. Through the interaction of self-efficacy and qualification, the study seeks to discover what

makes Beed's graduates employable and, hence, what capabilities are required to succeed in the education sector.

"I graduated college with full of happiness, 13 I thought life was end up there because I already have a diploma but that is not a guarantee even if I pass the LET exam.14The struggle is how to look for a job,15 some people rejected me,16 judge me because I'm a teacher but not teaching,17 but I neglected those comments about me.18 Until someone told me that I will be a Reading Teacher in A public school Though this is not a permanent job but still grateful for the opportunities that God has given me"." (Participant 6, lines 13-19)

Financial problem

A significant number of participants expressed that they are grappling with financial challenges. The feedback from many individuals highlighted the ongoing struggle they face in terms of their financial well-being, shedding light on the particular economic concerns experienced by BEED graduates. To wit:

"The problem that I had encountered before is to find a job, which is the financial assistance because if you want to apply there's a lot of requirements to comply and when I am stable there's also a problem to cope up in terms of time management and to my colleagues." (Participant 57, lines 171-172)

Participants 57 emphasized the challenge of securing financial assistance due to stringent job application requirements. Previously, the individual faced difficulties finding employment, highlighting the intricate conditions one must meet to access essential financial support. This is mirrored in the statement of Jayme (2023), who stated that financial difficulties significantly impact their ability to secure employment, given the numerous requirements they must meet, including undergoing various tests such as neurological, pregnancy, and psychological assessments.

"Yes, money is a factor; a person can't do anything without it. If someone has no money, they can't apply. Why? Because we need finances before we can apply, as there is no application process where everything is free. The application itself is free, but once you are accepted, that's when your expenses for the requirements start."... (Jayme, 2023)

Graduates suffer from low income, low financial literacy, compulsive spending tendencies, and high debt levels. Additionally, financial stress will lead to anxiety, depression, and behavioral changes like withdrawing from social activities or physical symptoms like stomachaches or headaches (Savuth et al., 2022). Many graduate students have made poor decisions on other costs (transition to a new city, entertainment, etc.) and have allowed credit card debt to pile up. Comparison with peers, emotional escape through spending, or the deserving grad mindset may put you and your family into a financial mess that makes recovery seem impossible.

Work environment

Apprehensions regarding their work environment point to a widespread challenge in the overall conditions of their professional workspace. This, however, was maintained as stated:

"After I've got the job as a teacher the main problem was to adjust in the environment, especially on how to deal with the colleagues, parents and the pupils"... (Participant No. 23, line 171)

Moreover, the formidable challenge of attaining passing points for the DepEd Ranking emphasizes the difficulty in securing a permanent position. Despite being currently engaged as

a substitute teacher under a contract, the respondent expressed enduring anticipation for a permanent position from the department. Once hired as a teacher, adapting to the new environment emerged as a significant hurdle. The adjustment process proved particularly demanding in navigating relationships with colleagues, parents, and pupils, underscoring the multifaceted nature of challenges faced in the teaching profession.

The mentioned statement above supports the statement of Jayme (2023), who stated that the satisfaction of teachers in their environment significantly influences their professional development. A positive atmosphere, good relationships, and effective leadership from principals contribute to a teacher's happiness in their work environment. Thus, the participants opined:

... "The environment is indeed a factor. For example, if a teacher is not happy with their environment, it can significantly affect their professional growth..."

(Jayme, 2023)

Workplace well-being, as explored by Slemp, Kren, and Brodrick (2020), can have positive or negative impacts. Cooper and Quick (2019) define workplace well-being as encompassing physical, psychological, and social benefits, creating environments where individuals can function optimally and uphold credible values. Page and Brodrick (2020) explain that job well-being includes job satisfaction and work-related emotions. Job satisfaction is a means to assess awareness of work-related activities. Emotions include cognitive (emotional) judgments.

Job availability

Dynamic reflection of the ever-changing employment landscape, shaped by technological advancements, economic trends, and societal shifts. It encompasses a range of diverse opportunities for individuals seeking employment, with industries adapting to emerging needs and creating new roles.

"The problems I encountered before are how to find a job that exactly to fit with my degree..." (Participants no. 37, lines 116)

Participant 37 highlighted a tale of both optimism and adversity. The initial joy of graduating with a diploma was met with the realization that it did not guarantee immediate success, even after passing the LET exam. The struggle unfolded in the daunting task of job hunting, marked by rejections and judgments from those who questioned their identity as a teacher not actively involved in teaching. Undeterred by the criticism, Participant 6 persevered. A glimmer of hope emerged when an unexpected opportunity presented itself in the form of a role as a Reading Teacher in a public school. Despite the impermanence of the position, the participant expressed deep gratitude for the unforeseen chances bestowed by God, signifying a resilient journey of embracing opportunities amid the uncertainties of post-graduation life.

Jayme (2023) stated that if there are no available positions, then there are no individuals in employment.

"Yes, it is also related because if there are no vacancies, no one can be employed. It really depends on the availability of positions." (Jayme (2023) lines 56-57)

Eligibility

The majority of the participants show that Eligibility is a cornerstone in life, sets crucial qualifications for program participation, benefits access, or engagement in activities. It spans education, employment, and government assistance, reflecting fairness and equity principles. Navigating eligibility is paramount for individuals shaping opportunities.

"Lack of prior teaching experience can make it more challenging to secure a teaching job, as schools often prefer candidates with some experience. After: Maintaining discipline and managing a classroom can be a significant challenge for new teachers." (Participant no. 25, lines 76-78)

Participant 25 highlighted the hurdles associated with securing a teaching position without prior teaching experience. They acknowledged the increased difficulty in the competitive job market, where schools typically prefer candidates with a background in teaching. The participant underscored the challenges faced by new teachers, particularly in maintaining discipline and effectively managing a classroom environment. This insight sheds light on the complexities faced by those entering the teaching profession, emphasizing the importance of experience in navigating the demands of the role, particularly in classroom management

Jayme (2023) stated that, in accordance with the law, meeting the essential criteria is a fundamental requirement. Teachers are currently regulated by the PRC and must hold a valid license. If a teacher's license expires, they are ineligible to teach until they renew it. Being eligible is a prerequisite for engaging in teaching.

"Yes, because it is part of the law. It is a basic requirement that you must be eligible. Teachers now are under the PRC (Professional Regulation Commission), whereas before they were under Civil Service and didn't need a license. Back then, eligibility was just a certificate. Since it's under the PRC now, a license is required. If the license expires, you could face legal consequences, so it must be renewed. Eligibility is a prerequisite if you want to teach...."

Competitive Job Market

A significant number of participants expressed that individuals navigate a complex terrain where demand for skilled professionals evolves. Employers seek adaptable, innovative candidates with diverse skills. Continuous learning and proactive career development are essential for success in this competitive environment. Staying ahead requires resilience and a mindset of lifelong learning.

According to Participant 42, the Competitive Job Market was one of her problems when she was looking for a job. The competition for teaching positions can be high, especially in densely populated areas or in certain specialties.

Participant 42 highlighted that the Competitive Job Market emerged as a significant challenge during her job search, particularly in the context of teaching positions. She highlighted the heightened competition in densely populated areas or specialized fields, shedding light on the rigorous dynamics of securing a teaching position. This observation underscores the intense demand for such roles, emphasizing the need for applicants to distinguish themselves through unique qualifications and a compelling skill set in order to navigate and succeed in this competitive employment landscape.

According to Gomez (2023), the competitiveness of BEED graduates from the 2018-2019 batch in the job market can significantly influence their employability. Factors such as skills, experience, networking, and the overall demand for educators can impact how competitive they are in securing employment opportunities.

Self-efficacy

According to Oboza (2019), the main issue with college graduates is not a lack of talent but insufficient competence. "Being a college graduate is no assurance that you are job-ready," he argues. In addition, he stated that a more robust education system offers students early knowledge about available jobs in business. Companies willing to hire recent graduates with

rudimentary abilities and train them to meet the company's needs before putting them to work are more adaptable. According to a study by Fay and Frese (2019), as cited by Meto (2023), the initiative has become increasingly important in the modern workplace. Companies need individuals capable of independent thought, self-direction, and initiative.

Participant 12 stated that, "The problems that I have encountered before was not knowing where to start, limited resources and lack of experiences."

Gomez (2023) found that the correlation between the self-efficacy of BEED graduates (2018-2019) and their employability outcomes is evident. Higher self-efficacy is associated with increased employability, showcasing a positive link between graduates' confidence in their abilities and their success in securing employment within the specified timeframe.

"Your demonstrative attributes and the character traits of a graduate, particularly those with a Bachelor of Elementary Education, need to be understood to be transparent in your "know-how" for classroom management. About 95-98% of what is required involves relatedness or collaborativeness. So, who you are as a graduate is reflected in your employment and your job. It is a measure of how you overcome hurdles and face difficult challenges, reflecting who you are upon graduation. Therefore, your first exposure to challenges, the primary obstacle you face is yourself when you are employed..."

Jayme (2023) posits that if they lack confidence and aren't adequately equipped with their talents and skills, it can impact their employability. This may lead to securing a job outside your field of study. Some graduates, despite being eligible, choose not to pursue a career in teaching.

"It's really important because if you are not confident that you are well-equipped with your talents and skills, you will struggle with your job applications and hesitate. This could result in you applying for jobs like being a store clerk instead. So, there's a mismatch. If someone says they are a graduate but admits they haven't learned much and find it difficult, they won't apply for teaching positions. Instead, they might work as a sales clerk or seek jobs abroad. There are many graduates in education who are not teaching now, even if they are eligible. This is because the new criteria are very challenging, leading to initial discouragement."

Exhaustive Discussion

In-depth review of quantitative and qualitative information about BEED graduate employability reveals the richness of its employment outcomes. The study shows that the number of teachers employed quantitatively is 86.9%. It has also been mentioned that out of those, 67.59% passed the LET. This shows that over 72% preferred non-teaching professions and proves the fact that they possess wider competencies than mere school teachers.

BEED graduates face various challenges in employment, including financial constraints, unfavorable working conditions, limited job opportunities, strict qualification criteria, and intense competition. Socio-economic issues, such as a shortage of employment opportunities due to changing teaching demands, inadequate working conditions, and lower-than-expected pay, further contribute to their difficulties. The study explores how BEED graduates perceive and apply self-efficacy in real professional school settings, emphasizing the importance of skills, knowledge, and qualifications in determining employability. Participants express concerns about financial challenges and workplace issues, underscoring the need for research and interventions to enhance their employability.

To wind up, BEED graduates have shown a high employment level, but there is still a need for further attempts regarding socio-economic impediments as well as competence issues. These include revisions in the curriculum, financial solutions, workplace improvement, and emphasis in self-efficacy development. To ensure that they are prepared to work through diverse professional paths, BEED graduates should be educated in ways that mirror the dynamic job market demands. These qualitative findings confirm the multidimensional characteristics of all these problems that are met by newly graduated teachers. Therefore, it is clear that a comprehensive model needs to be created in order to make these teachers successful in both teaching and non-teaching professions.

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Impact of English-Speaking Engagement: Basis for Enhancing the Speaking Fluency of Second-Year English Major Students

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ABSTRACT

This study investigates how English-speaking engagement activities enhance the fluency of second-year English major students at Tagoloan Community College. It focuses on three key strategies—storytelling, role-playing, and impromptu speaking—and examines how the frequency of teacher evaluations influences students' participation and performance. Employing a mixed-methods design that integrates both qualitative and quantitative approaches, the study utilizes survey data, rubric-based performance assessments, and interview-driven thematic analysis. Findings reveal that students demonstrate high proficiency in storytelling and role-playing activities but exhibit moderate difficulty in impromptu speaking. Moreover, regression analysis indicates that frequent teacher evaluations have a negative effect on engagement levels, particularly in storytelling and impromptu speaking tasks. The results highlight the importance of balanced assessment practices and varied speaking activities to foster greater confidence and fluency among English language learners.

INTRODUCTION

In today's globalized world, English proficiency is vital for academic, professional, and personal growth. For English majors, speaking fluency is particularly important, as future careers often rely on effective communication. As Priya (2023) noted, English proficiency directly affects career advancement. Among the four macro skills, speaking enables real-time interaction, and consistent engagement enhances fluency.

English-speaking engagement involves active participation in tasks such as storytelling, role-playing, and impromptu speaking. These build confidence, clarity, and spontaneity. Chen and Wu (2023) found role-playing improves learning outcomes, while Sanjaya and Kastuhandani (2025) observed increased willingness to speak. Oktaviani et al. (2024) confirmed that interactive speaking tasks strengthen fluency.

Regular practice develops pronunciation and confidence (Nazarie & Beigzadeh, 2025). Veronica (2023) highlighted the need to integrate all four language skills. In the Philippines, where English is an official language, fluency is essential. Vacalares (2023) found Englishonly instruction improves fluency and self-confidence, while Cañete and Ibojo (2023) emphasized the benefits of storytelling and impromptu speaking for students.

Ramos and Lambenicio (2023) reported average oral competence among English majors, influenced by emotion and peer interaction, recommending structured speaking activities. In Northern Mindanao, limited studies exist, though Quilang (2024) showed that structured tasks improved Grade 5 students' fluency. Bautista and Del Valle (2023) also stressed the importance of oral language development.

This study builds on these findings by focusing on second-year English majors. It investigates the effectiveness of storytelling, role-playing, and impromptu speaking in developing fluency,

and how teacher evaluation and engagement frequency influence outcomes. While feedback is often seen as motivating (Nguyen & Nguyen, 2023), its effect on specific speaking tasks remains unclear. This study aims to address that gap and support educators in enhancing students' oral communication.

METHODS

This study used a mixed methods design to collect and analyze both quantitative (numeric) and qualitative (textual) data for a comprehensive understanding of teachers' assessments and students' English-speaking engagements. Quantitative methods, such as structured surveys, were combined with qualitative approaches like interviews or focus group discussions to capture statistical trends and personal experiences. A mixed-methods design can integrate multiple data sources, which can assist in studying complex problems (Poth & Munce, 2020). The respondents were second-year BSED English major students from Tagoloan Community College during the Second Semester of Academic Year 2024–2025, selected through convenience sampling based on availability and accessibility.

The study began with quantitative data collection and analysis, followed by qualitative methods to clarify and contextualize the findings, specifically, performance-based evaluations, where students participated in three speaking activities assessed using structured rubrics developed for this study.

To evaluate the effectiveness of storytelling, role-playing, and impromptu speaking activities in enhancing speaking fluency, the researchers used a Likert scale to measure the frequency do teachers evaluate students' participation in English-speaking engagement during regular classroom interaction and a rubric to assess the level of students' English-speaking engagements—interpretation for evaluating teachers' assessment of students' speaking engagements are the following: 1.00 - 1.75 (Never Evaluated), 1.76 - 2.50 (Rarely Evaluated), 2.51 - 3.25 (Regularly Evaluated), 3.26 - 4.00 (Always Evaluated). Data were statistically analyzed using weighted means for Problems 1 and 2, and simple linear regression for Problem 3 to determine the influence of teacher evaluations on students' speaking engagements.

To assess the level of students' English-speaking engagements in terms of storytelling, roleplaying, and impromptu speaking activities, the researchers used activity-specific rubrics designed to measure both verbal and non-verbal communication skills across three speaking tasks. Each rubric employed a 4-point scale and targeted key fluency domains such as content, grammar, delivery, and spontaneity. These rubrics also served as diagnostic tools, providing clear standards to guide teaching strategies and support fluency development. The mean scores were interpreted using a descriptive scale to determine students' level of English-speaking proficiency: 1.00 - 1.74 (Poor Exposure of English), 1.75 - 2.49 (Developing Exposure of English), 2.50 - 3.34 (Intermediate Exposure of English), 3.35 - 4.00 (Highly Proficient Exposure of English).

RESULTS AND DISCUSSIONS

The study explored the effects of teacher evaluation frequency on the English-speaking engagement of second-year English major students at Tagoloan Community College, focusing on storytelling, role-playing, and impromptu speaking. Thematic analysis revealed that students struggled with expressive delivery and grammatical accuracy in storytelling despite intermediate proficiency, which limited the clarity and emotional depth of their narratives (Ahmad & Shin, 2023; Kim, 2023). In role-playing, students often failed to portray characters authentically and organize their thoughts effectively, leading to a lack of coherence and impact

(Clark, 2023; Katemba & Grace, 2023). Impromptu speaking was particularly challenging, with low confidence, hesitation, and pronunciation issues noted—fueled by anxiety and fear of mistakes (Alasmari, 2022; Cheng & Lee, 2025; Lestari & Setiyadi, 2023).

Emotional factors such as nervousness and limited preparation were identified as consistent barriers to fluency across all speaking tasks. Many students equated preparation with memorization, resulting in rigid and anxious performances (Bautista & Del Valle, 2023; Ramos & Lambenicio, 2023). This finding aligns with Cheng and Lee's (2025) cognitive-affective model, which emphasizes the impact of speaking anxiety on coherence and delivery. Nervousness stemming from fear of negative evaluation further hindered spontaneous speaking performance, echoing the findings of Li and Zhao (2025) on the role of emotional regulation strategies.

Quantitative and qualitative data showed that students performed better and engaged more actively when teacher evaluations were frequent and formative. Regression analysis confirmed a significant positive relationship between evaluation frequency and engagement, particularly in storytelling and impromptu speaking (Flores, 2024; Nguyen & Nguyen, 2023). However, the pressure of frequent evaluations was also reported to affect confidence in spontaneous tasks, suggesting that while feedback is beneficial, its timing and delivery must be sensitive to learners' emotional readiness (Shaddad & Jember, 2024).

These results affirm that structured speaking activities—when integrated with regular, supportive teacher feedback—enhance student fluency, coherence, and confidence. This is consistent with previous research emphasizing the role of task-based learning and performance-based assessment in improving oral skills (Brown, 2023; Nelson, 2022). To address the challenges observed, the study proposes a developmental plan incorporating continuous speaking practice, scaffolded instruction, and formative evaluations, aiming to build real-time communication competence (Nazarie & Beigzadeh, 2025; Yang & Lyster, 2023).

CONCLUSIONS

This study concludes that structured speaking activities—storytelling, role-playing, and impromptu speaking—effectively enhance the fluency of second-year English major students at Tagoloan Community College. A significant relationship was also found between frequent teacher evaluations and increased student engagement, particularly in impromptu speaking.

Exhaustive Discussions

The study comprehensively examined the impact of teacher evaluation frequency on second-year English major students' engagement in English-speaking activities—storytelling, role-playing, and impromptu speaking—at Tagoloan Community College. It was revealed that students showed higher levels of engagement and improved performance when teachers consistently provided evaluations and feedback. Through observation and analysis, the study found that while many students displayed strong potential in delivering stories and participating in simulated dialogues, several still struggled with emotional expression, logical organization of ideas, and confident delivery—particularly in spontaneous speech situations. These challenges were often linked to nervousness, lack of preparation, and fear of making mistakes. Recognizing these issues, the researchers proposed a structured developmental plan that incorporated continuous practice, scaffolded learning activities, and timely formative assessments. The plan emphasized the importance of sustained speaking opportunities supported by clear guidance, constructive feedback, and self-reflection. Overall, the findings underscored the essential role of regular and purposeful teacher evaluation in enhancing

students' confidence, coherence, and fluency, ultimately contributing to the development of competent English speakers ready for real-world communication.

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Laboratory Facilities of Library and Information Science Students Concerning Academic Performance of the Programming Fundamental Course

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ABSTRACT

This study aims to explore the relationship between the availability of computer laboratory facilities and the academic performance of Bachelor of Library and Information Science (BLIS) students in the Programming Fundamentals course. Data were collected through surveys and interviews, examining variables such as the availability and frequency of use of computer laboratories, students' programming proficiency, and their academic performance measured by their General Weighted Average (GWA). Data were analyzed using a mixed-methods approach. The results highlight a notable correlation between the utilization of well-equipped computer laboratories and enhanced academic performance in programming courses. The test result shows a strong positive correlation coefficient and is statistically significant. The findings offer valuable insights that may shape not only the strategies of academic institutions but also the aspirations and accomplishments of aspiring BLIS professionals who will help define the information landscape of the future.

INTRODUCTION

From an international perspective, the Bachelor of Library and Information Science (BLIS) program is a crucial domain within the field of library and information science. It equips students with essential knowledge and competencies to excel in the digital age. Among the core components of this academic journey in the programming fundamental course, is a linchpin that fosters proficiency in the art of computer programming. Fakari (2021) defines a programming fundamental course that equips students with the knowledge and abilities needed to apply computation and computer programming in engineering applications. In this course, students develop programming skills through assignments, labs, case studies, and example programs. The goal is proficiency in writing small to medium programs in a procedural programming language. However, the path to programming proficiency is multifaceted, with various factors impacting a student's trajectory.

The availability of computer laboratories, which are essential to the effective teaching of computer studies, is a barrier for BLIS students. Onwubere (2023) mentioned how important it is to use resources such as textbooks and computer labs. These technologically advanced laboratories provide hands-on learning opportunities and are integral parts of the curriculum. The computer laboratory is more than a physical space; it becomes a hub for exploration, experimentation, and collaborative learning. Brimming with resources, software, and opportunities for hands-on practice, these facilities are considered the 2 birthplace of practical programming skills. They provide a space where theory meets practice, allowing students to code, troubleshoot, and innovate.

This research delves deep into the pivotal connection between computer laboratory facilities and the academic performance of BLIS students in the Programming Fundamentals course. It aims to unravel how these state-of-the-art learning environments influence not only the acquisition of programming knowledge but also the broader educational journey of students. Beyond technical proficiency, the study investigates how such access affects other aspects of the student experience, such as the growth of critical thinking, the improvement of creativity, and the development of problem-solving abilities. The main goal is to comprehend how these computer labs function as both physical locations and intellectual boosters, whereby the real-world implementation of programming concepts serves as a bridge to improved academic achievement.

Furthermore, Merck (2023) stated that inadequate or nonexistent ICT infrastructure, especially in underdeveloped countries, can significantly hinder computer studies education. The use of computer lab facilities affects more than just running code; it touches on the fundamentals of learning and development as we explore the relationship between technology, education, and performance. This research aims to contribute valuable insights that may shape not only the strategies of academic institutions but also the aspirations and accomplishments of aspiring BLIS professionals who will help define the information landscape of the future.

MATERIALS AND METHODS

This study employs a mixed-methods research design, combining both quantitative and qualitative research methodologies. This approach allows for a comprehensive exploration of the relationship between computer laboratory facilities and the academic performance of Bachelor of Library and Information Science (BLIS) students in the Programming Fundamental course. The quantitative aspect involves the collection and analysis of numerical data. As highlighted by Sreekumar (2023), to monitor events that impact a sample population a specific set of people—quantitative research approaches are employed. This research methodology entails collecting a variety of numerical data using various techniques, and then statistically analyzing the data to aggregate, compare, or show correlations between the data. A structured survey questionnaire will be administered to BLIS students, focusing on their perceptions of computer laboratory facilities. The survey will include items related to respondents' profiles, computer laboratory facility usage among BLIS students, considering the availability of computer laboratory facilities and the number of computers available or usable, and the students' programming fundamentals proficiency in terms of their General Weight Average (GWA). Additionally, academic performance metrics such as grades, test scores, and project outcomes will be quantitatively measured and analyzed. Statistical techniques, including correlation analysis, will be applied to examine the quantitative relationships between students' perceptions and their academic achievements.

The qualitative component aims to provide a deeper understanding of the experiences and perspectives of BLIS students regarding computer laboratory facilities. As underscored by Tenny, S. (2022), one type of investigation that aims to explore and provide a deeper understanding of real-world problems is qualitative research. Qualitative research contributes by developing hypotheses and exploring a deeper understanding of quantitative data, in contrast to quantitative research, which entails the collection of numerical data or the application of interventions and treatments. This methodology involves the collection of participants' experiences, perceptions, and behaviors, addressing questions related to the processes and reasons behind phenomena rather than focusing solely on numerical quantities. In-depth interviews will be conducted with a subset of participants, exploring their qualitative insights into the challenges, preferences, and overall experiences in utilizing these facilities.

Qualitative data from interviews will be analyzed thematically to uncover patterns, themes, and nuanced aspects that may not be captured through quantitative measures alone. The results from both quantitative and qualitative analyses will be integrated to offer a more holistic understanding of the research question. Triangulation, the comparison of findings from different methods, will be employed to validate and strengthen the overall conclusions. By combining quantitative statistical patterns with qualitative depth, the mixed-methods approach aims to provide a comprehensive and nuanced perspective on the relationship between computer laboratory facilities and the academic performance of BLIS students.

RESULTS AND DISCUSSION

Respondents' Profile

The respondents' profile covered the age, gender, and subject taught of the teachers handling general education subjects of the three community colleges in Misamis Oriental.

Age

It was found that the majority of respondents, totaling 35 individuals (47.30%), belong to the age category of 22 years old and above. This substantial representation implies a significant enrollment of older individuals in the programming fundamentals course. On the other hand, the youngest age group, comprising respondents aged 18-19 years old, is the least represented, with only 10 individuals (13.51%) falling within this category. The findings from Table 5 indicate that the highest number of respondents falls within the age bracket of 22 years and above in the surveyed population. This observation aligns with the assertion made by Papaya and Bagayna (2023), which underscores that age group and other demographic characteristics have a big influence on how many students participate in traditional in-person and online learning settings.

Respondent's sex

The overall data underscores a pronounced predominance of female students within the BLIS program. Specifically, female respondents make up the majority, totaling 60 29 individuals, or 81.08% of the total population. In contrast, male respondents are notably fewer, comprising only 14 individuals, or 18.92%. which implies that most of the respondents are female because most of the students enrolled in this program are female. The highest number of respondents is observed among female fourth-year BLIS students, comprising 36 individuals, which accounts for 48.65% of the total. Following closely are male second-year students, totaling 10 individuals, representing 13.51% of the respondents. In contrast, the lowest representation of male respondents is seen among third-year BLIS students, with a complete absence, accounting for 0% of the total. Conversely, female representation among third-year BLIS students stands at six individuals, constituting 8.11%. The data highlighted by Diane et al. (2019) indicate that women have historically held a dominant position in the profession of librarianship.

Respondent's year-level

It is evident that out of 74 participants, the majority, comprising 54.05%, are fourth-year students. Conversely, 37.84% are second-year students, and only 8.11% are in their 30 third year. Cereneo S. Santiago Jr. et al. (2021) suggest that the COVID-19 epidemic has changed educational systems, requiring a change from traditional to flexible learning methods. This shift may explain the higher representation of fourth-year students, as flexible learning options have encouraged many lifelong learners to return to school.

The frequency of computer laboratory facility usage among BLIS students

Availability of computer laboratory facilities

The total mean score for the availability of computer laboratory facilities is 3.19, which is interpreted as "Moderately Available." This indicates that, on average, students perceive the computer lab facilities as moderately accessible and useful for their learning needs. This moderate rating reflects a consensus that while the facilities are present and somewhat beneficial, there may be room for improvement in their accessibility or usage to better support students' academic endeavors.

Within this context, the highest-rated indicator is the statement, "The lab facilities play a major role in helping students comprehend and put Fundamentals of Programming topics into practice," which has a weighted mean of 3.66, interpreted as "Highly Available." This suggests that students find the computer lab facilities particularly effective in aiding their understanding and practical application of programming concepts. The effectiveness of these facilities aligns with Azriadi's (2018) assertion that students can have practical experience with computer systems in a computer lab facility. Peerapol (2019) further emphasizes that modern functions of computer labs are essential for increasing knowledge and skills, addressing performance issues, and increasing productivity.

Conversely, the lowest-rated indicator is the statement, "Library and Information Science students often use the computer labs designed for the Programming 33 Fundamentals," with a weighted mean of 2.74, interpreted as "Moderately Available." This lower rating indicates that the utilization of the computer labs by Library and Information Science students for programming fundamentals is moderate, suggesting a potential area for increased engagement or better access. Enhancing the utilization of these labs could amplify their benefits, as Ali (2020) notes that Computer laboratories can improve students' educational experiences.

Number of Computers Available or Usable

The overall mean score for the availability and usability of computer lab facilities is 2.94, which is interpreted as "Moderately Available." This indicates that, on average, students perceive the computer facilities as moderately sufficient for their needs. Among the specific indicators, the statement, "To help students grasp the principles of programming, I believe that more computer facilities are required to support the current computer units in the computer lab," received the highest mean score of 3.74. This score indicates that students find the usage frequency of computer laboratory facilities based on the number of available and usable computers to be highly available. This suggests a strong perceived need for additional computer resources to support effective programming education, aligning with Mercado et al. (2022), which emphasizes that the hands-on experience and tangible interactions provided in a laboratory setting significantly enhance the learning process, making abstract concepts more concrete and understandable for students.

In contrast, "There are enough computers in the lab to accommodate every student in the library" received the lowest mean score of 2.38, interpreted as "Rarely Available." This indicates that students feel there are insufficient computers in the lab to meet the needs of every student, highlighting a gap in resources that may hinder optimal learning experiences. Despite the availability of personal computers at home, students still require well-equipped laboratories and teaching facilities to foster innovation and research, as underscored by Nelmida Fernado (2019). Home computers, while useful, do not fully meet the comprehensive educational needs of students, necessitating robust lab facilities. Students who get access to computers early have more time to practice and complete tasks. This can create an uneven playing field, where some students have a clear advantage due to an access issue, hindering overall learning outcomes for

the class. In conclusion, insufficient computers in the lab lead to a resource gap that creates frustration, time pressure, and unequal learning opportunities. This can significantly hinder students' ability to achieve optimal learning experiences in a technology-driven curriculum.

Students' programming fundamentals proficiency

General Weight Average (GWA)

The data reveal that the highest frequency of proficiency, encompassing 35 students (47.30% of the respondents), is observed at the "Satisfactory (Approaching Proficiency)" level. This indicates that nearly half of the students achieved a General Weight Average (GWA) in the range of 80%-84%. This level of proficiency suggests a solid understanding and competency in Programming Fundamentals among these students. 40 Conversely, the lowest proficiency level identified is "Outstanding (Advance)," attained by five students comprising 6.76% of the total. These students achieved an impressive GWA of 90% or higher, demonstrating exceptional performance and a profound mastery of programming fundamentals. It's noteworthy that no students scored below 75%, indicating that all respondents met or exceeded the basic expectations for proficiency in programming. This overall achievement underscores the effectiveness of the educational approach and the commitment of students to excel in their studies. Simões (2022) emphasizes that students who use computers more often get more confident in their ability to use them, which enhances performance. This insight aligns with the proficiency levels observed, suggesting that active engagement with programming tasks and technologies contributes to students' success in mastering Programming Fundamentals.

Respondents' experiences in using computer laboratories

Availability of Computer Laboratory Facilities

From the responses of the respondents during the conduct of the focus group discussion, the following theme emerged: Limited access to learning materials. This theme, along with categories, is discussed in the succeeding paragraphs.

Number of computers available

Research and learning materials are heavily digitized these days. From programming, online databases, and academic journals to e-textbooks and educational software, computers provide a vast resource pool. Without them, students struggle to find the depth and breadth of information needed to excel in their studies. Research and learning materials are heavily digitized these days. From programming, online databases, and academic journals to e-textbooks and educational software, computers provide a vast resource pool. Without them, students struggle to find the depth and breadth of information needed to excel in their studies. Online platforms, such as programming, are a common tool for collaboration and communication in classrooms. Students without computers may have trouble working on group projects, accessing class materials shared online, or staying connected with teachers and classmates for updates or discussions.

Computer skills are crucial in today's world. Without access to computers, students miss out on developing these skills, putting them at a disadvantage compared to their peers. This gap can affect their performance in computer-based tasks or limit their ability to access online resources for future learning and careers. Overall, the lack of computer resources creates an uneven playing field for students. They struggle to access information, participate in online learning, develop essential digital skills, and collaborate effectively, all of which can hinder their academic performance.

Limited access to learning materials

Much educational content is now delivered online, from textbooks and assignments to lectures and educational resources. Students without computers may struggle to keep up with coursework or have difficulty finding the information they need to succeed. Hinders computer Knowledge Acquisition and Retention, such as Textbooks, online resources, practice problems, and other materials, provide students with the content they need to learn and solidify their understanding. Without them, students struggle to grasp complex concepts, retain information, and prepare for assessments. Limits Learning Styles and Engagement: Learning materials come in various formats—textbooks, articles, videos, simulations—catering to different learning styles. Limited access restricts students to methods that might not resonate with them, leading to disengagement and difficulty absorbing information. Students with access to a wider range of resources can delve deeper into topics, explore diverse perspectives, and practice more effectively. This creates an advantage compared to students with limited materials, widening the achievement gap. Learning materials empower students to go beyond the classroom curriculum and explore topics independently. Restricted access limits their ability to delve into areas of 43 interest, ask deeper questions, and develop a genuine love for learning. The struggle to find appropriate learning materials can be stressful for students. They might feel overwhelmed by the workload or inadequate preparation, leading to anxiety and hindering their ability to perform well. By addressing these issues and ensuring equitable access to a variety of learning materials, educators can create a more level playing field and empower all students to reach their full potential in programming.

Difficulties with communication and collaboration

Many schools and teachers use online platforms for communication and collaboration. Students without a computer may have trouble staying connected with classmates and teachers or miss out on important announcements. Clear communication is crucial in programming. When collaborating online, misunderstandings can easily arise due to a lack of face-to-face interaction, unclear documentation, or misinterpretations in text-based communication. These misunderstandings can lead to errors in code, requiring rework and delays. Effective collaboration allows programmers to leverage each other's strengths and perspectives. Difficulties with communication can hinder this process, making it harder to brainstorm solutions, identify and fix bugs efficiently, or effectively explain complex technical concepts. In large projects with multiple programmers, collaboration is essential for integrating different code sections seamlessly. Communication difficulties can lead to compatibility issues, version control problems, and unexpected bugs when merging code written by different team members. Frustration from communication problems can create tension and decrease team morale. Difficulty collaborating effectively can slow down progress, leading to missed deadlines and a decreased sense of accomplishment. Collaboration allows programmers to learn from each other's experiences and approaches. Communication difficulties can hinder this knowledge transfer, limiting opportunities for professional development and creating a situation where programmers might reinvent the wheel instead of building on existing solutions. Additionally, online collaboration and tools can sometimes introduce their challenges. By improving communication skills, adopting clear documentation practices, and utilizing effective online collaboration tools, programmers can overcome these challenges and work together more effectively to achieve better results.

The significant relationship between the availability of the computer laboratory of the BLIS students and their academic performance.

The data provides a significant insight into the relationship between the availability of computer laboratory facilities and the academic performance of Bachelor of Library and Information Science (BLIS) students. The table highlights a strong positive correlation

coefficient of 0.66, indicating a robust relationship between the two variables. Furthermore, the associated P-value of 0.0001 underscores the statistical significance of this correlation, suggesting that the observed relationship is unlikely to have occurred by chance. Segundo (2020) underscores that proficiency is built on a solid foundation of basic programming concepts. Programming necessitates a structured approach where students first grasp fundamental language elements before advancing to more advanced strategies and the complete programming process. This layered learning approach ensures that students develop a comprehensive understanding and are adequately prepared for future challenges in their academic and professional pursuits.

The availability of computer laboratory facilities significantly influences BLIS students' academic performance. The strong positive correlation coefficient and the low P value affirm that students benefit from well-resourced learning environments that support their educational journey effectively. By providing access to necessary tools and practical experiences, such facilities enhance students' comprehension and application of programming concepts, thereby facilitating their overall academic success. The computer laboratory facilities not only support foundational learning but also contribute to students' readiness for the complexities of their chosen field. Ensuring 48 continued access to and improvement of such resources is crucial for maintaining high standards of education and preparing students for future professional challenges.

CONCLUSION

The study explored the relationship between various factors—age, sex, year-level, computer lab usage, and academic performance—among BLIS students. The respondents' profile showed a predominance of female students, particularly fourth-year students, and a majority of students were in the 22-year-old and above age group. The data on computer laboratory facility availability indicated moderate accessibility and usage, with the highest rating given to its role in aiding programming practice. However, there was an evident gap in the number of computers available, as students expressed a need for additional resources to support their learning. These findings reflect the challenges faced by students in utilizing available resources effectively, which may impact their overall academic experience.

The study also examined the proficiency of students in programming fundamentals, finding that the majority were "Satisfactory" in their performance, with a few excelling at an "Outstanding" level. The results showed a significant positive correlation between the availability of computer labs and academic performance, suggesting that better access to learning facilities can lead to improved student outcomes. However, the study also noted that the use of the computer lab by students was not fully optimized, with limited usage of the facilities for programming-related tasks. This gap highlights the importance of maximizing access and utilization of the available technology to improve students' learning experiences.

In conclusion, the study underscores the critical role that adequate learning resources, especially computer laboratory facilities, play in enhancing students' academic performance. The positive correlation between computer lab availability and academic success emphasizes the need for continued investment in these resources. Additionally, the study suggests that educational institutions should focus on improving access to technology, fostering better communication and collaboration in learning environments, and ensuring that students are fully equipped to succeed in their academic pursuits.

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Effective Maternal Health Care Service Delivery as Observed by Healthcare Providers in Tagoloan, Misamis Oriental

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ABSTRACT

Maternal healthcare service delivery is vital for ensuring a safe and healthy outcome for both mothers and their newborns. This study sought to assess the key factors that enhance the effectiveness of delivering maternal healthcare services as observed by healthcare providers in delivering maternal health services and to examine the influence of demographic factors on service delivery. Conducted in two government healthcare facilities in Tagoloan, Misamis Oriental, the research employed a quantitative approach with 50 healthcare providers selected through convenience and purposive sampling. It administers survey forms to collect information directly from the Healthcare Provider, allowing for the measurement of factors such as the extent to which they observed the delivery of effective maternal health services. The instrument used was adapted from the study by Cagayan et al. (2020), and the scoring system was based on the Balanced Scorecard (BSC) System by Kaplan and Norton (1992). The study assessed five key aspects of maternal health service delivery: Governance, Leadership, and Accountability; Human Resources; Protocols; Transportation and Communication; and Emergency Drugs and Equipment. Results showed that all aspects were rated as "Always Demonstrated," with the highest scores in Transportation and Communication (M = 3.83) and the lowest in Human Resources (M = 3.66). Correlation analyses revealed no significant relationships between demographic factors—sex, age, education, and years of service—and the degree of observation in service delivery. Based on these findings, a tailored program was developed to address specific areas needing improvement, particularly focusing on Human Resources. The recommendations emphasize enhancing training and resource allocation to support healthcare providers effectively.

INTRODUCTION

Maternal health is essential to the overall well-being of families and communities. It has long been a global concern, particularly in low- and middle-income countries (LMICs), where healthcare systems often face shortages in infrastructure, staffing, and logistical support. In the Philippines, the maternal mortality ratio remains high, currently exceeding the Southeast Asian regional average. The World Health Organization and national agencies emphasize improving maternal healthcare access, quality, and responsiveness to reduce maternal and infant mortality rates.

Midwife-led care, integration of community health workers, and establishment of comprehensive referral systems have been identified as effective strategies. Despite these initiatives, implementation gaps remain due to limited funding, lack of continuity across services, and barriers related to geography and socio-cultural practices. Poor access to health facilities in far-flung areas, delayed transport during emergencies, and the limited presence of

skilled birth attendants in geographically isolated and disadvantaged areas (GIDAs) compound the risks for maternal and neonatal mortality.

In response to these issues, the Philippine Department of Health launched the Service Delivery Network (SDN) under the Maternal, Newborn, Child Health, and Nutrition (MNCHN) strategy. This initiative aims to coordinate care delivery across facilities and ensure the availability of essential maternal health services. However, the effectiveness of these services is best understood through the perspective of healthcare providers who are directly involved in service delivery.

Moreover, the COVID-19 pandemic significantly disrupted maternal and child health services, revealing vulnerabilities in system responsiveness and continuity of care. Travel restrictions, fear of infection, and reallocation of healthcare resources caused declines in facility-based deliveries and prenatal consultations. Lessons from these experiences highlight the importance of resilient health systems that maintain service delivery even under crisis conditions.

This study explores the experiences and observations of 50 healthcare providers in Tagoloan, Misamis Oriental, to assess the degree to which maternal health services are effectively delivered. It specifically evaluates five dimensions: Governance, Leadership, and Accountability; Human Resources; Protocols; Transportation and Communication; and Emergency Drugs and Equipment. Understanding the strengths and gaps in these areas is essential for improving maternal health outcomes and designing interventions tailored to the local context. The broader application of these findings may also provide comparative insights across different LGUs in the region and facilitate the development of a more unified and responsive maternal health system nationwide.

LITERATURE REVIEW

Hamal et al. (2020) explored the social determinants impacting maternal health in India through a comprehensive scoping review of peer-reviewed articles. The study identified several structural and intermediary factors affecting maternal health service utilization and maternal mortality. Structural determinants included economic status, caste/ethnicity, education, gender, religion, and cultural norms, while intermediary factors encompassed residence location, maternal age at childbirth, parity, exposure to mass media, and maternal health messages. The findings revealed that structural factors directly or indirectly influenced intermediary factors, collectively shaping maternal health service use and contributing to maternal mortality. Additionally, the health system was recognized as an independent and significant intermediary factor affecting maternal health outcomes. This study highlights the intricate relationship between social determinants and maternal health disparities, emphasizing the need for targeted interventions to mitigate these inequities.

Punzalan et al. (2024) provide insights into the factors influencing maternal choices regarding the place of delivery in the Philippines, particularly focusing on the availability of primary care facilities in proximity to hospitals. Their qualitative study highlights safety as the main factor determining the choice of delivery place for mothers, with hospitals preferred for their better facilities for handling childbirth complications. The findings underscore the importance of promoting PhilHealth-covered services in birthing clinics to make delivery more accessible and inclusive, while also emphasizing the need for improving infrastructure, medical resources, and staffing at birthing clinics to instill confidence among expectant mothers. These findings resonate with the structural and14 intermediary factors identified by Hamal et al. (2020), demonstrating the broader relevance of addressing social determinants in maternal health care service delivery across different contexts.

Herwansyah et al. (2022) conducted a systematic literature review to examine the use of maternal health services in primary healthcare settings across Southeast Asia. The review highlighted sociocultural barriers and inequities in healthcare service delivery as key factors contributing to the low utilization of maternal health services. These findings underscore the necessity of addressing both structural and intermediary factors to enhance access to and use of maternal health services. This aligns with the themes identified in studies by Hamal et al. (2020) and Punzalan et al. (2024), emphasizing the need for comprehensive interventions to address these challenges.

Maternal health care service delivery represents a crucial aspect of healthcare systems globally, particularly in low and middle-income countries (LMICs) where maternal mortality rates remain alarmingly high (WHO, 2019). Understanding the complexities and nuances of maternal health care delivery is essential for devising effective strategies to address maternal health disparities and improve health outcomes for mothers and newborns. A systematic review conducted by Afulani et al. (2020) explored the utilization of maternal health services in LMICs, revealing significant gaps in access to and utilization of essential maternal health interventions. The review identified various barriers, including socioeconomic factors, cultural beliefs, geographical remoteness, and health system challenges, highlighting the need for multifaceted approaches to enhance maternal health service delivery in resource-constrained settings.

Moreover, a study of community health workers (CHWs) by le Roux et al. (2020) in rural South Africa found that CHWs significantly improved maternal wellbeing and health behaviors. Mothers involved in the CHW program reported fewer depressive symptoms, attended more antenatal visits, and practiced better baby-feeding methods, including exclusive breastfeeding for six months. This highlights the critical role of CHWs in maternal health and the importance of integrating CHW programs into health system strengthening efforts for sustainable improvements.

Furthermore, Chou et al. (2019) conducted a modeling study to estimate the global impact of poor quality of care on maternal and neonatal outcomes in 81 low- and middle-income countries. The study suggests that improving the quality of care could lead to a significant decrease in maternal and neonatal deaths and stillbirths. It emphasizes the need for health system enhancements, workforce capacity building, and facility infrastructure improvements to address the substantial gaps in the availability, accessibility, and quality of maternal health services, especially in rural and underserved areas.

Overall, addressing maternal health disparities requires comprehensive and integrated approaches that encompass community-based interventions, facility-based strategies, and health systems strengthening efforts (WHO, 2020). By addressing the multifaceted determinants of maternal health and implementing evidence-based interventions, countries can make significant progress towards achieving global targets for maternal health and contributing to sustainable development goals.

Factors Influencing Maternal Health Service Utilization

A variety of socio-demographic factors significantly influence the utilization of maternal health services, shaping both access to and use of these services. Gaining a thorough understanding of these factors is crucial for developing effective policies and interventions to enhance maternal health outcomes.

Paula and Chouhan's (2020) study on socio-demographic factors influencing maternal health care utilization in India revealed critical insights into the complexities of maternal health service utilization. Their findings underscored the pivotal role of educational attainment and

household wealth status in determining access to maternal health services. Similarly, a recent study by Singh et al. (2023) explored the socio-economic factors influencing the utilization of maternal health care services in Uttarakhand, India. The study found that women's educational level, household income, and access to health information were significant predictors of the use of maternal health services. Women with higher education levels were more likely to utilize antenatal care services and skilled birth attendants, while those with greater household income had better access to emergency obstetric care.

Moreover, Hamal et al. (2020) conducted a comprehensive review of factors influencing maternal health outcomes in India, emphasizing the impact of structural and intermediary factors on maternal health service use. Their findings revealed the intricate interplay between economic status, education, cultural beliefs, and health system challenges in shaping maternal health outcomes. Similarly, Punzalan et al. (2024) explored the factors influencing maternal choices regarding the place of delivery in the Philippines. Their study highlighted safety as a critical determinant in choosing delivery locations, emphasizing the need for accessible and quality maternal health services.

Furthermore, a 2022 study by Bain et al. explored the prevalence and determinants of maternal healthcare utilization among young women in sub-Saharan Africa. The study found that the probability of utilizing maternal healthcare increased with wealth status and that young women who were in the richest wealth quintile were significantly more likely to utilize antenatal care (ANC), skilled birth attendance (SBA), and postnatal care (PNC) than those in the poorest wealth quintile.

Additionally, a review by Mzembe et al. (2023) assessed interventions to enhance healthcare utilization among pregnant women, including adolescents, in low- and middle-income countries. The review highlighted the effectiveness of community health workers in increasing early ANC initiation among pregnant adolescents, suggesting the need for policy changes and the implementation of interventions that have proven effective in some countries to improve maternal health service utilization.

Observations on Maternal Health Service Utilization

Observations in accessing maternal health services present significant challenges in both low-and middle-income countries (LMICs) and high-income countries (HICs). Studies have identified various factors contributing to these observations, encompassing socio-economic, cultural, and structural dimensions. For instance, a study by Begum and Hamid (2023) conducted in rural Bangladesh highlighted disparities in antenatal care visits and institutional delivery between high and low disaster-prone areas. The study found that financial constraints, household size, income, and proximity to health facilities were strong influencing factors for receiving adequate antenatal care. Moreover, the level of institutional delivery was low, with significant differences in cesarean sections and attendance of graduate doctors/gynecologists between the areas studied.

Similarly, research in Nigeria by Udenigwe et al. (2023) examined the sociocultural realities of pregnant women in rural areas through the lens of negofeminism. The study described how women negotiate authority and influence over their pregnancy healthcare decisions within patriarchal norms. It highlighted the need for policy and programming that acknowledges women's social embeddedness and promotes their control over reproductive health and autonomy in seeking care. Geographic barriers also play a significant role in hindering access to maternal health services, particularly in rural areas.

Chen, Wang, and Liu (2019) conducted a cross-sectional study in rural China, identifying geographical remoteness as a key barrier to accessing maternal health services. Furthermore,

structural barriers within health systems contribute to the inequitable distribution of maternal health services and hinder access to quality care. These barriers include shortages of trained healthcare professionals, inadequate medical infrastructure, and unequal distribution of resources.

Despite efforts to improve maternal health service utilization, persistent barriers continue to impede access to care for vulnerable populations. Disparities in access to education, socio-economic status, and cultural norms further exacerbate these challenges, particularly for adolescent mothers and marginalized communities. A recent report by Jones et al. (2020) emphasizes the importance of prioritizing girl child education and addressing financial barriers to access maternal health services. The report maps out social protection intervention pathways that can help overcome these barriers, ensuring that adolescent girls in low- and middle-income countries receive the necessary support to utilize maternal health services effectively. This comprehensive approach not only facilitates access to education but also empowers young women to make informed decisions regarding their health and well-being.

Additionally, cultural beliefs and practices continue to serve as significant barriers to maternal health service utilization in many low- and middle-income countries (LMICs). A study by Mzembe et al. (2023) reviewed systematic reviews on interventions to increase healthcare service utilization among pregnant women. The review highlighted the importance of culturally sensitive interventions that respect local traditions while promoting the uptake of essential maternal health services.

Furthermore, a qualitative study by Felisian et al. (2023) in Tanzania found that sociocultural beliefs and practices throughout pregnancy, childbirth, and postpartum are widespread, with some being harmful and affecting the utilization of medical services. The study emphasizes the need for public health interventions that recognize and address these cultural practices to improve maternal and child health outcomes.

In conclusion, addressing the multifaceted barriers to maternal health service utilization requires comprehensive strategies that address socio-economic, cultural, and structural factors. By identifying and addressing these barriers, policymakers and stakeholders can work towards improving access to quality maternal health services and reducing maternal morbidity and mortality rates globally.

METHODOLOGY

To systematically assess the effectiveness of maternal health care service delivery in Tagoloan, Misamis Oriental, this study adopted a descriptive quantitative research design. The approach was chosen to capture numerical representations of service quality and effectiveness as perceived by frontline healthcare workers. A structured survey format was used to gather standardized data, allowing for the aggregation and analysis of trends across the healthcare provider population.

The descriptive quantitative design allowed for direct measurement of various service delivery indicators based on the Balanced Scorecard (BSC) framework. This model, initially developed for business and organizational performance measurement, was adapted to assess health service dimensions: Governance, Leadership, and Accountability; Human Resources; Protocols; Transportation and Communication; and Emergency Drugs and Equipment. The BSC framework is particularly suitable for public health assessments as it provides a multidimensional view of organizational performance.

The target population consisted of healthcare providers employed within the municipality of Tagoloan who were directly engaged in maternal healthcare services. This included public health nurses, municipal health officers, rural health physicians, midwives and nurse midwives. From this group, a total of 50 participants were selected using purposive and convenience sampling techniques. Purposive sampling ensured that all respondents had direct experience with maternal health care, while convenience sampling allowed for efficient access to respondents within the locality.

A structured questionnaire was utilized as the main data collection tool. The questionnaire was adapted from Cagayan et al. (2020), a validated tool previously used to assess maternal service delivery in another region of the Philippines. The questionnaire was composed of two sections: (1) respondent demographic information, and (2) an assessment of the five dimensions of maternal service delivery.

Each of the five service areas contained 5–10 statements rated using a 4-point Likert scale: 1 = Not Demonstrated, 2 = Hardly Demonstrated, 3 = Demonstrated Most of the Time, and 4 = Always Demonstrated. The instrument was pilot-tested with a subset of 10 healthcare providers from neighboring municipalities to verify clarity and internal consistency. Cronbach's alpha for the pilot test was 0.88, indicating high reliability.

Data collection was conducted over a one-month period, August of 2025. The researchers personally visited Tagoloan Community Hospital and the Rural Health Unit of Tagoloan to administer the survey. Respondents were briefed on the purpose of the study and assured of their anonymity. Participation was voluntary, and respondents could withdraw at any time without consequence. Completed surveys were collected immediately after completion to ensure a high response rate and to clarify any ambiguous responses in real-time.

Data were encoded and analyzed using descriptive statistics including frequencies, means, and standard deviations to summarize demographic characteristics and average ratings for each of the five dimensions. Pearson correlation was utilized to assess any statistically significant relationships between respondent demographic variables (age, sex, education, and years in service) and their observations of service delivery.

Inferential analysis was included to test hypotheses regarding the relationship between workforce experience and perceived service performance. An alpha level of 0.05 was used to determine statistical significance. The results from the quantitative analysis formed the basis for crafting targeted intervention strategies to address identified gaps in maternal health service delivery.

This study is limited to the experiences and perceptions of healthcare providers within Tagoloan and may not fully represent maternal health service delivery in other municipalities or regions. The quantitative nature of the study captures observable behaviors and processes but does not explore underlying causes or contextual factors influencing performance. Future studies are encouraged to integrate qualitative interviews for deeper exploration of provider experiences and systemic challenges.

RESULTS AND DISCUSSION

Results show strong adherence to maternal healthcare service standards across all five domains. Among the healthcare providers surveyed, 88% were female, and the majority were college graduates (80%). Most respondents had less than 5 years of experience, with an average age of 36.06 years. These demographics suggest a relatively young and academically prepared workforce.

Demographic Profile of Respondents

The demographic profile revealed that a large proportion of the respondents (88%) were female, consistent with the general composition of maternal healthcare providers in the Philippines. Most participants were within the age range of 29–35 years, and 64% had less than five years of service experience. A majority (76%) held a college degree, while the remainder had either vocational qualifications or graduate-level training. The relatively young, educated demographic suggests a workforce that is both dynamic and in need of structured continuing education programs.

Summary of Observations by Service Area

Governance, Leadership, and Accountability

This area received a mean score of 3.76, indicating a strong presence of governance structures such as local health boards and community accountability mechanisms. Respondents reported that municipal leaders were supportive of health programs and that budget allocation for maternal services was visible.

Human Resources

With the lowest average score of 3.66, the Human Resources domain highlighted critical gaps. While the provision of incentives such as hazard pay and transportation allowances was recognized, respondents pointed out an insufficient number of midwives and the absence of a formal supervisory and mentorship structure. The ratio of maternal healthcare providers to clients remained below national standards.

Protocols

Protocols and standard operating procedures (SOPs) were consistently followed, according to respondents. This category earned a mean score of 3.82. Facilities maintained updated referral directories, and patient records were handled confidentially. However, discrepancies were noted in the application of standardized referral forms across some barangays, occasionally resulting in communication breakdowns during emergency referrals.

Transportation and Communication

This service area was rated the highest, with a mean score of 3.83. Respondents cited the availability of municipal ambulances and motorcycles for emergency transport. Furthermore, mobile phone communication between barangay health stations and rural health units was well established. However, challenges remained in areas with poor network coverage, which hindered timely coordination during critical emergencies.

Emergency Drugs and Equipment

The availability of essential supplies such as antibiotics, IV fluids, and sterile delivery kits was generally rated as reliable (mean = 3.78). However, several respondents reported intermittent shortages of uterotonic drugs and oxygen tanks. The procurement system was described as centralized and often slow, creating delays that could compromise care quality during high-risk deliveries.

Correlation Between Demographic Factors and Observations

Pearson correlation analysis showed no statistically significant relationships between the demographic characteristics of healthcare providers (age, sex, years in service, and education level) and their ratings of service delivery. This finding implies that perceptions of maternal healthcare service effectiveness were consistent across various provider subgroups.

Comparative Analysis by Facility Type

To further understand variations in service delivery, responses were analyzed based on facility type (i.e., b, rural health unit, and community hospital). Rural health units generally scored higher in governance and drug availability, just like the community hospital most likely because both health facilities are in close proximities and under the Local Government Unit of Tagoloan and regularly oversight by local officials.

Summary of Key Findings

The data revealed high levels of service delivery consistency across most of the evaluated domains. The main strengths were observed in logistics (transport and communication) and protocol adherence, while the primary weaknesses were evident in workforce management and timely supply chain execution. These findings serve as a basis for the formulation of targeted interventions to enhance maternal healthcare delivery in the locality.

The findings confirm the importance of infrastructure and protocol consistency in delivering maternal healthcare. Despite overall positive ratings, gaps in human resources remain a serious concern. Without regular training, incentives, and staffing support, the quality of care may stagnate or decline. Other studies (Chou et al., 2019; Udenigwe et al., 2023) support this view, citing HR challenges as a primary factor in maternal care disparities.

Interestingly, demographic characteristics of the providers had no statistically significant effect on service delivery observation. This suggests that structural and organizational factors—not individual ones—are more likely to influence maternal health service quality. This aligns with the Social Ecological Model, where macro-level factors often override individual variations.

The identification of Human Resources as the weakest domain highlights the need for strategic human capital investment—something that many developing regions overlook. Training should be institutionalized, and resource allocation must ensure that health workers feel supported and equipped.

CONCLUSION

The findings of this study provide a comprehensive understanding of the current state of maternal healthcare service delivery in Tagoloan, Misamis Oriental, as observed by healthcare providers across various health facilities. Overall, the results show that the delivery of maternal healthcare services in the locality is commendably strong across most dimensions, particularly in Transportation and Communication, Protocols, Governance, Leadership, and Accountability. These areas reflect a high level of organizational commitment, logistical readiness, and standardized procedures that collectively support the goal of providing quality maternal care.

However, the relatively lower rating in Human Resources raises a red flag and calls for immediate attention. This domain reflects the human capital challenges confronting local health systems, including staff shortages, insufficient training, and the lack of structured supervisory frameworks. Despite strong governance and the availability of protocols and equipment, the effectiveness of maternal healthcare hinges greatly on the competencies, availability, and well-being of healthcare providers. Without addressing these human resource gaps, the sustainability and scalability of maternal health gains in Tagoloan may be compromised.

An important conclusion drawn from the absence of significant demographic correlations is that the challenges and strengths of service delivery are systemic rather than attributable to specific subsets of providers. This underscores the need for solutions that are institutional and

policy-driven rather than dependent on individual capacity or motivation. It also validates the utility of the Balanced Scorecard as a framework for assessing the multidimensional aspects of maternal service delivery.

The consistency in the delivery of protocols and emergency drugs indicates a health system that has achieved a certain level of maturity. However, the occasional lapses in supply chain efficiency and referral communication systems remind us that health systems must be dynamic and continuously evolving to meet emerging needs. Additionally, while infrastructure and resource availability are essential, they must be complemented with supportive management practices, community engagement, and cross-sectoral collaboration.

Finally, this study reinforces the critical role of local government units in advancing maternal health. Through leadership, governance, and resource allocation, LGUs serve as the backbone of primary healthcare implementation. Strengthening their capacity and ensuring alignment with national health goals will be pivotal in achieving not only maternal health targets but the broader vision of Universal Health Care in the Philippines.

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Parental Support, Socio-Emotional Learning, and Academic Performance of Filipino Major Students: A Structural Equation Modeling Approach

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ABSTRACT

This study explores the relationship between parental support, socio-emotional learning (SEL), and academic performance among Bachelor of Secondary Education (BSED) Filipino majors at a community college in Misamis Oriental. Utilizing Structural Equation Modeling (SEM), the study aimed to determine the direct and indirect influences of parental support on academic outcomes, with a focus on the mediating role of SEL. Data were collected through a survey assessing the perceived level of parental support, socio-emotional competencies, and academic performance. Results indicated that students perceived both father's and mother's support as moderately high. The socio-emotional competencies, particularly in self-management, relationship skills, and responsible decision-making, were also rated as moderately high. Academic performance was found to be satisfactory. SEM analysis revealed a significant direct effect of parental support on both SEL ($\beta = 0.947$, p < .001) and academic performance ($\beta = 0.435$, p = .002). Furthermore, the study confirmed a partial mediating effect of SEL on the relationship between parental support and academic performance (R² increase from 0.896 to 0.969). These findings suggest that parental support not only influences academic achievement directly but also plays a crucial role in enhancing socio-emotional competencies, which, in turn, positively affect academic performance. This study underscores the importance of integrated support systems in fostering both cognitive and emotional development among students.

INTRODUCTION

Academic performance remains a critical indicator of student success in higher education, particularly among Bachelor of Secondary Education (BSED) Filipino majors who are being prepared to become future educators themselves. As teacher education programs demand not only intellectual mastery but also emotional resilience and effective interpersonal skills, it becomes crucial to understand the different factors that influence academic achievement in this field. Two significant factors that have gained increasing attention in educational research are parental support and socio-emotional learning (SEL). These elements are recognized as essential drivers that contribute not just to academic success but also to the holistic development of students.

Parental support, encompassing emotional encouragement, financial assistance, and educational guidance, plays a pivotal role in shaping students' attitudes, motivation, and engagement in their academic pursuits. Studies have consistently shown that students who perceive strong support from their parents demonstrate higher levels of academic achievement, stronger self-efficacy, and better coping mechanisms when faced with academic challenges. Particularly in the Filipino cultural context, where family ties are highly valued, the influence

of parental involvement can be profound, impacting not only the students' educational choices but also their perseverance and resilience in their academic journey.

In parallel, socio-emotional learning, which includes the development of self-awareness, self-management, social awareness, relationship skills, and responsible decision-making, is increasingly recognized as a critical contributor to student success. SEL equips students with the skills necessary to navigate the complexities of academic life, manage stress, build positive relationships, and make responsible choices. For BSED Filipino majors, mastery of socio-emotional competencies is particularly significant, as these skills are vital in both their own academic journey and their future roles as educators who must model and foster such skills in their future students.

Despite the recognized importance of parental support and socio-emotional learning, there remains a gap in understanding how these variables interact and collectively influence academic performance, particularly among Filipino college students in the field of education. Most existing studies have explored these constructs separately, but a comprehensive analysis that captures the complex interrelationships among these factors is lacking. Moreover, there is a need for a more sophisticated analytical approach that can model these relationships simultaneously rather than in isolation.

In response to this research gap, this study aims to investigate the interrelationships among parental support, socio-emotional learning, and academic performance of BSED Filipino majors using a structural modelling analysis. Structural modelling offers a robust method for examining both direct and indirect effects among variables, providing a more holistic and nuanced understanding of how parental support and socio-emotional competencies contribute to students' academic outcomes. Through this approach, the study seeks to generate insights that could inform educational policies, guidance programs, and interventions designed to support BSED Filipino majors in maximizing their academic potential.

Generally, this research endeavors to highlight the importance of a collaborative framework involving families, higher education institutions, and students themselves in fostering academic success. By illuminating the pathways through which parental support and socio-emotional learning impact academic performance, the study hopes to contribute to the development of more targeted and culturally responsive strategies in teacher education programs in the Philippines.

Present Study

This study hypothesizes that parental support for BSED Filipino Major students exerts a direct influence on both their socio-emotional learning and academic performance. Furthermore, it is posited that socio-emotional learning serves as a mediating variable in the relationship between parental support and academic performance, suggesting that higher levels of parental support foster stronger socio-emotional competencies, which in turn enhance students' academic outcomes.

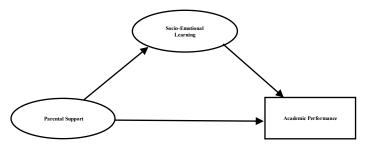


Figure 1. Hypothesized Model of the Research

MATERIALS AND METHODS

The study adopted a descriptive-causal design to investigate the role of socio-emotional learning (SEL) as a mediator between parental support and academic performance among BSED Filipino Major students. Using total population sampling, the study included all 330 BSED Filipino Major students enrolled in the School Year 2024–2025 at a community college in Misamis Oriental. This approach ensured a diverse range of experiences, capturing variations in parental support, socio-emotional learning, and academic performance, thus enhancing the representativeness of the findings.

Data were collected through an online survey using Google Forms, which offered an efficient platform for responses and minimized data recording errors. The survey included demographic information, a Parental Support Scale, an Adolescent Social and Emotional Learning Questionnaire (ASELQ), and academic performance based on the students' cumulative grade point average for the academic year. The study utilized JASP v.0.19.3 and AMOS v.21 for statistical analysis, applying descriptive statistics to summarize the variables and Structural Equation Modeling (SEM) to explore the relationships and mediating effect of SEL on the relationship between parental support and academic performance.

In SEM, model fit indices were crucial for evaluating the alignment between the proposed model and the data. The study reviewed widely recognized indices like the Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Residual (SRMR), along with the Chi-Square Test of Model Fit (χ^2). These fit indices were analyzed to assess the model's validity and reliability, ensuring the robustness of the research findings.

RESULTS AND DISCUSSION

- 1. What is the level of parental support perceived by the respondents in terms of:
 - a. Father's support; and
 - b. Mother's support?

Table 1. Summary of the Mean Distribution of the Respondents' Level of Parental Support

Parental Support	Mean	SD	Description	Interpretation
Father's Support	3.10	.77	True	Moderately High
Mother's Support	3.07	.74	True	Moderately High
Overall	3.33	.65	True	Moderately High

Legend: 1.00 – 1.80: Very Low, 1.81 – 2.60: Low, 2.61 – 3.40: Moderately High, 3.41 – 4.20: High, 4:21 – 5.00: Very High

Table 1 presents the summary of the respondents' perceived level of parental support in terms of fathers' and mothers' support. The results show that the mean score for father's support is $3.10~(\mathrm{SD}=0.77)$, while mother's support has a mean of $3.07~(\mathrm{SD}=0.74)$. According to the descriptive interpretation, both scores fall under the "True" category and are interpreted as "Moderately High." The overall parental support score is slightly higher at $3.33~(\mathrm{SD}=0.65)$, which is likewise interpreted as "Moderately High." These findings suggest that BSED Filipino majors perceive a generally positive, although not extremely strong, level of support from both parents. In the context of the study, these moderately high levels of perceived parental support may play a crucial role in influencing students' socio-emotional development and academic outcomes. The relatively balanced perception of support from both fathers and mothers highlights the importance of both parental figures in the academic journey of college students.

A recent study by Hsieh (2023) examined the relationships between home-based parental involvement, study habits, and academic achievement among adolescents. The study found that parental involvement significantly influenced students' academic performance, highlighting the importance of both fathers and mothers' support in fostering positive academic outcomes. This aligns with the findings of your study, where BSED Filipino majors reported moderately high levels of perceived parental support from both parents.

These findings underscore the critical role of balanced parental involvement in students' academic journeys. In the context of Filipino culture, where family is central, both fathers' and mothers' support is vital in shaping students' socio-emotional development and academic success. Educational institutions and policymakers should recognize the significance of family dynamics and consider implementing programs that encourage and facilitate active parental engagement in students' academic lives.

2. What is the level of socio-emotional learning among the respondents based on the following dimensions:

- a. Self-awareness;
- b. Self-management;
- c. Social awareness;
- d. Relationship skills; and
- e. Responsible decision-making?

Table 2. Summary of the Mean Distribution of the Respondents' Socio-Emotional Learning

Socio-Emotional Mean SD		Description	Interpretation		
Self-Awareness	3.20	.76	Neither undescriptive/descriptive	Moderately High	
Self-Management	3.61	.56	Neither undescriptive/descriptive	Moderately High	
Social Awareness	3.12	.57	Neither undescriptive/descriptive	Moderately High	
Relationship Skills	3.46	.66	Descriptive	High	
Responsible Decision-making	3.56	.59	Descriptive	High	
Overall	3.39	.52	Neither undescriptive/descriptive	Moderately High	

Legend: 1.00 – 1.80: Very Low, 1.81 – 2.60: Low, 2.61 – 3.40: Moderately High, 3.41 – 4.20: High, 4:21 – 5.00: Very High

Table 2 summarizes the respondents' level of socio-emotional learning across five core competencies. The findings show that self-awareness has a mean score of 3.20 (SD = 0.76) and social awareness has a mean of 3.12 (SD = 0.57), both of which fall within the "Moderately High" interpretation. Self-management achieved a slightly higher mean of 3.61 (SD = 0.56), categorized as "Moderately High" but approaching the "High" level. Relationship skills and responsible decision-making scored 3.46 (SD = 0.66) and 3.56 (SD = 0.59), respectively, both interpreted as "High." Overall, the respondents' socio-emotional learning registered a mean of 3.39 (SD = 0.52), indicating a "Moderately High". These results suggest that while most socio-emotional competencies are moderately developed, particular strengths are evident in relationship skills and responsible decision-making. These areas of strength could positively influence both interpersonal relationships and academic behaviors among BSED Filipino majors, highlighting the essential role of socio-emotional learning in academic performance.

A recent study by Huang et.al (2024) examined the role of social and emotional (SE) skills in student development, highlighting their association with improved academic performance, occupational status, income, and general life satisfaction. The study found that students with higher SE skills tended to experience less test anxiety, less exposure to bullying

and cyberbullying, and higher levels of well-being and life satisfaction. This underscores the importance of developing SE skills for adolescent development and well-being.

These findings underscore the critical role of balanced parental involvement in students' academic journeys. In the context of Filipino culture, where family is central, both father's and mother's support are vital in shaping students' socio-emotional development and academic success. Educational institutions and policymakers should recognize the significance of family dynamics and consider implementing programs that encourage and facilitate active parental engagement in students' academic lives.

3. What is the academic performance level of the respondents?

Table 3. Summary of the Mean Distribution of the Respondents' Level of Academic Achievement

Academic Performance	Mean	Description	
BSED Filipino Major Students	84.40	Satisfactory	

Legend: Below 75: Did Not Meet Expectation; 75-79: Fairly Satisfactory; 80-84: Satisfactory; 85-89: Very Satisfactory; 90-100: Outstanding

Table 3 presents the respondents' level of academic performance. The data show that the BSED Filipino major students obtained a mean score of 84.40, which falls within the "Satisfactory" category based on the provided scale. This indicates that, on average, the academic performance of the respondents meets the expected standards but has not yet reached the higher categories. These findings suggest that while students are performing at an acceptable academic level, there remains room for improvement. In relation to their levels of parental support and socio-emotional learning, it can be inferred that these factors may contribute positively to sustaining satisfactory academic achievement, while further strengthening them could potentially elevate students' academic performance to higher levels.

According to Wang, Li, and Yao (2024), the relationship between participation in extracurricular arts and sports activities and adolescents' social and emotional skills was examined. The study found that participation in extracurricular activities significantly positively influenced various dimensions of social and emotional skills, including collaboration, emotional regulation, and task performance. These findings highlight the importance of engaging students in activities that promote social and emotional development, which can, in turn, enhance academic performance.

The results of this study underscore the critical role of socio-emotional competencies in academic success. By fostering skills such as self-awareness, self-management, and responsible decision-making, educational institutions can enhance students' ability to navigate academic challenges effectively. Moreover, integrating socio-emotional learning into the curriculum can provide students with the tools necessary for personal and academic growth, potentially leading to improved academic outcomes.

4. What structural model best represents the relationships among parental support, socio-emotional learning, and academic performance of BSED Filipino Major students?

Table 4 presents the goodness of fit measures for the final structural equation model. The results indicate an excellent model fit. The chi-square (X^2) value is 12.948 with 8 degrees of freedom (df), resulting in a X^2/df ratio of 1.618, which falls well within the acceptable threshold of less than 3. The p-value is .114, which is greater than .05, suggesting no significant difference between the observed and expected covariance structures, thus supporting the model's

adequacy. All incremental fit indices also exceed the recommended value of 0.90, including the Goodness of Fit Index (GFI = 0.990), Adjusted Goodness of Fit Index (AGFI = 0.957), Normed Fit Index (NFI = 0.995), Incremental Fit Index (IFI = 0.998), Tucker-Lewis Index (TLI = 0.993), and Comparative Fit Index (CFI = 0.998).

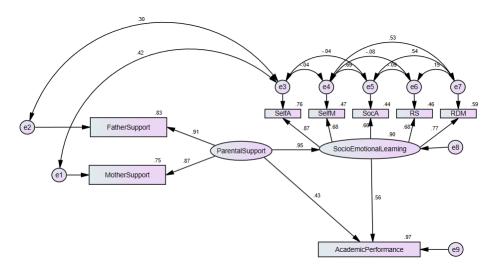


Figure 2. Structural Equation Final Model

Table 4. Goodness of Fit Measures of the Structural Equation Final Model

	X^2	df	X ² /df	p	GFI	AGFI	NFI	IFI	TLI	CFI	SRMR	RSMEA
Critical Value		>0	<3	>.05	>0.9	>0.9	>0.9	>0.9	>0.9	>0.9	<.05	<.05
Model	12. 948	8	1.618	.114	.990	.957	.995	.998	.993	.998	.0155	.043

Moreover, the Standardized Root Mean Square Residual (SRMR = 0.0155) and the Root Mean Square Error of Approximation (RMSEA = 0.043) are both well below the critical value of 0.05. Taken together, these indicators confirm that the final structural model demonstrates a very good fit to the data, validating the proposed relationships among parental support, socioemotional learning, and academic performance of BSED Filipino majors.

5. Does parental support significantly influence the academic performance of BSED Filipino Major students?

Table 5. Influence of Parental Support on the Academic Performance of BSED Filipino Major Students

Standardized Direct Effect	β coefficient	p-value
Parental Support → Academic Performance	.435	.002**
*n < 05 **n < 01 ***n < 001		

Table 5 shows the results of the analysis examining the influence of parental support on the academic performance of BSED Filipino major students. The standardized direct effect (β coefficient) of parental support on academic performance is .435, with a p-value of .002. Since the p-value is less than .01, the relationship is statistically significant at the 1% level. This indicates that higher levels of perceived parental support are associated with better academic performance among the respondents. Consequently, the hypothesis (H₁), which states that parental support has a direct influence on the academic performance of BSED Filipino major

students, is supported. The positive and significant effect underscores the important role that parental support plays in fostering academic success in the college setting.

A recent study by Esteban (2024) examined the impact of parental involvement on the academic performance of students at Rizza National High School during the 2023–2024 school year. The study employed a descriptive research design and utilized a modified survey questionnaire to gather data from 50 parents and 30 teachers. The findings revealed a significant relationship between the academic performance of students and parental involvement. This supports the hypothesis that parental support has a direct influence on the academic performance of students.

These findings underscore the critical role of parental involvement in enhancing students' academic outcomes. Educational institutions should recognize the importance of fostering strong partnerships with parents to support students' learning and development. Implementing programs that encourage and facilitate parental engagement can contribute to improved academic performance and overall student success.

6. Does parental support significantly influence the socio-emotional learning of BSED Filipino Major students?

Table 6. Influence of Parental Support on the Socio-Emotional Learning of BSED Filipino Major Students

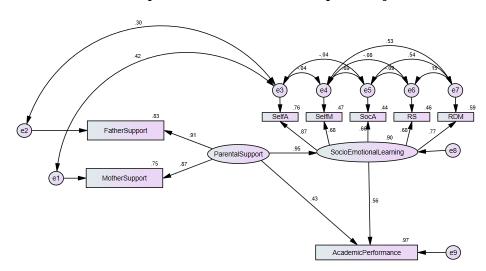
Standardized Direct Effect	β coefficient	p-value
Parental Support → Socio-Emotional Learning	.947	0.001***
*n < 05 **n < 01 ***n < 001		

Table 6 presents the results regarding the influence of parental support on the socio-emotional learning of BSED Filipino major students. The standardized direct effect (β coefficient) of parental support on socio-emotional learning is .947, with a p-value of .001. Since the p-value is less than .001, the relationship is highly statistically significant. This very strong positive effect indicates that higher levels of parental support are closely associated with stronger socio-emotional learning among the respondents. Therefore, the hypothesis (H₂), which posits that parental support has a significant influence on the socio-emotional learning of BSED Filipino major students, is supported. These findings highlight the critical role of parental support in fostering the development of students' socio-emotional competencies.

A recent study by Isik and Sahin Taskin (2024) examined parents' perspectives on their children's social-emotional skills. The study found that most parents are familiar with the concept of social-emotional learning (SEL) and recognize its importance in their children's development. This aligns with your findings that higher levels of parental support are closely associated with stronger socio-emotional learning among students. The study emphasizes the critical role of parental involvement in fostering the development of students' socio-emotional competencies.

These findings underscore the importance of integrating parental support into educational strategies aimed at enhancing students' socio-emotional learning. Educational institutions should consider implementing programs that actively engage parents in the development of their children's social and emotional skills. By fostering a collaborative approach between parents and educators, students can benefit from a supportive environment that promotes their overall well-being and academic success.

7. Does socio-emotional learning significantly mediate the relationship between parental



support and the academic performance of BSED Filipino Major students?

Figure 3. Mediating Effect of Socio-Emotional Learning

Upon examining the R^2 values presented in Figure 3, it was found that 89.6% of the variance in socio-emotional learning is explained by parental support. Furthermore, 96.9% of the variance in academic performance is accounted for by the combined influence of parental support and socio-emotional learning. The standardized direct effect (β coefficient) indicates a strong and highly significant positive relationship between parental support and socio-emotional learning (β = .947, p < .001). Additionally, a strong positive relationship between socio-emotional learning and academic performance is evident (β = .563, p < .001). The relationship between parental support and academic performance is also positively significant (β = .435, p = .002).

Figure 3 further illustrates that the influence on academic performance increases from an R² value of 0.896 to 0.969 when socio-emotional learning is introduced as a mediating variable in the model. This substantial increase suggests that socio-emotional learning plays an important mediating role. However, since the direct effect of parental support on academic performance remains significant even after the inclusion of socio-emotional learning, the mediation observed is classified as partial mediation. This finding implies that parental support impacts academic performance both directly and indirectly through the enhancement of socio-emotional learning among BSED Filipino major students.

To further assess the significance of the indirect effects associated with the observed partial mediation in the model, a mediation analysis was conducted. This analysis utilized both direct and indirect effects, based on bootstrap procedures with 5,000 resamples and a 95% biascorrected bootstrap confidence interval (see Table 7).

Table 7. Bootstrapping Results for the Mediating Effect of Socio-Emotional Learning on the Relationship Between Parental Support and Academic Performance

Indirect Effect	Bootstrap Coefficient	SE	95% Confidence Interval		\mathbb{R}^2	p
	Coefficient		Lower	Upper	_	
Parental Support→SEL→Academic Performance	.533	.264	.226	1.059	.969	.013*

^{*}p < .05, **p < .01, ***p < .001, SEL-Socio-Emotional Learning

Table 7 presents the bootstrapping results for the mediating effect of socio-emotional learning (SEL) on the relationship between parental support and academic performance. The indirect effect of parental support on academic performance through SEL is 0.533, with a standard error (SE) of 0.264. The 95% bootstrap confidence interval for this effect ranges from 0.226 to 1.059, indicating that the indirect effect is statistically significant as it does not include zero within the confidence interval. The R² value of 0.969 suggests that the model accounts for 96.9% of the variance in academic performance, supporting the substantial influence of the mediating effect. The p-value of 0.013, which is less than the 0.05 threshold, further supports the significance of the mediation.

These findings indicate that socio-emotional learning significantly mediates the relationship between parental support and academic performance, reinforcing the importance of socio-emotional competencies in academic outcomes. The results support the hypothesis, which posits that socio-emotional learning mediates the relationship between parental support and academic performance.

CONCLUSION

This study emphasizes the vital roles of both parental support and socio-emotional learning (SEL) in shaping the academic performance of BSED Filipino major students. The findings confirm the importance of family involvement, with both fathers and mothers' support perceived as moderately high. This aligns with Bronfenbrenner's Ecological Systems Theory, which underscores the role of the immediate family in influencing students' academic outcomes. The results show that parental support positively impacts academic performance, reaffirming the theory's proposition that family involvement is crucial in shaping students' behaviors, motivations, and academic success.

Furthermore, the study found that SEL significantly mediates the relationship between parental support and academic performance. SEL competencies such as self-awareness, self-management, relationship skills, and responsible decision-making were positively associated with academic behaviors and success. This supports CASEL's SEL Theory, which highlights the role of socio-emotional competencies in overcoming academic challenges. The mediation analysis revealed that socio-emotional learning not only enhances academic performance directly but also strengthens the influence of parental support, emphasizing the interconnectedness of these factors in achieving academic success.

In conclusion, this study underscores the importance of both parental support and socioemotional learning in fostering academic achievement. The findings demonstrate that parental involvement, particularly in the Filipino cultural context, directly influences academic performance while also enhancing socio-emotional learning, which in turn contributes to better academic outcomes. The study suggests that educational strategies should focus on strengthening parental engagement and promoting SEL, as these factors are integral in improving students' academic performance and overall development.

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Pre-Service Teachers' Experiences with ChatGPT: Toward Responsible AI Use in Teacher Education

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ABSTRACT

The emergence of generative artificial intelligence (AI) tools, such as ChatGPT, is reshaping how teachers and learners interact with content. While its use in teacher education is growing, little is known about how pre-service teachers experience, interpret, and utilize this tool during critical phases like practice teaching. This study explores the lived experiences, perceptions, and reflections of pre-service teachers in using ChatGPT for academic and instructional tasks. It aims to inform the development of an AI literacy program grounded in ethical and pedagogical principles for teacher education institutions. A qualitative descriptive-phenomenological approach was used, involving in-depth, semistructured interviews with 25 fourth-year pre-service teachers from Tagoloan Community College during 2nd Semester SY 2024-2025. Braun and Clarke's (2023) thematic analysis framework guided data analysis to capture emergent themes. Participants reported diverse uses of ChatGPT, including academic writing support, lesson planning, research guidance, and content clarification. A central finding was the recognition of ChatGPT as a personalized learning companion, especially during periods of cognitive load or instructional planning. While most highlighted its role in enhancing efficiency, creativity, and confidence, concerns were raised about overreliance, diminished critical thinking, and ethical boundaries. Thematic findings reflected a balanced perspective, valuing ChatGPT's convenience while recognizing the need for responsible and reflective use. Based on these findings, the study recommends integrating a structured AI literacy and ethics program, AI-TEACH (Artificial Intelligence – Training for Ethical and Accountable Classroom Harnessing), into teacher education curricula. This initiative promotes digital competence, ethical awareness, and pedagogical innovation, contributing to inclusive and quality education as emphasized in Sustainable Development Goal 4.

INTRODUCTION

The rapid advancement of artificial intelligence (AI) technologies has brought transformative changes to education, reshaping how teaching and learning are conceptualized and delivered. Among these technologies, ChatGPT, an AI-powered language model developed by OpenAI, has gained significant traction in academic settings for its ability to generate content, provide writing assistance, and support idea development (David & Maroma, 2025; Bongolto et al., 2024). Its accessibility has made it a widely used tool by students and teachers alike, including those in teacher education programs (Pesce & Blanco, 2024; Batucan et al., 2025).

For pre-service teachers, the integration of AI tools like ChatGPT into their academic routines offers practical benefits. It can assist in lesson planning, instructional material development, and academic writing, especially during the demanding period of practice teaching (Balatero et al., 2025; Bongolto et al., 2024). However, its use also presents challenges and ethical considerations, such as the risk of overreliance, concerns about originality and academic

integrity, and the absence of formal training on responsible AI use within the curriculum (Guarin et al., 2025; Alejandro et al., 2024; Relator et al., 2025).

Despite its growing presence, there remains a lack of in-depth understanding of how preservice teachers engage with ChatGPT, particularly in the context of their professional preparation and teaching practicum (Gudelos, 2025; Guan et al., 2025). As teacher education institutions aim to prepare digitally competent and ethically grounded teachers, it becomes necessary to investigate the real-world experiences and reflections of future teachers who have used AI tools during their training (Lumanlan et al., 2025; Kayaalp et al., 2025). The Technological Pedagogical Content Knowledge (TPACK) framework and Self-Efficacy Theory offer useful lenses to interpret how pre-service teachers integrate AI tools into their academic and pedagogical practices, reflecting both their technological fluency and confidence in instructional contexts.

This study explores the experiences, perceptions, and reflections of 25 fourth-year pre-service teachers who have completed their deployment in public elementary schools for practice teaching. By examining how they used ChatGPT in their academic and professional tasks during this important phase of teacher formation, the research seeks to uncover meaningful insights that will inform the development of a context-specific AI literacy program (Lima et al., 2025). The study ultimately aims to support the responsible and ethical integration of AI in teacher education, contributing to the broader goals of Sustainable Development Goal 4: Quality Education (Villareal et al., 2024).

Despite the growing presence of ChatGPT in educational settings, little is known about its practical use among pre-service teachers in community colleges in the Philippines. While existing studies have explored general attitudes toward AI in education, there remains a notable gap in localized, qualitative research that investigates how pre-service teachers in Philippine community colleges practically engage with ChatGPT during their fieldwork. This study addresses that gap by providing empirical evidence grounded in lived experiences within the teacher preparation context.

METHODOLOGY

Research Design

This study employed a qualitative research design, specifically using a descriptive-phenomenological approach to explore the lived experiences, perceptions, and reflections of pre-service teachers regarding their use of ChatGPT during their academic coursework and practice teaching experiences (Creswell et al., 2007; Guan et al., 2025). Grounded in the philosophical tradition of phenomenology, this approach aims to understand the meaning and essence of participants' lived experiences without being clouded by the researcher's prior assumptions or theoretical impositions (Nernere & Kastuhandani, 2024).

The descriptive-phenomenological method is particularly appropriate for this study because it provides a structured way to explore how pre-service teachers make sense of their engagement with emerging technologies such as generative AI tools (Balatero et al., 2025; Gudelos, 2025). In this case, ChatGPT was used for various academic and instructional purposes, including lesson planning, generating learning materials, and clarifying content (David & Maroma, 2025; Bongolto et al., 2024). The method allowed the researcher to capture the subjective realities of participants in their own words, revealing how they internalize and interpret AI integration in the context of teacher education (Lumanlan et al., 2025; Alejandro et al., 2024).

To guide data analysis, Braun and Clarke's (2023) thematic analysis was employed as a systematic and flexible framework for identifying, analyzing, and reporting patterns within the data. This method ensured transparency in theme development and enhanced the trustworthiness of the findings (Braun & Clarke, 2023; Pesce & Blanco, 2024).

To uphold reflexivity, the researcher engaged in ongoing reflective journaling throughout the data collection and analysis phases. This practice helped bracket prior knowledge and assumptions, allowing the participants' voices to remain central in the interpretation process. Reflexivity also supported ethical and interpretive integrity, especially given the researcher's dual role as a teacher and investigator.

Furthermore, the use of a descriptive-phenomenological approach was ideal in the context of Tagoloan Community College, where students navigate a blended learning environment. Their lived experiences with ChatGPT are shaped not only by academic demands but also by technological accessibility and evolving teaching modalities (Villareal et al., 2024; Lima et al., 2025). By exploring these dynamics through rich, first-person narratives, the study contributes to a deeper understanding of how pre-service teachers engage with AI in meaningful, instructional ways (Relator et al., 2025; Kayaalp et al., 2025).

Participants and Sampling Technique

The participants in this study were 25 fourth-year pre-service teachers from the College of Education at Tagoloan Community College, all of whom had recently completed their practice teaching in various public schools around Tagoloan, Misamis Oriental, for the 2nd Semester SY 2024-2025. These participants were selected using purposive sampling, a non-probability technique appropriate for qualitative research that seeks to obtain rich, in-depth insights from individuals with firsthand experience of the phenomenon under investigation (Creswell et al., 2007).

Purposive sampling was preferred over strategies such as maximum variation or snowball sampling because the study specifically aimed to include individuals with direct experience using ChatGPT for academic or instructional purposes. Inclusion criteria required that participants had completed their deployment as student-teachers for the 2nd Semester SY 2024-2025 and had used ChatGPT in academic tasks such as lesson planning or content development. Pre-service teachers who had not completed their practicum or had never used ChatGPT in an academic context were excluded.

The sample size of 25 was determined based on data saturation, in which no new themes or significant insights emerged from the data (Creswell et al., 2007). This number aligns with common sample sizes in descriptive phenomenological research and allowed for in-depth analysis while maintaining manageability (Braun & Clarke, 2023; Guan et al., 2025). All participants had meaningful engagement with ChatGPT in authentic educational settings, providing deep reflections that supported the study's aim of exploring responsible AI use in teacher education (Balatero et al., 2025; Bongolto et al., 2024; Gudelos, 2025).

Research Locale

This study was conducted at Tagoloan Community College (TCC), a government-funded local community college higher education institution in Misamis Oriental, Philippines. The College of Education, one of TCC's leading academic programs, offers teacher education programs and serves students from diverse socioeconomic backgrounds. The institution has adopted a blended learning approach to address resource limitations and promote digital adaptability. This environment, where traditional instruction coexists with technology-enhanced practices, makes TCC a relevant and dynamic setting for exploring the academic use of generative AI

tools like ChatGPT among pre-service teachers (Balatero et al., 2025; Lima et al., 2025; Creswell et al., 2007).

Data Collection Procedure

To gain rich, in-depth insights into pre-service teachers' experiences with ChatGPT, this study employed semi-structured interviews as the primary method of data collection. This approach allowed for flexibility in probing responses while maintaining a consistent structure across participants. Semi-structured interviews are particularly effective in phenomenological research, as they provide space for participants to articulate their lived experiences in their own terms (Creswell et al., 2007).

Three open-ended guide questions were used to frame the interview sessions:

- 1. Experiences with ChatGPT Can you share a specific experience where you used ChatGPT in your academic work, and describe how it helped or affected that experience?
- 2. Perceptions and Meaning-Making What does using ChatGPT mean to you as a future teacher, and how do you make sense of its role in your learning?
- 3. Reflection and Acceptance How do you feel about the use of ChatGPT in your education, and what impact do you think it has had on your development as a pre-service teacher?

These questions were carefully designed to align with the study's phenomenological aim, to explore how pre-service teachers experience, interpret, and integrate ChatGPT in their academic and instructional contexts. The open-ended format allowed participants to freely narrate their stories and perspectives.

To promote authentic and comfortable communication, participants were invited to respond in either Cebuano or English, depending on their language preference. This bilingual approach was intended to reduce response inhibition, support cultural relevance, and ensure the clarity of meanings, particularly in deep or emotional reflections.

All interviews were conducted in person, providing a more interactive setting that fostered rapport and allowed for observation of non-verbal cues. Each session lasted approximately 15–30 minutes. This duration was sufficient to gather rich and detailed narratives due to the focused nature of the questions, the familiarity of participants with the topic, and the comfort afforded by language flexibility. The balance between depth and brevity also minimized participant fatigue, supporting the collection of high-quality data within a manageable timeframe.

With informed consent, all interviews were audio-recorded to ensure accurate documentation. Participants were assured of confidentiality, and all identifiable information was removed during the transcription process. The recordings were then transcribed verbatim, preserving the original structure, language, and expression of the participants' narratives. Verbatim transcription is essential in qualitative studies, as it safeguards the authenticity of meaning-making and supports rigorous thematic analysis (Braun & Clarke, 2023).

Finally, the transcripts were reviewed for accuracy and completeness before being subjected to thematic analysis using the framework of Braun and Clarke to identify patterns, meanings, and recurring themes across the data set.

Data Analysis

The transcribed interviews were analyzed using thematic analysis, as outlined by Braun & Clarke (2023). This method involved the following six steps:

1. Familiarization with the data through repeated reading of transcripts.

- 2. Generating initial codes by identifying significant phrases, patterns, or meanings in participants' responses.
- 3. Searching for themes by clustering related codes. Themes were prioritized based on three criteria: (1) frequency of occurrence across participants, (2) the strength and richness of the narrative (i.e., depth and detail in descriptions), and (3) the uniqueness or distinctiveness of certain experiences that revealed deep or underrepresented perspectives. This approach allowed the researcher to capture both widely shared patterns and meaningful divergences in pre-service teachers' engagement with ChatGPT.
- 4. Reviewing themes to ensure they accurately reflected the full data set and aligned with the study's objectives.
- 5. Defining and naming themes to clearly represent participants' core experiences in a coherent and descriptive manner.
- 6. Producing the final report by selecting vivid, compelling excerpts and connecting findings to the research questions and objectives.

Data were manually coded using printed transcripts and spreadsheet matrices (for example, Word and Excel) to systematically organize codes, group them under emerging themes, and ensure consistency in analysis. The prioritization process ensured that themes not only reflected common usage of ChatGPT but also captured critical insights into the participants' ethical awareness, instructional practices, and cognitive engagement.

To ensure the trustworthiness of the findings, specific strategies were implemented:

First, member checking was conducted by returning the initial set of themes and their corresponding interpretations to the original participants. Each participant was provided with a summary of the themes that emerged from their own interview data. They were asked to review whether the interpretations accurately reflected their views and to suggest corrections or clarifications if necessary. This process ensured that the findings remained faithful to the lived experiences of the respondents and helped validate the accuracy of the researcher's interpretations (Creswell et al., 2007; Nernere & Kastuhandani, 2024).

Second, to further strengthen credibility, the themes were independently reviewed by a qualitative research expert with advanced training in thematic analysis and experience in conducting and evaluating qualitative research studies. This expert was given access to anonymized interview transcripts, the initial codes, and the developed themes. The expert examined the consistency between the raw data and the thematic structure and provided important feedback to refine and validate the coherence of the themes (Braun & Clarke, 2023).

These procedures, participant validation and expert review, ensured that the thematic analysis was conducted rigorously and that the results were grounded in the actual data. As a result, the findings of this study can be considered credible and trustworthy, offering meaningful insights into how pre-service teachers perceive and engage with ChatGPT as part of their academic experience (Guan et al., 2025; Balatero et al., 2025; David & Maroma, 2025).

Thematic analysis enabled the researcher to systematically interpret the depth and complexity of participants' reflections and how these can inform the development of an AI literacy program (Lumanlan et al., 2025; Kayaalp et al., 2025).

Ethical Considerations

This research adhered to established ethical guidelines to ensure the protection of participants' rights, dignity, and well-being. This study adhered to the principles of the Declaration of

Helsinki and ethical standards for human subject research, ensuring that the research process upheld the values of respect, beneficence, and justice.

Since Tagoloan Community College does not have an institutional Research Ethics Board (REB) yet, the researcher sought and secured formal approval to conduct the study from the College Dean and the Vice President for Academic Affairs. These administrators reviewed the research objectives, methodology, and ethical safeguards before granting permission.

Prior to data collection, informed consent was obtained from all participants. They were clearly informed about the purpose of the study, their right to voluntary participation, the option to withdraw at any stage without penalty, and the assurance of confidentiality and anonymity. Participants provided written consent, indicating their willingness to take part in the interviews and for their responses to be used in the study.

To further protect participants' privacy, all identifiable information was removed from transcripts, and pseudonyms or participant codes such as P1, P2, P3, and so on were used in the reporting of findings. Audio recordings and transcribed data were securely stored and accessed only by the researcher. These measures ensured that the research process was both ethical and respectful of participants' autonomy and trust.

RESULTS AND DISCUSSION

Question 1. Can you share a specific experience where you used ChatGPT in your academic work, and describe how it helped or affected that experience?

This study explored the lived experiences of pre-service teachers in using ChatGPT to support their academic and instructional tasks. Through thematic analysis using Braun and Clarke's (2023) framework, eight distinct themes emerged from participant responses, reflecting varied purposes, perceptions, and outcomes of their interaction with the tool.

This study explored the lived experiences of pre-service teachers in using ChatGPT to support their academic and instructional tasks. Through thematic analysis using Braun and Clarke's (2023) framework, eight distinct themes emerged from participant responses, reflecting varied purposes, perceptions, and outcomes of their interaction with the tool.

Theme 1: Academic Writing and Grammar Assistance

One of the most frequently cited uses of ChatGPT was for academic writing support. Preservice teachers described using it to paraphrase, structure ideas, and improve grammar. For instance, P1 shared, "ChatGPT is one of those AI tools where you can ask for information. It usually used it for paraphrasing paragraph and helps in improving words used." P22 added, "ChatGPT helped me organize RRL, rephrase abstracts, vary sentence structure, and guide my thesis writing." These reflections show that ChatGPT served as an accessible academic aid that enhanced participants' writing fluency. This is supported by Balatero, Jayno, and Miranda (2025), who found that ESL pre-service teachers viewed ChatGPT as a useful writing scaffold that promoted clarity and coherence. Similarly, Bongolto et al. (2024) emphasize that ChatGPT enhances academic productivity, particularly in research composition and content generation among pre-service teachers.

Theme 2: Lesson Planning and Teaching Resources

Pre-service teachers used ChatGPT to generate ideas for lesson plans and teaching strategies. P2 stated, "ChatGPT was actually a useful tool for giving interactive ideas/games." This highlights ChatGPT's role in supporting instructional creativity and differentiation, especially during practicum. David and Maroma (2025) found similar outcomes, noting that ChatGPT

supports pre-service teachers in developing age-appropriate teaching materials. Nernere and Kastuhandani (2024) also documented how teachers used AI tools to enhance lesson design.

Theme 3: Understanding and Explanation Aid

Participants shared that they used ChatGPT for understanding complex academic content. As P6 described, "My experience in using chatgpt in my academic was very helpful. When I'm so tired and I don't understand the topic to make an answer. Like definition, graphic and also the site I used for demonstration." Participant 7 said, "Been a user of ChatGPT, but to be honest, it helped me in many ways especially during those times where I need more explanations about something and it quickly provide explanations which helped me understand." This demonstrates how ChatGPT functions as a learning support tool, especially in high-pressure academic contexts. Gudelos (2025) reported comparable findings, with pre-service teachers using AI tools to clarify difficult concepts and reinforce comprehension.

Theme 4: Time-saving and Convenience

Several participants highlighted ChatGPT's efficiency in helping them complete tasks. P8 remarked, "I used ChatGPT quite many times, but only as a last resort- especially if the task is a bit too hard. AI is definitely very easy to use and user friendly. It makes hard tasks easy because it will give you the answer you need." This practical benefit aligns with findings by Guarin et al. (2025), who emphasized ChatGPT's role in streamlining workloads and saving time for pre-service teachers in blended learning environments.

Theme 5: Thesis and Research Support

ChatGPT was also used for thesis writing and research planning. P21 shared, "I used ChatGPT to research topics and generate ideas for my thesis. It helped me organize my thoughts and provided valuable insights, saving time and improving my writing. ChatGPT's assistance enabled me to focus on analysis and critical thinking, enhancing the overall quality of my work." This aligns with Batucan et al. (2025), who noted that ChatGPT assists in topic development and research structure among pre-service mathematics teachers.

Theme 6: Academic Shortcut or Last Resort

Some students admitted to using ChatGPT as a last-minute tool to meet deadlines. P25 revealed, "Katong time nga naay pasahon tapos murag pila nalang ka oras deadline maong ang GPT akong gipa answer [That time when there was something to submit and the deadline was just a few hours away, so I let GPT answer it for me]." Such accounts raise ethical concerns. Pesce and Blanco (2024) caution that while ChatGPT offers convenience, it may also encourage academic shortcuts when not used responsibly.

Theme 7: Limited Perception of Use

A minority expressed skepticism about ChatGPT's academic value. P5 stated, "For me ChatGPT cannot help my academic work... we must have our knowledge based on facts, book and MELCs..." Alejandro et al. (2024) similarly observed that some pre-service teachers still prioritize traditional learning materials due to concerns over AI-generated content's reliability.

Theme 8: General Positive Impression

Some participants shared a general appreciation for ChatGPT. P4 summarized, "ChatGPT makes learning easy and accessible especially for us students." This reflects the broader positive reception of ChatGPT as a transformative learning companion, as reported by Relator et al. (2025) and Lumanlan et al. (2025).

Question 2. What does using ChatGPT mean to you as a future teacher, and how do you make sense of its role in your learning?

This study explored how pre-service teachers perceive and make sense of their use of ChatGPT in the context of becoming future teachers. Using Braun and Clarke's (2023) thematic analysis, six distinct themes emerged, reflecting a wide range of attitudes, both embracing and cautious, toward AI integration in teacher education.

Theme 1: ChatGPT as a Teaching and Learning Aid

Many participants viewed ChatGPT as a practical tool for enhancing teaching creativity and lesson preparation. P1 stated, "As a future teacher, you can always make use of any AI tool to enhance and improve your creativity and activities." Likewise, P25 shared, "Para nako isip future teacher, ang ChatGPT usa ka tabang sa pagkat-on ug paghimo og lesson plans... [For me, as a future teacher, ChatGPT is a helpful tool for learning and creating lesson plans]." This perspective supports the findings of David and Maroma (2025), who noted ChatGPT's role in enriching pedagogical design, and Nernere and Kastuhandani (2024), who found that teachers used it as a creative assistant for instructional material development.

Theme 2: Efficiency and Productivity

Pre-service teachers appreciated ChatGPT for helping them manage their workload efficiently. P3 remarked, "It's a tool to help me accomplish my work as soon as possible." This aligns with Guarin et al. (2025) and Bongolto et al. (2024), who reported that pre-service teachers use ChatGPT to streamline academic tasks and teaching preparation, particularly under time constraints.

Theme 3: Balanced and Ethical Use of AI

Some participants stressed the importance of ethical and mindful use. P7 reflected, "ChatGPT is very useful and easy to access but as a future teacher, we need to control ourself. Dli dapat natu e asa ang tanan [We should not rely on it for everything]." P11 added, "Using ChatGPT means embracing a powerful tool... while importantly evaluating its limitations and ensuring ethical and responsible use." These reflections show a growing sense of digital responsibility, echoing the findings of Relator et al. (2025) and Lumanlan et al. (2025), who emphasized the need to integrate AI ethics into teacher education curricula.

Theme 4: Caution and Dependence Concerns

A few participants expressed concern that overreliance on ChatGPT may hinder original thinking. P13 shared, "Hindi dapat always na gamitin ito. [It should not be used all the time.]" This sentiment is consistent with Pesce and Blanco's (2024) findings, which highlight the tension between efficiency and autonomy in AI use among pre-service teachers.

Theme 5: Creativity and Important Thinking Development

Several pre-service teachers noted that ChatGPT fosters creativity and deeper thinking when used meaningfully. P21 summarized this well: "Using ChatGPT means leveraging technology... It helps me think importantly and creatively..." This theme aligns with Batucan et al. (2025) and Alejandro et al. (2024), who found that AI can support higher-order thinking and innovative teaching practices among future teachers.

Theme 6: ChatGPT as a Personalized Learning Partner

Some participants described ChatGPT as a valuable learning companion. P22 gave a rich reflection: "Ang paggamit nako sa ChatGPT nagpasabot nga nag-evolve na gyud ang paagi sa pagkat-on ug pagtudlo... ChatGPT helps me become more independent and curious... not a

replacement for important thinking... but a support system that can guide, clarify, and inspire." This highlights how students reconceptualize AI as a partner in their growth, not just a tool. Lima et al. (2025) and Guan et al. (2025) similarly found that AI tools foster learner autonomy and strengthen professional readiness in teacher education.

Question 3. How do you feel about the use of ChatGPT in your education, and what impact do you think it has had on your development as a pre-service teacher?

To understand the emotional and professional reflections of pre-service teachers regarding ChatGPT, their responses were analyzed using Braun and Clarke's (2023) thematic analysis. Seven major themes emerged, reflecting both positive reception and mindful caution about the tool's influence on their development as future teachers.

Theme 1: Helpful for Academic Productivity

Participants commonly described ChatGPT as a helpful tool in accomplishing school tasks. P3 shared, "Well it helped me accomplish a lot of school works," while P4 emphasized, "Chat GPT really helps us future teacher. In terms of making or crafting lesson plans and by seeking information that is fast." ChatGPT contributed to learners' academic efficiency and instructional readiness. This aligns with David and Maroma (2025), who found that ChatGPT streamlines workload and enhances lesson planning. Bongolto et al. (2024) likewise identified its supportive role in guiding pre-service teachers through complex academic tasks.

Theme 2: Important and Responsible Use of ChatGPT

Several participants highlighted the importance of using ChatGPT with intention. P1 warned, "It must ONLY be used to enhance and improve, not for total dependency..." while P21 reflected, "I'm also mindful of its limitations and potential biases, which has taught me to approach technology with a discerning and deep perspective." Such reflections show emerging digital ethics among future teachers. This supports Lumanlan et al. (2025) and Relator et al. (2025), who emphasized the value of responsible AI use in teacher education programs.

Theme 3: Boost in Creativity and Important Thinking

For some, ChatGPT was seen as a thinking partner that inspired creative and cognitive engagement. P2 explained, "Since ChatGPT offers ideas, it allows me to make those ideas more meaningful... improves my important-thinking skills." This theme aligns with findings from Batucan et al. (2025) and Alejandro et al. (2024), which show AI tools encourage deeper reflection, innovation, and problem-solving in academic contexts.

Theme 4: Limited or Negative Impact

A few respondents were more important. P5 stated, "As a future teacher, I cannot say that it helps me a lot because we have a book to use and MELCs to follow." This cautious stance suggests a preference for traditional learning tools or possibly a lack of familiarity with AI use. It echoes Gudelos (2025) and Pesce and Blanco (2024), who observed skepticism toward AI among some pre-service teachers with limited exposure to the technology.

Theme 5: Ethical Concerns and Overreliance

Some participants voiced concern about overdependence. P8 remarked, "ChatGPT might be somewhat unethical since some use it as an escape... It can be used as a reference." Similarly, P13 admitted, "I feel happy... but I also feel bad sometimes... we should not rely... especially ChatGPT." These comments reflect a balanced awareness of ChatGPT's double-edged role. Guarin et al. (2025) and Nernere and Kastuhandani (2024) noted similar concerns about the risk of diminishing learner autonomy and academic integrity due to AI misuse.

Theme 6: Increased Confidence and Motivation

Others found that ChatGPT boosted their confidence and motivation. P12 shared, "Dako gyud siya natabang sa ako... makatabang sa ako labaw na kung magpadayon gyud ko pagka maestra [It has really helped me... especially if I continue becoming a teacher]." P22 added, "It made me more confident and curious." This suggests that ChatGPT supports self-efficacy, a finding affirmed by Lima et al. (2025) and Guan et al. (2025), who linked AI tools with enhanced preparedness and professional identity among future teachers.

Theme 7: Overall Positive Impact

Many participants expressed deep gratitude and overall satisfaction. P7 reflected, "ChatGPT has a huge part of my journey... I'm truly grateful for ChatGPT." P23 summarized, "It is multifaceted... when used properly, it's a great help." The general sentiment is that ChatGPT has become a trusted educational companion. This perception is consistent with Balatero et al. (2025) and Kayaalp et al. (2025), who advocate for integrating AI tools in teacher education as a sustainable, competence-building strategy.

Overall Synthesis

This study provides a holistic and deep understanding of how pre-service teachers engage with ChatGPT as part of their academic journey and professional formation. The thematic findings reveal that ChatGPT has become a deeply embedded tool in the educational practices of future teachers, shaping how they approach learning, teaching preparation, and instructional innovation (David & Maroma, 2025; Guan, Zhang, & Gu, 2025).

Across all three research questions, a strong trend of pragmatic use is evident. ChatGPT is primarily seen as an academic support system, helpful in writing, grammar correction, idea generation, lesson planning, thesis structuring, and time management. This reinforces its perceived role as a personal learning companion, especially under conditions of academic pressure and cognitive fatigue (Balatero, Jayno, & Miranda, 2025; Bongolto et al., 2024; Batucan et al., 2025). These experiences are largely framed within a constructive-utilitarian perspective, where the tool serves as a bridge between effort and efficiency (Guarin et al., 2025).

In terms of perception and meaning-making, pre-service teachers generally express an openness to integrating AI into educational practice. However, this is tempered by a growing awareness of the ethical boundaries and potential risks of overdependence, such as diminished creativity, academic dishonesty, or erosion of important thinking (Pesce & Blanco, 2024; Alejandro et al., 2024). Participants emphasized the importance of responsible use, aligning with global calls for AI ethics in education (Lumanlan et al., 2025; Relator et al., 2025).

Furthermore, ChatGPT is not merely viewed as a technological convenience, but as a transformative catalyst that enhances creativity, promotes independent learning, and fosters motivation (Batucan et al., 2025; Kayaalp, Durnali, & Gökbulut, 2025). For many, it supports the development of 21st-century teaching competencies, contributing to their evolving teacher identity and professional confidence (Guan, Zhang, & Gu, 2025; Lima et al., 2025). Still, a minority expressed skepticism or reported limited benefits, citing a preference for traditional resources or challenges in comprehension, highlighting diverse levels of AI literacy and readiness (Gudelos, 2025; Villareal, Amamangpang, & Cabiles, 2024).

These patterns resonate with earlier findings on pre-service teachers' digital self-efficacy and online learning readiness after the pandemic, which revealed high proficiency in technology integration but varying degrees of readiness in time management and communication skills (Quiño & Potane, 2023). This parallel suggests that the effective and ethical engagement with

AI tools like ChatGPT is grounded not only in access and exposure but also in the digital self-efficacy that pre-service teachers developed during post-pandemic transitions to online learning.

The findings reflect a balanced but optimistic outlook: ChatGPT is valued for its practicality, but there is also an emerging digital maturity among pre-service teachers that highlights the need for important engagement, ethical awareness, and guided integration of AI tools in teacher education programs (Creswell et al., 2007; Braun & Clarke, 2023). The study strongly suggests that teacher education institutions must incorporate structured AI literacy and ethics training to ensure that future teachers harness such tools with both creativity and caution (Lumanlan et al., 2025; Kayaalp, Durnali, & Gökbulut, 2025).

To better illustrate these findings, the conceptual diagram below synthesizes the key elements of the study:

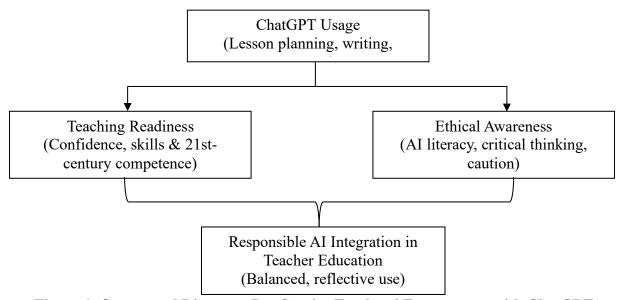


Figure 1. Conceptual Diagram: Pre-Service Teachers' Engagement with ChatGPT

This model illustrates that ChatGPT usage influences both teaching readiness and ethical awareness, which in turn inform a responsible approach to AI integration in the field of education. The relationship is dynamic: the more pre-service teachers engage meaningfully with the tool, the more they recognize its value and limitations, thereby deepening both their instructional competence and ethical sensibilities.

CONCLUSION

This study revealed that ChatGPT has become a significant academic and instructional support tool for pre-service teachers. Through their lived experiences, the participants described ChatGPT as a personal learning companion, providing assistance with academic writing, lesson planning, research tasks, and content clarification. It also offered convenience and boosted their motivation, efficiency, and confidence as future teachers.

However, participants also demonstrated growing digital maturity by acknowledging potential drawbacks, including the risk of overreliance, diminished creativity, and ethical concerns about academic integrity. Their reflections indicate that while ChatGPT is viewed positively, its responsible and informed use is essential. Notably, this dual awareness of both its value and its

limitations highlights the need for the formal integration of AI ethics and literacy into teacher education programs.

While the findings offer valuable insights, as a qualitative study with a purposive sample, findings are context-specific and not broadly generalizable. As such, results may not be generalizable across all pre-service teacher populations. Future research may consider a mixed-methods or longitudinal approach to evaluate the long-term impact of AI integration in teacher training. In particular, the proposed AI-TEACH program would benefit from pilot testing and quantitative validation to assess its effectiveness in improving AI literacy, ethical awareness, and pedagogical competence.

Generally, this study underscores the transformative potential of generative AI tools like ChatGPT in preparing future-ready teachers. It supports Sustainable Development Goal 4 (Quality Education) by advocating for AI integration that is ethical, reflective, and empowering. By contributing to teacher preparation in under-resourced, technology-diverse contexts, the study fosters inclusive and adaptable AI integration practices that align with global educational priorities.

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Small Engine Fuel Pump Breakdown Detection Device

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ABSTRACT

Fuel pump detection systems play a crucial role in modern vehicles by monitoring the operation and performance of fuel pumps to ensure optimal efficiency and reliability. This abstract explores recent advancements in fuel pump detection technology, focusing on key aspects such as accuracy, reliability, portability, and cost-effectiveness. The accuracy of these systems is essential for detecting anomalies in fuel pump operation, preventing potential failures, and optimizing fuel consumption. Recent developments in sensor technology and data analysis techniques have improved the accuracy of fuel pump detection systems, enabling real-time monitoring and diagnostics. Reliability is another critical factor in fuel pump detection systems, as vehicle safety and performance depend on their continuous operation. Evaluating the reliability of these systems involves rigorous testing under various conditions, including long-term durability testing and fault tolerance evaluation. Portability is increasingly important in fuel pump detection systems, particularly for applications such as field diagnostics and mobile repair services. Portable systems must be compact, lightweight, and easy to install, ensuring flexibility and convenience for users in diverse environments. Cost-effectiveness is a key consideration for deploying fuel pump detection systems in commercial fleets and automotive maintenance facilities. Evaluating the total cost of ownership, including initial investment, maintenance costs, and operational efficiency gains, helps determine the overall value proposition of these systems.

INTRODUCTION

The automotive industry is fundamentally changing toward innovative technologies, prioritizing performance and safety. The fuel pump is vital to the effective running of internal combustion engines. The fuel pump's smooth operation is essential for vehicle performance. Still, it's prone to many irregularities that, if left unchecked, can result in severe consequences such as unexpected failures, lower fuel pressure, and decreased safety. Despite the significance of the fuel pump in vehicle operation, there exists a gap in current automotive technology concerning the early detection of fuel pump anomalies. The absence of a dedicated early warning system may result in unforeseen breakdowns, safety hazards, and increased repair costs. Bridging this gap is crucial for advancing automotive reliability and ensuring a safer and more efficient driving experience. The fuel pump, an unseen, crucial component of the vehicle, needs help to identify the problems due to its installed location inside the fuel tank; it may face several issues that might disrupt its smooth performance. Examples are Wear and tear, contamination, and lousy operating conditions, which can seriously threaten fuel distribution.

The Current automobile technology lacks an exclusive technique or device for detecting irregularities inside the fuel pump, resulting in a crucial gap in our capacity to deal with issues before they worsen. In response to this need, we are focusing our research on the development and importance of an innovative device known as the Small Engine Fuel Pump Breakdown Detection Device. This device shows a crucial improvement in automotive fuel systems,

aiming to effectively discover abnormalities within the gasoline pump and provide timely Warnings to drivers and maintenance personnel. The detection system provides vital, easy warning of dangerous anomalies in the fuel pump. Some gases and vapors also pose a fire risk, and another risk arises when anomalies such as losses of pressure and fuel pump failure create severe damage to the engine. Example: leaking due to a drop in pressure of the fuel injected became lean; not achieving the atomized form of fuel injected by the injector, which will result in an engine power loss or irregular RPM (revolution per minute); and fuel pump breakdown caused by clogging up the fuel filter. Due to its old age, the fuel became weak, resulting in losses of pressure and fuel pump failure; the engine will cut off, and sometimes you will be stranded on the road. The condition of the fuel pump is quite difficult to notice because it is inside the fuel tank. Sometimes, the technician misdiagnoses and replaces it, even though it is not the main problem. The fuel pump is expensive and will cost the vehicle owners a lot of money. The fuel pump, a fundamental component in a vehicle's fuel delivery system, is pivotal in maintaining optimal engine performance. However, factors such as Wear and tear, contamination, and suboptimal operating conditions can compromise the health of the fuel pump, leading to inefficiencies and potential failures. Recognizing the need for an innovative solution beyond reactive maintenance, our research delves into developing a Small Engine Fuel Pump Detection Device. (Wuling, 2023). As Muhammad (2021) mentioned, "Gas leakage detection systems are essential components of safety systems, serving as the primary defense against potential gas leakage disasters. The device detects the presence of gas leaks and initiates an alert system to activate safety measures." As Delphiblog (2023) mentioned, "In the fuel delivery- the detection device, they measure both the pressure and volume of the fuel being delivered through the system under standard testing conditions. In addition to testing for pressure and volume, measuring the amperage of the fuel pump circuit can assist in identifying the underlying reason for the issue." Some leaks are too small to smell or unnoticeable, and you can't tell at first glance if your fuel pressure is dropping, so it's a worthwhile investment to install a detection device to ensure the safety of the vehicle and motorcycles. The timeframe of the research project is around 43 weeks or about 10 months.

MATERIALS AND METHODS

Project Design

This project-based research focuses on the general application, implementation advantages, and performance of a Small Engine Fuel Pump Breakdown Detection Device. It includes the research method, project design, development, testing, operating procedures, and project evaluation. The study was conducted in the Engineering Department.

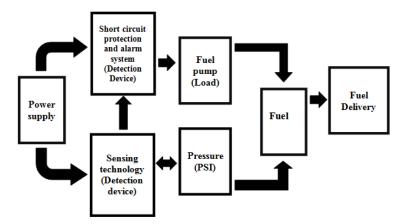


Figure 1. Block diagram of Small Engine Fuel Pump Breakdown Detection Device.

In Figure 1. The fuel delivery system is complex and relies on a reliable power supply, short circuit protection, and an alarm system to ensure smooth operation. The power supply provides the necessary energy for the system, while the short-circuit protection and alarm system safeguard against potential hazards. Advanced detection devices and sensing technologies enhance the system's efficiency by monitoring parameters such as fuel pressure.

The fuel pump, a dynamic component, operates under the directives of these devices, adjusting its performance to meet demand. The sensing technology continuously monitors and communicates with the fuel pump to regulate its output, ensuring optimal fuel pressure for combustion. Integrating these components with intelligent monitoring and control systems creates a robust infrastructure for efficient and secure fuel transportation in the automotive or industrial environment.

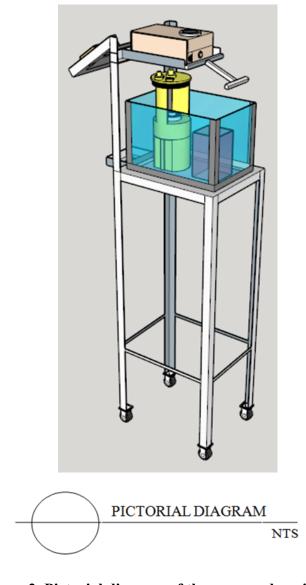


Figure 2. Pictorial diagram of the proposed project

The diagram in Figure 2 depicts the design of the proposed research project. The frame is constructed from 1"x1" angular steel, providing support for the mock-up. At the top, there is a main control unit connected to a gauge meter. Casters will be installed to facilitate easy transportation.

Project Development Procedure

The project development showed how the researchers planned the construction of the Small Engine Fuel Pump Breakdown Detection Device. Procedures were presented in a flowchart illustrating the project's development phases.

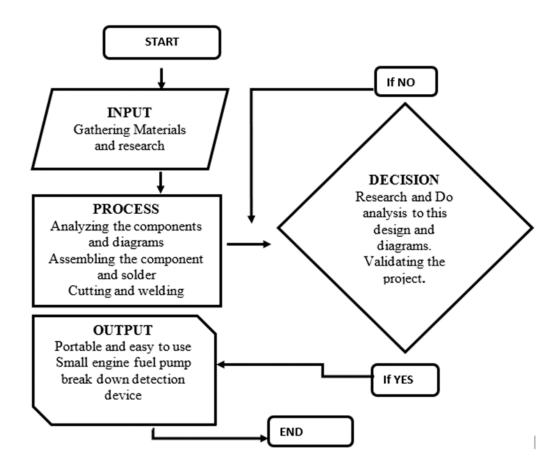


Figure 3. Fuel Pump Detection Device Flow Chart

Figure 3.3 shows the study's flow chart. The first objective is to determine how the researcher gathers data for the chosen study. Input: gathering materials such as a sensor, a 12V relay, a 100k multi-turn potentiometer, a BC547 transistor, a 1k ohm resistor, a bicolor (dual color, red/green) LED 1.5v, and a momentary switch. Process: gathering data and determining research on how to make an effective power/short circuit protection system, an applicable sensor device, and a flexible diagram design. Analyze this design through wiring diagrams, validate the project design, construct the final design using suitable steps, and apply it to the detection device, test and evaluate, and validate the final output and decision; all the materials and research are being evaluated, finalized, and agreed upon by the researchers and evaluator. Output: small engine fuel pump breakdown detection device.

Testing and Operating Procedures

In this stage, the researcher conducted testing and operating procedures to test the general functionality, including reliability, accuracy, portability, and cost-effectiveness of the components and operation. The problem is that revisions are made once the project has reached a reasonable and acceptable level of performance.

Testing Procedure

In this procedure, the researcher used a Voltmeter Ammeter and Pressure Gauge as testing instruments to check the performance of the Small Engine Fuel Pump Breakdown Detection device.

Phase 1: Simulation and Experimentation Project Research, Short circuit detection system.

- Step 1: Log in to the 12V power supply
- Step 2: Test the fuel pump short-circuit protection and alarm-detection system input voltage presence using a Voltmeter tester.
- Step 3: Test the output voltage and amperage present using an Ammeter tester.
- Step 4: We are activating the fuel pump.
- Step 5: By creating a short circuit in the output terminals, the detection device becomes active and sends an alarm signal.
- Step 6: Testing the input and output voltage again to ensure no issues happened.
- Step 7: Activate the fuel pump again for 1 hour, create a short circuit, and test whether the detection system responds well.
- Step 8: The test runs well consecutively and lasts a duration of 12 hours.

Phase 2: Simulation and Experimentation Project Research, sensor or sensing system.

- Step 1: Activating the fuel pump to suck the fuel goes to the fuel line to create fuel pressure.
- Step 2: Test the sensor input voltage present.
- Step 3: The sensor will respond well if there's pressure in the fuel line.
- Step 4: Measure the Pressure (PSI) present using a Pressure Gauge.
- Step 5: Record the time when the signal responds using a Timer.
- Step 6: They are intentionally dropping the fuel pressure or creating leaks.
- Step 7: The pressure drops and the sensor sends an alarm signal.
- Step 8: The pressure-dropping test records the time duration of the pressure drop of every signal indicator.

Operating Procedure

- Step 1: Prepare the materials needed.
- Step 2: Prepare the necessary testing Instruments, such as a voltage and ammeter, a pressure gauge, and a time watch.
- Step 3: Construct a suitable diagram for a Small Engine Fuel Pump Breakdown Detection Device.
- Step 4: Connect the input and output terminals to their designated terminals.
- Step 5: Connect the hose to the designated connection.
- Step 6: Make sure the researcher follows what's on the diagram.
- Step 7: Review the wire connection on its designated terminal
- Step 8: And activation
- Step 9: Log in to the 12V power supply.
- Step 10: The current flow from the 12V power supply is distributed to the fuel pump and sensors.
- Step 11: Test the voltage present.
- Step 12: Test the breakdown response.
- Step 13: If everything is functional without any issues, the researcher can conclude that the research project performs appropriately.

Project Evaluating Procedure

This study used the descriptive method. The descriptive study design entails systematically collecting data on a particular subject matter without attempting to deduce cause-and-effect correlations. Furthermore, descriptive research encompasses surveys, observational studies, and case studies, with the potential to gather qualitative or quantitative data (Sirisilla, 2023).

Evaluation Instrument

This research project uses surveys to acquire information about small engine fuel pump breakdown detection devices. The first begins with the distribution of a survey questionnaire to the study's participants, and it ends with the collection and analysis of the gathered data. The statements are answerable using a point rating scale.

Criteria for Evaluation

The project evaluation for a fuel pump detection device should cover various aspects, including project planning for diagram design, technical aspects, risk management, testing, quality assurance, user interface, performance metrics, and future development. The lessons learned can be applied to future projects. The following are the testing procedures for the said components using the testing instruments, such as a voltage meter, an ammeter, a pressure gauge, and a timer. The research project is evaluated in terms of the functions of each component accordingly, such as: The reliability of a fuel pump detection device is assessed based on factors like detection reliability, downtime, response time, environmental resilience, durability, component reliability, emergency response, longevity, and testing. The accuracy of a fuel pump detection device can be assessed through benchmark comparison, false positives, detection sensitivity, precision, calibration, environmental influences, and user feedback. Regular calibration and validation are crucial for ensuring accuracy under different conditions. The portability of a fuel pump detection device is assessed based on factors such as size, weight, mobility, power consumption, durability, and resilience. It also considers compatibility with vehicles, communication, user interface accessibility, and remote monitoring. The costeffectiveness evaluation of a fuel pump detection device considers the initial investment, reduces maintenance cost, enhances fuel economy, and impacts energy efficiency compared to alternatives. The study involves respondents choosing a number (1 to 5) to express their opinion on the cost-effectiveness of a fuel pump detection system.

Rating Scale

According to Likert (1932). The Likert scale is a quantitative measurement tool commonly employed to assess individuals' opinions, attitudes, or behaviors. This structure consists of a statement or a question, followed by a sequence of five or seven answer statements. Participants select the choice most accurately aligns with their sentiments towards the statement or query. A 5-point Likert scale is a psychometric tool that allows respondents to quickly express their level of agreement with questions using a scale of five points. This study was patterned with the Likert-type scale.

Statistical Tools

This research aims to explore the application and efficacy of two fundamental statistical tools weighted mean and percentage formula in data analysis. The study will investigate these tools' theoretical underpinnings, practical applications, and comparative advantages in handling real-world data sets. The weighted mean and percentage formulas are particularly noteworthy for

their versatility and precision among various statistical tools. This research seeks to clarify how these tools enhance data analysis processes, ensuring accurate and meaningful interpretations.

RESULTS AND DISCUSSION

Project Description

The efficient operation of fuel systems is essential in all types of vehicles. However, it faces obstacles such as pump failures and safety measures. This research project focuses on developing an advanced fuel pump detection device. The device aims to identify irregularities in gasoline pumps and fuel distribution, thereby enhancing security and efficiency. The project aims to improve fuel control methods in various operating conditions by giving early warnings and safety measures.

Evaluation Results

Fuel pump detection systems are critical for monitoring fuel pump performance in vehicles. They utilize sensors to measure parameters like fuel pressure and flow rate, enabling real-time monitoring and diagnostics. Advancements in sensor technology have led to enhanced precision and dependability of systems, which are subjected to thorough assessments to ensure accuracy and long-lasting performance. Portable designs allow for field diagnostics, enhancing convenience. Cost-effectiveness considerations are crucial, balancing initial investment with maintenance costs and operational efficiency gains.

Project Design

- 1.1. The design is light, flexible, and reasonably portable for its size.
- 1.2. Due to its design, the device can be applied to any environment.
- 1.3. The device has an easy wiring connection, which is standard for motorcycles.

Project Development

- 1.1. The development of the study was challenging. Some difficulties were experienced when finding suitable materials for the project. Since this was a new venture, every step was upside down, and the researcher experienced failures, purchasing the wrong materials, and more.
- 1.2. The researchers needed some help with the measurements of the project design.
- 1.3. When putting the components together, the researchers overcome problems like destroyed parts.

Project Functionality Test

- 1.1. **Sensor Performance**. Testing the accuracy and responsiveness of sensors, such as oil pressure sensors and pressure transducers, to detect varying fuel pump conditions accurately.
- 1.2. **Assembly and Integration**. Assessing the assembly process to ensure components are securely mounted within the project box, with proper wiring connections and effective integration to prevent damage or operational issues.
- 1.3. **User Interface**. Evaluating the user interface for simplicity and effectiveness, ensuring that it provides intuitive controls and clear feedback to operators during monitoring and troubleshooting.

1.4. **Safety Measures**. Validating the device's ability to activate safety measures promptly in response to detected anomalies, such as fuel leaks or pump failures, to prevent potential hazards

Project Evaluation

- 1.1. The reliability of the device has very positive reviews, with an average mean of 4.46
- 1.2. The device's accuracy has been very positive, and they are delighted with its performance. With an average mean of 4.45
- 1.3. The portability and user interface of the project were strongly agreed upon, which means evaluators have a very positive view of the fuel pump detection device's appearance, size, and flexibility, able to adapt to different environments and different platforms, and are delighted with its proficiency. With an average mean of 4.38

The project's cost-effectiveness was strongly agreed upon, meaning evaluators have a favorable view of the fuel pump detection system; they likely see it as reliable and effective. With an average mean of 4.42

DISCUSSION

The researchers examined and reviewed the study results and came up with the following conclusion.

Project Design

- 1.1. The fuel pump breakdown detection device boasts a design that is light, flexible, and reasonably portable, making it convenient to handle and install.
- 1.2. Its versatile design allows it to be applied in various environments, enhancing its adaptability and broad usability.
- 1.3. The device features easy wiring connections that are standardized for motorcycles, ensuring straightforward and efficient integration into existing systems. This combination of portability, versatility, and user-friendly installation makes the detection device an excellent solution for improving fuel pump management and security across diverse settings.

Project Development

- 1.1. The development of this project presented significant challenges and learning opportunities throughout its journey. Finding suitable materials posed initial difficulties, compounded by the exploratory nature of the venture, which led to setbacks such as purchasing incorrect components and encountering unexpected failures.
- 1.2. Collaborative efforts were crucial, particularly in obtaining accurate measurements and overcoming assembly challenges, including the unfortunate occurrence of damaged parts.
- 1.3. Despite these obstacles, the project's progression underscored the resilience and adaptability of the research team, culminating in valuable lessons learned and a refined understanding of project management and component integration. These experiences have not only enriched the development process but also paved the way for future innovations in similar endeavors.

Project Functionality Test

- 1.1. Through rigorous testing of sensors, electrical components, assembly integrity, user interface effectiveness, environmental adaptability, and safety measures, the device has proven its capability to accurately detect fuel pump anomalies and activate timely responses.
- 1.2. These results validate the device's readiness for deployment, ensuring enhanced fuel management efficiency and operational safety in diverse industrial and automotive applications.
- 1.3. Users can rely on its accurate sensor readings, seamless integration into different environments, and intuitive user interface for efficient monitoring and troubleshooting.
- 1.4. The functionality test of the fuel pump breakdown detection device has demonstrated its robust performance and reliability across various critical parameters.

Project Evaluation

- 1.1. The fuel pump breakdown detection systems are essential to modern vehicle technology and offer efficiency, performance optimization, and increased reliability. Due to developments in sensor technology and project design, these detection systems have developed to deliver more precise and reliable fuel pump operation monitoring.
- 1.2. The research findings highlight the importance of accuracy in detecting fuel pump anomalies, which can prevent potential failures and optimize fuel consumption. Additionally, evaluating reliability through rigorous testing under various conditions ensures continuous operation and enhances vehicle safety.
- 1.3. Fuel pump detection systems' portability allows them to be utilized in various settings, including field diagnostics and repair services, which increases operator flexibility and convenience.
- 1.4. Evaluating these systems' total value proposition requires careful evaluation of costeffectiveness factors, such as initial investment, maintenance expenses, and effectiveness enhancements.

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Synchronized Electronic Device Control System

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ABSTRACT

This study focuses on the development and evaluation of a Synchronized Electronic Device Control System to enhance energy efficiency and security in laboratory environments at educational institutions. Conducted during the second semester of the 2023-2024 academic year, it involved six engineering department instructors and 14 college engineering students. A descriptive research design with surveys and Likert scale questionnaires was employed to assess the system's functionality, reliability, and craftsmanship. The system integrates biometric access control, automatic door lock mechanisms, and realtime synchronization of laboratory appliances like lights and fans, using ultrasonic sensors for occupancy detection. This ensures appliances operate only when the laboratory is occupied, optimizing energy usage and reducing unnecessary power consumption. Rigorous testing demonstrated the system's effectiveness in reducing electricity costs and preventing unauthorized access. The findings advocate for the system's widespread implementation across the entire school campus to promote sustainability, reduce operational costs, and ensure secure, efficient laboratory environments. This study addresses the specific needs outlined by educational governing bodies, such as the Commission on Higher Education (CHED), ensuring laboratories remain exclusive and dedicated to scientific research. The successful integration of these technologies not only provides a practical solution to existing challenges but also sets a precedent for future innovations in educational infrastructure. The study concludes with a recommendation for adopting this system campus-wide to foster a culture of innovation, energy efficiency, and enhanced security.

INTRODUCTION

In recent years, the increasing demand for energy efficiency and security in educational institutions has prompted the need for innovative solutions to address challenges like high electricity bills and unauthorized access to laboratory facilities. Educational institutions, particularly schools and universities, often grapple with soaring electricity costs due to human errors such as the failure to turn off electrical appliances, especially lights and fans. These errors not only strain financial resources but also contribute to unnecessary energy waste and a heightened carbon footprint. Dyussembekova, Westküste, Temirgaliyeva, Umyshev, and Shavdinova (2023).

As published by CMO No. 25, Series of 2005, maintaining the security and exclusivity of laboratory rooms in accordance with the guidelines set by educational governing bodies like the Commission on Higher Education (CHED) is of paramount importance. CHED regulations stipulate that laboratory rooms should remain free from unauthorized access, maintaining their sanctity as spaces dedicated to scientific research and experimentation.

Implementing this study can enhance security and convenience for authorized personnel, while students benefit from hands-on learning, interdisciplinary skill development, and exposure to innovation, and preparation for emerging industry trends. Bekele & Atakara (2023)

investigated the importance of energy-efficient building automation systems in reducing energy consumption and costs. Their study emphasized the need for intelligent systems that can automatically manage and control electronic devices, such as lighting and HVAC, to reduce electricity consumption. The findings highlight the potential of a synchronized electronic device system to optimize energy usage, addressing one of the primary issues faced by educational institutions, including high electronic bills.

As studied by Cobo, Cabaravdic, and Žiga (2023), the researcher made an automated door as a smart device that presented in this paper delves into the augmentation of traditional home devices by integrating smart technologies. It focuses on the development of a smart door control system accessible through a web interface, enabling remote control from any Internetconnected device. A pivotal component of this system is the servo motor, intricately constructed through a combination of software and mechanical elements. The software component comprises a PID controller and a web server, while the mechanical aspect involves the integration of an electric motor and electronic components. The use of the ESP32 microcontroller and Arduino platform, along with HTML, CSS, JavaScript, and "web socket" technologies, facilitates the creation of a user-friendly interface for two-way communication. The paper also emphasizes the consideration of privacy and data exchange speed, highlighting the advantages of direct device-user connections. The implementation of this automated door drive element not only enhances convenience through remote control but also offers insights into potential challenges and drawbacks associated with smart devices in home automation. The comprehensive exploration of both advantages and disadvantages contributes to a nuanced understanding of the implications of integrating such technologies into our daily lives.

In response to these challenges, the researchers introduce the concept of a "synchronized electronic device system." This system combines biometric authentication technology with smart control of doors and electrical appliances, with the goal of enabling authorized personnel to seamlessly access laboratory rooms while ensuring energy efficiency and security.

MATERIALS AND METHODS

Project Design

The goal of this research is to develop and implement an innovative, secure, and energy-efficient solution for laboratory rooms within school institutions, utilizing biometric access control to synchronize the activation and deactivation of electronic devices, with a primary focus on lights and fans. The overarching aim is to enhance security, promote energy conservation, and address the challenge of high electronic bills caused by human errors while ensuring compliance with regulatory requirements for laboratory exclusivity.

The project design illustrates how the project operates using a block diagram, as shown in Figure 1.

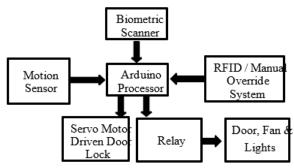


Figure 1. Block diagram of Synchronized Electronic Door System with Biometric

Figure 1 shows the operation of the synchronized electronic device control system. A biometric scanner, motion sensor, and RFID override system are devices that send data or signals to the Arduino processor, and the servo motor-driven door lock and relay are controlled by the Arduino processor. A biometric scanner identifies the specific user to be allowed to use the laboratory; a motion sensor detects movement inside the laboratory; and an RFID override system is an electronic code that is also used for security purposes. These devices send an input signal to the Arduino processor, which then performs the task that is programmed with it. The servo motor-driven door lock is used as the main lock for the doors of the laboratory, and the relay controls the electricity that is supplied to the fans and lights in order to save electrical energy. Both of these devices will work according to the Arduino program.

Project Development Procedures

The figure below depicts the development of the research, the method to be followed, and the validation of the final product of the synchronized electronic door control system with biometrics.

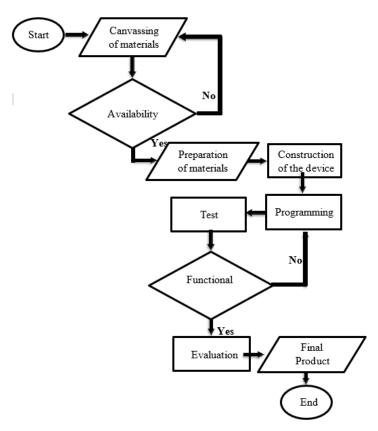


Figure 2. Flow chart for Project Development of innovation of Synchronized Electronic Device Control System with Biometric

- Step 1: Canvassing of materials for the innovation of a synchronized electronic door control system with biometrics. The materials needed are an Arduino processor, a biometric scanner, a motion sensor, an RFID, a servo motor-driven door lock, and a relay.
- Step 2: The availability of materials is needed for making informed decisions on how to allocate available resources to different production lines or orders efficiently.
- Step 3: After the materials are available, preparation is the next thing to do, which includes purchasing all the materials for device construction.

- Step 4: After the materials are purchased, next is the construction process: assembling the connections, installing automatic locks on doors, and relays controlling the laboratory's electricity supply to the wall fans and lights.
- Step 5: Next is the programming process, which synchronizes all the devices controlled by the Arduino processor.
- Step 6: The test process is then followed to determine if the device is functional.
- Step 7: If the device is functional, it will undergo evaluation, and if not, it should be reviewed for construction and programming.
- Step 8: The evaluation process takes place after it is already functional to determine its durability. The output symbol then shows the final product.

Testing and Operating Procedure

In this section, the researchers conducted testing and operating procedures to assess the reliability, functionality, and craftsmanship of the components and operations. They encountered problems along the way, which led to revisions until the project reached a good and acceptable performance level. The main objective of this project was to improve the efficiency of the synchronized electronic device control system.

Testing Procedure

The researcher is going to use a multi-tester to check the output of the synchronized electronic device system and also to check its current.

Test Run and Installation

- Step 1: Power on the entire system, including the associated electronic components.
- Step 2: Test the biometric access control mechanism to ensure accurate user authentication. Verify that only authorized personnel can gain access to the controlled area.
- Step 3: Initiate tests to synchronize electronic devices, such as lights and fans. Confirm that devices activate upon authorized personnel entry and deactivate when the area is unoccupied.
- Step 4: Evaluate the energy efficiency features by monitoring the power consumption of devices in different modes (active and inactive). Verify that energy is conserved by automatically turning off devices when the area is unoccupied.
- Step 5: Verify that the system complies with regulatory requirements, particularly those related to laboratory exclusiveness and access control.
- Step 6: Confirm that users, both administrators and end-users, can easily navigate and operate the system.
- Step 7: Simulate various error scenarios, such as incorrect biometric input or device synchronization failure.
- Step 8: Assess the system's scalability by testing its performance with an increased number of connected devices or users. Confirm that the system remains reliable and responsive as the scale increases.

- Step 9: Conduct comprehensive testing to ensure that all components of the system work seamlessly together. Verify that the synchronization, access control, and energy efficiency features operate cohesively.
- Step 10: Engage potential users in usability testing to gather feedback on the overall user experience. Identify areas for improvement in terms of user interactions and system responsiveness.
- Step 11: Engage potential users in usability testing to gather feedback on the overall user experience.
- Step 12: Identify areas for improvement in terms of user interactions and system responsiveness.
- Step 13: Assess the overall performance of the system by measuring response times, data processing speeds, and other relevant performance metrics.

Operating Procedure

- Step 1: Ensure all system components, including the electronic devices, are powered on.
- Step 2: Initiate the biometric authentication process for authorized personnel. Prompt users to authenticate using the biometric system.
- Step 3: Verify the biometric data against the authorized personnel database. Grant access upon successful authentication; deny access otherwise.
- Step 4: Ensure that lights and fans turn on automatically when the user enters the controlled area.
- Step 5: Monitor the energy efficiency mode to automatically turn off devices when the controlled area is unoccupied. Confirm that the system optimizes energy consumption.
- Step 6: Verify that the system complies with regulatory requirements, especially regarding laboratory exclusiveness and access control.
- Step 7: Interact with the user interface to navigate through system features. Confirm the user-friendliness of the interface for both administrators and end-users.
- Step 8: Monitor the security features to prevent unauthorized access. Ensure that the system maintains the security and exclusivity of the controlled environment.
- Step 9: Simulate error scenarios, such as incorrect biometric input or device synchronization failure. Observe how the system handles errors and provides feedback.
- Step 10: Test the system's scalability by adding more connected devices or users. Verify that the system remains reliable and responsive with increased load.
- Step 11: Engage users in usability testing to assess their experience with the system. Collect feedback on user interactions and the overall usability of the system.
- Step 12: Measure and evaluate the overall performance of the system. Assess response times, data processing speeds, and other relevant performance metrics.
- Step 13: Conduct end-to-end testing to validate the entire system's functionality, from user authentication to device control.
- Step 14: Refer to system documentation, including user manuals and technical guides, for any operational guidance.

Project Evaluating Procedure

In this phase, the evaluation of the overall performance of the project had to be done to determine the project's reliability, validity, and craftsmanship, which also served as the basis for project improvement. The expert evaluator and the projected end-users of the project were the most important actors in this aspect. The researcher evaluated the project development using descriptive statistics, utilizing the Likert scale to measure acceptability in terms of the functionality, craftsmanship, and reliability of the final project outcome.

By employing these evaluation criteria, the researcher aimed to assess the project's strengths and areas for improvement comprehensively. The evaluation process involved gathering input from expert evaluators and potential end-users, ensuring a well-rounded assessment of the project's performance.

- Step 1: The researchers asked for permission from the Dean of the College of Engineering Technology.
- Step 2: The researchers gathered 20 respondents to answer the survey questionnaire.
- Step 3: An orientation was conducted by the researchers to guide the respondents on the proper way of answering the questionnaire.
- Step 4: The respondents answered the questionnaire.
- Step 5: After completing the questionnaire, the researchers collected the survey questionnaires from the respondents.
- Step 6: The researchers analyzed the responses.
- Step 7: A report summarizing the survey results was written by the researchers.

The Synchronized Electronic Devise System underwent testing procedures, and door lock will be evaluated using the humidity sensor and multi-tester. Descriptive statistics were utilized to evaluate the Synchronized Electronic Devise System in terms of functionality, reliability, and craftsmanship.

RESULTS

Evaluation Results

The Specific Components

The materials to use in the project's development came across a variety of options. Most of the material was based on economic choice; however, the researcher did not compromise on the quality of the project.

The Design of the Project

Design a synchronized electronic device system that can accurately and securely identify authorized personnel and grant access to the laboratory. The system integrates advanced biometric identification technologies, such as fingerprints, to ensure precise and reliable authentication of authorized individuals. The design prioritizes user-friendliness and seamless integration with existing laboratory infrastructure while maintaining a high level of security and reliability.

Project Development

This process entails meticulous planning, precise component selection, and rigorous testing to ensure seamless integration with the overall system. The researcher faces challenges such as

optimizing the door lock mechanism for reliability and security, integrating it with the control system's software, and ensuring compatibility with existing hardware. However, overcoming these challenges presents opportunities for innovation and refinement, ultimately contributing to the realization of a sophisticated and efficient access control solution tailored for laboratory environments.

Functional Test Result

Several trials were being employed during functional testing and were adjusted and calibrated until the result was finally achieved.

Project Evaluation Results

The results of the reliability, functionality, and craftsmanship of the synchronized electronic device system.

- The reliability testing results show that the overall product is perceived as highly reliable by a vast majority (82%) of respondents. Similarly, questions 2 and 3 were rated as extremely reliable by 75% of respondents, respectively. Question 4 received slightly lower marks, with 65% rating it extremely reliable. Question no. 4 also has the highest standard deviation (0.845), indicating a wider range of responses compared to the other questions.
- The tables show the results of a functionality test on five questions. The majority of respondents found all questions to be extremely functional or functional. Question 4 received the highest mean rating (4.45) and question 1 received the lowest (4.3). The standard deviation for all questions ranged from 0.73 to 0.79.

The tables show results from craftsmanship testing for three questions. The respondents rated the questions on a scale likely ranging from excellent to poor. Question 1, 3, and 5 all received similar ratings, with a mean around 4.35 and a standard deviation around 0.73, though question 5 had a higher percentage of excellent ratings (60%) compared to questions 1 and 3 (50%).

DISCUSSION

The researcher's investigation into the Synchronized Electronic Device System, conducted collaboratively by engineering instructors and students, aimed to assess user perceptions of its reliability, functionality, and craftsmanship. We employed a descriptive approach through surveys and Likert scale assessments during the second semester of the academic year (January–May 2024). The following section will summarize the key findings based on the specific objectives of the research, with a particular focus on the data presented in Tables 4.5 through 4.16.

Project Components

The researchers learned during the project's development that it would have been preferable to choose an already-assembled biometric rather than assemble it yourself.

Project Design

The designed system demonstrates its capability to fulfill the specified objectives, providing a sophisticated yet user-centric solution for access control in laboratory environments.

Project Development

Since the project was intended to automatically turn on and off, the researchers chose to utilize a type of sensor in the development of the door lock to detect whether there is movement, which suggests that there is someone inside.

Project Functionality test

Before finalizing the wiring in the product, it is best to test it to ensure that it functions.

Project Evaluation

Based on the findings of the study, the following conclusions are made:

- 1.1. In terms of the functionality of the product, the result was 4.7 in terms of product functionality. The interpretation is that the product is extremely functional; therefore, the automatic door lock is easy to operate properly.
- 1.2. In terms of reliability, the product result was 4.3, indicating that its representation was extremely reliable, making it easy to troubleshoot.
- 1.3. In the objective of craftsmanship, the result was 4.45, and its interpretation is excellent. The product incurs cost efficiency, and the output design is properly molded.

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The Familial Background of Selected Individuals Diagnosed with HIV and Their Personal Experiences: A Case Study

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ABSTRACT

Human immunodeficiency virus remains a global public health challenge. Individuals affected with this virus continue to experience significant social stigma, leading to feelings of shame, anxiety, and depression. Despite the enormous efforts to prevent and control the spread of HIV, this virus does not select or exempt individuals from getting infected. Using case study analysis, this study intends to examine the familial background, psychosocial struggles, and coping strategies of five persons living with HIV (PLHIV) in Cagayan de Oro City. In adherence to ethical considerations, the researchers ensured the participants' anonymity, confidentiality, and risks and discomfort. Findings indicate that participants came from broken families, had financial struggles and constraints, had unsupportive parents, and experienced interpersonal conflict. Additionally, their psychosocial struggles included social isolation, religious belief, challenges accessing healthcare, difficulties in disclosing their status, and issues related to legal and human rights. To cope with these social challenges, participants reported employing various strategies, including seeking counselling and treatments, as well as working towards better access to resources.

INTRODUCTION

Cases of human immunodeficiency virus are rising quickly in the Philippines. HIV spreads more swiftly with population growth, and with population growth come socioeconomic factors, family histories, and the demographics of those living with HIV, which in turn contribute to social difficulties and changes.

The familial background, which includes cultural heritage and customs passed down from one generation to the next, is one of the present societal components that has not altered. The breadth of a deeper comprehension of HIV is realizing the person's family history might reveal information about their origins, morals, and social concerns.

Those who are diagnosed with HIV are subject to discrimination and social stigma. HIV is a complicating factor that contributes to social health problems, as people living with the virus feel as though their regular lives have come to an end, isolate themselves from friends and family, and avoid social situations. HIV presents social relationship issues, including social stigma, discrimination, inequality, and the demographics of those affected.

This social stigma has great power because it can be used to marginalize and exert pressure on people living with HIV, as well as to create social rejection and social isolation. By demonizing those who receive an HIV diagnosis and face discrimination, this virus has strengthened societal stigma by allowing individuals, communities, and society as a whole to absolve themselves of the duty to provide care.

This study utilized the notion of symbolic interactionism to pinpoint the respondents' individual experiences in order to comprehend the dynamics of the structural symbolic interactionism between the respondents, religion, and society. People with HIV diagnoses and society interpret social items and social interactions. Symbolic interactionism examines how social symbols affect the meaning of their social relationships in their social networks, and their personal experiences are influenced by the Structural functionalism of their family history, religion, and social institutions; these meanings may have varying interpretations and comprehensions for the individuals involved.

REVIEW OF THE LITERATURE

Misperceptions, ignorance, and the stigma associated with HIV diagnosis, which negatively impacts the social well-being of those who receive a diagnosis, human immunodeficiency virus is one of the biggest and most recent risks to physical health. The likelihood of developing hidden instances of HIV infection can be raised by social stigma, discrimination, and rejection from others and society. These factors can also cause medical, mental, and social issues that can result in the revelation of HIV infection status.

Societal stigma and prevailing social views cause negative social repercussions. Apart from the psychological consequences of living with HIV, individuals can experience discrimination, loss of social position and role, altered social relationship dynamics, loss of employment and jobs, financial hardship, and challenges of obtaining and sustaining medication (Masoumeh, D. et al. 2015).

HIV stigma is a complex issue that manifests itself in various ways. It may stem from a combination of fear and ignorance regarding HIV, empathy, and/or both. HIV stigma can make those who are infected feel afraid or alone. It is challenging for people to get over their concerns about the infection because of the stigma that HIV carries in our society (Acon, 2017).

The family affected by HIV could be under a lot of stress. When a person's HIV status is made public in a relationship, it can expose aspects of their behavior that they would have preferred to remain private. This may lead to emotions of guilt and blame, as well as the breakdown of the partnership. Multiple HIV-positive family members can raise healthcare costs and result in greater psychological and financial burdens and challenges. The family could also suffer a loss. Stigma and prejudice may cause people to conceal their condition, which could limit their ability to get support from their extended family and from society (AAMFT, 2022).

HIV-positive people start to internalize the stigma they come across and develop a poor opinion of themselves. If others are aware of their HIV status, they may fear discrimination or unfavorable treatment. When someone internalizes negative preconceptions and stereotypes about people living with HIV, they start to apply those assumptions and beliefs to themselves. HIV- positive people start to internalize the stigma they come across and develop a poor opinion of themselves. If others are aware of their HIV status, they may fear discrimination or unfavorable treatment. When someone internalizes negative preconceptions and stereotypes about people living with HIV, they start to apply those assumptions and beliefs to themselves (Centers for Disease Control and Prevention, 2021).

HIV-positive individuals' experiences at work shed light on the tragedy inside the tragedy of the HIV epidemic in the Philippines. The difficulties faced by HIV-positive individuals at work have a big influence on their family troubles. HIV-positive workers and employees there experience prejudice at work. People with HIV opt to stay silent and are reluctant to submit complaints regarding work discrimination, which includes pressuring them to leave and

refusing to hire them, since they are afraid of being exposed to the public and facing social rejection (Conde, C. 2018).

HIV infection's potential socioeconomic repercussions in the Philippines, with a focus on the situations of two vulnerable groups: sex workers and foreign contract workers. Given the recent occurrences in the Philippines, including the prospective implications of HIV disease are taken into consideration, along with the economic downturn, widespread poverty, and income disparity. Next, the contributions of sex workers and foreign workers are analyzed at the macro and local levels (Tan, ML, 2017).

Some adherents of Catholic dogma hold the stigmatizing belief that HIV is a disease that gay men are meant to contract as payback for their transgression of homosexual behavior. The Philippine government intervened because the Catholic Church opposed a pilot program of sexuality education that would have included HIV instruction in two Manila schools (Bustamante, J, & Plankey, M.W. 2022).

The Philippines is the only predominantly Christian country in Asia. Many MSM still find it difficult to embrace their own sexuality, serostatus, and the potential effects these factors may have on their connection with God because of their continued devotion to the Roman Catholic tradition (Miller, J. 2022).

Explore and clarify the significant role of Catholicism and the Catholic Church as both a continuing source of marginalization and oppression, as well as strength and support, for Canadian gay men living with HIV/AIDS today. Examine religion's anti-homosexuality teachings and contributions to the stigmatization of HIV/AIDS y (Laborer, 2016).

It has been demonstrated that discrimination connected to HIV/AIDS makes it more difficult to put into practice effective preventive measures since it discourages HIV-positive individuals from seeking out social and health services as well as other persons. This argues that issues related to PLWHA's human rights must be taken into consideration in order for the Philippines to maintain its low HIV prevalence rate or even lessen prejudice against them (Ortega, NL. Et al. 2005).

People may now obtain the medications they need to minimize the effects of HIV/AIDS and continue living their regular lives, and social stigma and discrimination are rapidly decreasing. The local response is an essential part of the country's HIV/AIDS prevention effort. The program in Region X revolves around the two local governments (LGUs) and Cagayan De Oro City. Through the Sustainable Development Goal (SDG) and through the HIV and AIDS Medium-Term Plan (AMTP), they pledged to reduce HIV infection (Sobradil, M. 2020).

MATERIALS AND METHODS

In-depth interviews (IDIs), a descriptive and purposeful research method, are used in this study to determine the degree of societal stigma and discrimination experienced by the chosen HIV-positive persons. The information acquired in this manner is a guiding interview question intended to elicit information that supports a deeper understanding of the reason for the illness. The main focus of descriptive research is preoccupied with determining "what is." The fundamental goal of this study's qualitative methodology was to determine "what is." To gather data, observational methods and interview guide questions were employed (Borg & Gall, 1989).

The province of Cagayan de Oro City, 9000, and Nazareth were the study's locations. An NGO (non-governmental organization) that assisted those in need in the city with HIV. A non-governmental organization that promotes human rights and sexual health in a

nondiscriminatory, gender-responsive society has established an HIV center that provides a secure environment for everyone looking for a free screening for HIV and other sexually transmitted illnesses. The Oro Pia Lounge, named for the beauty queen, has a custom logo created featuring a silhouette of Pia, the Asia-Pacific ambassador for UNAIDS Goodwill.

The chosen people at Oro Pia Community Center who have been diagnosed with HIV were the research respondents for this study. The interview guide questions were addressed by the respondents. The chosen respondents undergo purposeful sampling and audio-visual documentation to pinpoint respondents' true responses while interpreting the data accurately. After that, the audio-visual recording is erased. There are just five people who make up the research subject population at Oro Pia Community Center, and only those who responded.

Five clients of the Oro Pia Community Center were selected as the study's subjects and respondents. The respondents scheduled times for the private interview and gave the researchers their informed consent. The researchers then provided the respondents with a list of twenty interview questions. The one-on-one interview is conducted at the respondents' desired time and location.

Two portions of the interview guide questions were utilized in the study, along with an in-depth interview to collect data. The demographic profile, which includes the respondents' age, religion, marital status, occupation, number of siblings in the household, and level of education, is the first section. Twenty qualitative, in-depth interview questions comprise the interview guide, which forms the second section. The form included a straightforward guide for the qualitative questions, and the researchers promptly gathered the responses. The audio-video replies were captured, and they were removed once the data was transcribed, captured, and they were removed

A guiding interview question was used during data collection. Prior to conducting the interview, the researchers wrote a letter requesting the dean of the College of Arts and Sciences to sign a consent form. Secondly, the researchers composed a letter to the Oro Pia Community Center requesting authorization to carry out the study there. Third, the researchers did not receive approval from the Oro Pia Community Center regarding its approval or disapproval. Instead, they approached the targeted respondents in private and inquired about their willingness to participate in the study. If they agreed, they were then given a consent form. Fourth, the researchers scheduled a one-on-one interview with Oro Pia Community Center clients. Fifth, the researchers followed up with the clients after the interview was scheduled. Gave the respondents a non-disclosure agreement that said the respondents' identities would be disguised and the data would be kept private. The responder granted permission to record the interview, with the understanding that the information would only be used to record everything. This way, material not collected during the written interview could be reviewed during data tabulation, and the recordings would be removed after serving their original purpose. The responders acknowledged that their faces could be obscured in photos. Confidentiality and security are maintained for the respondents' names and responses.

In order to find and arrange the common key themes of the data, the study's methodology involves coding, creating themes, and comparing the data with the respondents' responses. By reading with an open mind, searching for themes and explanations, and assembling those themes into a cohesive whole, the researchers were able to gain knowledge about the material.

Prior to performing the research, the researchers obtained consent from the respondents; this time, we scheduled an in-person interview as well as one conducted via online platforms. The participants were not coerced by the researchers to respond to the questionnaire and ensure that all of the respondents' personal information is kept private. The respondents who were face-to-

face interviewed signed a non-disclosure agreement after receiving an informed consent letter. The researcher made sure that before any data was collected, the interview procedures would respect the respondents' specific cultural values, norms, traditions, and even taboos. They also made sure that the research process would be transparent by allowing the personal information collected to be made public, and that the respondents' right to privacy would not be violated or that they would be observed without their knowledge.

RESULTS

The result of this study addressed the issues raised in the problem statement and provide the evidence in an unbiased, academic manner based on the research method.

- 1. What is the familial background of selected individuals who are diagnosed with HIV?
 - Came from a broken family
 - Financial Struggles and constraints
 - Education background (informed and uninformed family and society)
 - Familial authority
 - Unsupportive Parents
 - tense interpersonal relations
 - religion that stigmatizes
 - Cultural context
 - Cultural background that fuels discrimination and stigma.
- 2. What are the psychosocial struggles of the respondents?
 - Religious belief
 - Honoring the Family history
 - Social Isolation
 - Discrimination
 - Limited communication to their families
 - Lack of emotional bond
 - Financial hardship
 - Social relationship problems
 - Access to healthcare
 - Difficulties with disclosing their status
 - Legal and human rights issue
- 3. Do the selected individuals diagnosed with HIV received social support?
 - Mending relationships that established bonds
 - Free access to health care
 - Counselling and Community organizations, e.g., love yourself, Oro Pia, Alagad Mindanao
 - Emotional Support from the Family
 - Acceptance of the society
 - Education and information
 - Financial and legal assistance
- 4. How do the selected individuals diagnosed with HIV cope with social struggles?
 - Through support systems, e.g., family, peers, and government
 - Educating others about HIV
 - Counselling and treatment
 - Empowerment of PLHIV in overcoming the barriers of society

- Resources accessibility, e.g., healthcare services, financial assistance program, legal support, and community organizations and NGO that helps reduce stress.
- Establishing limits in order to make you feel valued and secure, it respects your needs and desires.
- Social services and programs of DSWD and MSWD, e.g., employment assistance, case management

DISCUSSIONS

There are highlighted questions 4, 15, 16, 18, and 19 that represent the indicators on stigma, prejudice, and social struggles.

Question 4. Talking about your religion, how do you feel about it? Does your religion have a huge impact on your situation right now that you have HIV? 3 out of 5 of the respondents, equivalent to 60% said that their religion had a huge impact on their situation, whereas 2 out of 5 respondents, equivalent to 40% said that their religion did not impact them as being diagnosed with HIV. Therefore, the respondents' situations and conditions are determined by the influence of religion. Religion plays a crucial role; it has a negative effect if it is too strict or too shallow.

Question 15. Having been diagnosed with HIV, do you feel that social structure and social institutions provided you support and collaborate with your relationship to you family, peers and community/neighborhood? 4 out of respondent or 80% of the respondents felt and experienced that they were supported by a support group, whereas 20% of the respondent or 1 out of 5 had a negative experienced with social support where the respondent did not receive any assistance from social support. Therefore, the social support has a major role in how the respondents will respond to the social stigma, and those who are deprived of support because of some other external factors.

Question 16. How do you feel about the opinions of your relatives, family members, and neighbors regarding your condition of having been diagnosed with HIV? 80% or 4 out of 5 respondents are okay with the opinions of others, regardless of what it is, and will not be affected by unsolicited comments, whereas 1 out of 5 or 20% of the respondents will be affected by the opinions of others. Therefore, social support groups have a great impact on how respondents diagnosed with HIV face social struggles.

Question 18. Do you think that people who are active in sex and have been into sex should be tested for HIV? 5 out of 5 or 100% of the respondents said that people who are engaging in sexual contact should be tested. Therefore, being aware of your situation empowers you to make decisions that will maintain the health of both you and your partners. You can receive medications, extend your life, and have a healthy life if you are HIV positive.

Question 19. How did you cope with the struggles of having been diagnosed with HIV? 100% or 5 out of 5 respondents coped with their struggles through optimism or having a positive outlook. Therefore, having a social support group, such as friends, families, and other forms of social support groups makes the respondents feel that they belong to a community that loves them, cares for them, and values them, which helps the respondents to overcome setbacks, be able to solve problems, allows them to improve self-esteem, and even manage their psychosocial problems. These supports may be tangible or intangible.

CONCLUSION

The researchers have arrived at the following results regarding the familial background of individuals diagnosed with HIV, based on the theories of structural functionalism and symbolic interactionism. Symbolic Interactionism of the status of the Familial Background of Individuals who are 98 Diagnosed with HIV will be present at all times, and they were stereotyped. Therefore, both society and the respondents interpret their knowledge about HIV in their personal experiences.

We discovered that some people do not receive social support from social institutions. As a result, the social institution does not offer enough chances for people with HIV diagnoses to interact and get support. The respondents' descriptions of their circumstances and experiences focused solely on isolation and discrimination. Consequently, the respondents were reluctant to discuss their status.

About their behavior toward society, restrictions and limitations have been added to the structural functional significance of a person's family history who has been diagnosed with HIV. Due to the stigma attached to HIV, those who have been diagnosed with it choose not to acknowledge their situation. Social support from the Philippine government in terms of free access to medical and psychosocial care is low. Society as a whole has very little knowledge of HIV. The interventions made by family members, friends, and institutions of social support have strengthened those who have been diagnosed with HIV despite the low levels of awareness and acceptance of people with HIV. The respondents' internalized stigma, social issues, stigma, and the negative symbolic meaning of HIV are thereby protected by enhanced social support.

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The Impact of Service Quality on Customer Loyalty

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Service Quality; Customer Retention; Empathy; Coffee Shops; Customer Satisfaction

ABSTRACT

This research explores how quality of service affects customer loyalty in the coffee shops located in Poblacion, Tagoloan, Misamis Oriental. As coffee shops gain more popularity and face tougher competition, customer loyalty has become a crucial factor for business survival. This study focuses on five key aspects of service quality: tangibility, reliability, responsiveness, assurance, and empathy. Using a descriptive-quantitative research design, the researchers gathered data from 344 regular customers across five selected coffee shops in the area. Respondents were selected through stratified random sampling, and data were collected using a well-organized questionnaire. Results were examined using weighted mean, Pearson correlation, and multiple regression analysis. The findings revealed that all five dimensions of service quality were rated as highly influential by customers. Among them, empathy had the strongest impact on customer loyalty, followed by assurance. This means that customers are more likely to remain loyal when they feel genuinely cared for and when they trust the individuals providing them with service. Although tangibility was rated the lowest among the five dimensions, it still contributed positively to the customer experience. The study also found a strong positive correlation between overall service quality and customer loyalty. This proves that when service is consistently excellent, customer loyalty is strengthened. The researchers recommend that coffee shop owners and employees focus on improving customer interactions, especially through empathetic and trustworthy service. Personalized service, continuous staff training, and the implementation of loyalty programs may help increase customer retention and business growth. Future research may investigate additional factors that could impact consumer behavior, such as pricing, convenience, or product quality.

INTRODUCTION

Customer loyalty plays a significant role in sustaining business operations, particularly in highly competitive industries such as the coffee shop sector. Establishing loyal customer relationships ensures repeated patronage and contributes to long-term profitability. One of the primary factors that influences customer loyalty is service quality, which encompasses the overall customer experience during service encounters. The SERVQUAL model developed by Parasuraman, Zeithaml, and Berry (1988) identifies five critical dimensions of service quality: tangibility, reliability, responsiveness, assurance, and empathy. These dimensions are considered essential indicators of how customers evaluate service performance. According to Oliver (1999), customer satisfaction, derived from perceived service quality, significantly contributes to the development of loyalty.

Recent studies support the notion that interpersonal interactions influence customer retention. For instance, Yeong et al. (2022) emphasized that empathy and assurance significantly affect customer trust and loyalty in the hospitality industry. Bove (2019) also found that emotionally intelligent service staff enhance customer satisfaction and foster lasting loyalty. Furthermore, Dokcen et al. (2021) highlighted the role of tangibility, such as a clean and organized

environment, in creating a favorable impression and increasing customer commitment. Anchored in the SERVQUAL framework and Oliver's Satisfaction—Loyalty Theory, this study aims to assess the relationship between service quality and customer loyalty among selected customers of coffee shops in Poblacion, Tagoloan, Misamis Oriental. By identifying which dimensions of service quality most significantly influence loyalty, the study seeks to provide relevant insights for business owners, service personnel, and future researchers.

MATERIALS AND METHODS

The researchers employed a descriptive-quantitative research design. A total of 344 regular coffee shop customers from five different establishments in Poblacion, Tagoloan, were selected using stratified random sampling. Data were collected via a structured survey questionnaire, validated and tested for reliability (Cronbach's alpha ≥ 0.90 across all scales). The instrument assessed five dimensions of service quality and measured customer loyalty. Data analysis involved weighted mean, Pearson correlation, and multiple linear regression to determine relationships and significant predictors of customer loyalty.

RESULTS AND DISCUSSION

- 1. How do respondents assess service quality in terms of:
 - 1.1 Tangibility;
 - 1.2 Reliability;
 - 1.3 Responsiveness;
 - 1.4 Assurance; and
 - 1.5 Empathy?

Table 1. Respondents Assess Service Quality in Terms of Tangibility

Indicators	Mean	SD	Description	Interpretation
I like how clean the coffee shop is.	3.163	1.050	Agree	Moderately Influential
I find the coffee shop aesthetically pleasing.	3.183	0.933	Agree	Moderately Influential
I am satisfied with how well the furniture is maintained.	2.969	1.126	Agree	Moderately Influential
I admire how presentable the staff looks.	3.220	0.923	Agree	Moderately Influential
I find the lighting inside the coffee shop comfortable.	3.176	0.909	Agree	Moderately Influential
I enjoy the feel of the coffee shop's cups.	3.414	0.669	Strongly Agree	Highly Influential
I like how well-arranged the decorations are in the coffee shop.	3.353	0.668	Strongly Agree	Highly Influential
I feel comfortable with the layout of the coffee shop.	3.217	0.719	Agree	Moderately Influential
The service-related materials (e.g., posters, booklets) are visually appealing.	3.203	0.820	Agree	Moderately Influential
I find the overall cleanliness of the coffee shop impressive.	3.278	0.736	Strongly Agree	Highly Influential
AVERAGE MEAN	3.218	0.855	Agree	Moderately Influential
Lagand: 1.00 1.75 Strongly Disagrae (Not I	nfluontial)	1 76 2	Disagraga (Lass	Influential) 251 2 25 Agree

Legend: 1.00-1.75 Strongly Disagree (Not Influential), 1.76-2.50 Disagree (Less Influential), 2.51-3.25 Agree (Moderately Influential), 3.26-4.00 Strongly Agree (Highly Influential)

Table 1 shows the respondents' assessment of service quality regarding Tangibility within the coffee shop. The data revealed an average mean of 3.218 with a standard deviation of 0.855, which was described as "Agree" and interpreted as "Moderately Influential." The top-ranked statement reads, "I enjoy the feel of the coffee shop's cups" (Mean = 3.414, SD = 0.669), which was marked as "Strongly Agree," signifying a major impact. Meanwhile, the lowest-rated

indicator is "I am satisfied with how well the furniture is maintained" (Mean = 2.969, SD = 1.126), described as "Agree" but interpreted as "Moderately Influential."

The researchers interpreted the results on tangibility as an indication that customers were generally pleased with the physical environment of the coffee shops. However, the lower score on furniture maintenance suggested that physical appearance, while important, was secondary to other service elements. The researchers asserted that tangibility played a foundational role in shaping first impressions and influencing customers' satisfaction. While the physical environment received moderate ratings overall, the results highlighted a need to enhance maintenance and design aspects to elevate customer perception further.

Table 2. Respondents Assess Service Quality in Terms of Reliability

Indicators	Mean	SD	Description	Interpretation
I can rely on the coffee shop to provide consistent service.	3.53	0.60	Strongly Agree	Highly Influential
I trust the staff to be knowledgeable about the products.	3.47	0.62	Strongly Agree	Highly Influential
I always receive high-quality coffee from the coffee shop.	3.42	0.67	Strongly Agree	Highly Influential
I believe the coffee shop maintains proper records.	3.43	0.62	Strongly Agree	Highly Influential
I trust the coffee shop to provide accurate information.	3.40	0.67	Strongly Agree	Highly Influential
I can rely on the coffee shop to serve my order within a reasonable time.	3.40	0.66	Strongly Agree	Highly Influential
I received my order exactly as requested.	3.44	0.61	Strongly Agree	Highly Influential
I experience the same level of service regardless of which staff member assists me.	3.39	0.68	Strongly Agree	Highly Influential
I trust the coffee shop to deliver on its promises.	3.41	0.60	Strongly Agree	Highly Influential
I expect my favorite drink to taste the same every time.	3.43	0.67	Strongly Agree	Highly Influential
AVERAGE MEAN	3.43	0.64	Strongly Agree	Highly Influential

Legend: 1.00-1.75 Strongly Disagree (Not Influential), 1.76-2.50 Disagree (Less Influential), 2.51-3.25 Agree (Moderately Influential), 3.26-4.00 Strongly Agree (Highly Influential)

The data in Table 2 show the respondents' assessments of service quality regarding reliability in the coffee shop. The data revealed an average mean of 3.43 with a standard deviation of 0.64, which was described as "Strongly Agree" and interpreted as "Highly Influential." The highest-rated indicator was "I can rely on the coffee shop to provide consistent service" (Mean = 3.53, SD = 0.60), described as "Strongly Agree" and interpreted as "Highly Influential." Additionally, the lowest-rated indicator was "I experience the same level of service regardless of which staff member assists me" (Mean = 3.39, SD = 0.68), still described as "Strongly Agree" and interpreted as "Highly Influential." This indicated that while customers generally trusted the coffee shop's service reliability, there were slight variations in the quality of service offered by various staff members.

The researchers emphasized that reliability was a vital service quality dimension that cultivated customer trust. Therefore, reliability strengthened the business's reputation, which was vital for sustained loyalty.

Table 3 shows the respondents' assessment concerning service quality in relation to Responsiveness within the coffee shop. The data revealed an average mean of 3.41 with a standard deviation of 0.64, which was considered "strongly agree" and interpreted as interpreted as "highly influential." These findings suggested that customers perceived the coffee shop's staff as highly responsive, emphasizing their attentiveness, promptness, and

willingness to assist. The highest-rated indicator is "I receive prompt responses when I make a request" (Mean = 3.48, SD = 0.58), described as "strongly agree" and interpreted as "highly influential." This suggested that customers valued the efficiency of the staff in addressing their requests, reinforcing their trust in the service provided. Research by Lovelock and Wirtz (2021) highlighted that quick response times enhanced customer perceptions of service quality and contributed to the overall experience.

Table 3. Respondents Assess Service Quality in Terms of Responsiveness

Indicators	Mean	SD	Description	Interpretation
I receive prompt responses when I make a request.	3.48	0.58	Strongly Agree	Highly Influential
I feel that staff members pay attention to my needs.	3.39	0.65	Strongly Agree	Highly Influential
I experience staff members making an extra effort to assist me.	3.36	0.63	Strongly Agree	Highly Influential
I receive timely updates from staff when I ask about new menu items, special offers, or service changes.	3.40	0.65	Strongly Agree	Highly Influential
When I ask questions or share concerns, staff take the time to respond, even when they are busy.	3.39	0.67	Strongly Agree	Highly Influential
When I need assistance, staff respond in a way that makes me feel they genuinely enjoy helping me.	3.44	0.62	Strongly Agree	Highly Influential
When I inquire about product availability, staff provide an answer without delay.	3.38	0.66	Strongly Agree	Highly Influential
I can rely on staff to address my service requests without unnecessary waiting.	3.42	0.63	Strongly Agree	Highly Influential
I receive quick responses from staff whenever I need information.	3.46	0.65	Strongly Agree	Highly Influential
I get a timely response from staff regardless of how I contact them.	3.33	0.63	Strongly Agree	Highly Influential
AVERAGE MEAN	3.41	0.64	Strongly Agree	Highly Influential

Legend: 1.00-1.75 Strongly Disagree (Not Influential), 1.76-2.50 Disagree (Less Influential), 2.51-3.25 Agree (Moderately Influential), 3.26-4.00 Strongly Agree (Highly Influential)

Moreover, the lowest-rated indicator was "I get a timely response from staff regardless of how I contact them" (Mean = 3.33, SD = 0.63), still described as "strongly agree" and interpreted as "highly influential." This suggested that while customers generally appreciated the staff's responsiveness, there were slight inconsistencies in response time depending on the mode of communication used. According to Wu et al. (2019), seamless and efficient communication across multiple customer touchpoints was essential for maintaining high service satisfaction levels.

The researchers recognized that responsiveness significantly contributed to customer satisfaction by ensuring that services were delivered promptly and attentively. The data suggested that customers appreciated the speed and enthusiasm shown by staff in addressing their needs. However, the researchers acknowledged that slight inconsistencies in communication may have affected perceived responsiveness.

The data in Table 4 shows the respondents' assessment of service quality in relation to Assurance within the coffee shop. The data revealed an average mean of 3.40 with a standard deviation of 0.66, which was described as "strongly agree" and interpreted as "highly influential." These findings indicated that customers have a significant level of trust and confidence in the coffee shop's services, environment, and staff.

The highest-rated indicator was "I trust the coffee shop to provide a safe environment" (Mean = 3.56, SD = 0.60), identified as "Strongly Agree" and assessed as "Highly Influential." While, the lowest-rated indicator was "The coffee shop genuinely cares about my experience" (Mean = 3.30, SD = 0.75), still described as "strongly agree" and interpreted as "highly influential."

This indicated that while customers generally felt valued, there was always a room for improvement in personalized service and customer engagement.

Table 4. Respondents Assess Service Quality in Terms of Assurance

Indicators	Mean	SD	Description	Interpretation
I trust the coffee shop to provide a safe environment.	3.56	0.60	Strongly Agree	Highly Influential
I feel confident in the quality of their products.	3.47	0.60	Strongly Agree	Highly Influential
The coffee shop is committed to providing excellent service.	3.46	0.59	Strongly Agree	Highly Influential
The coffee shop genuinely cares about my experience.	3.30	0.75	Strongly Agree	Highly Influential
The staff are trustworthy.	3.41	0.63	Strongly Agree	Highly Influential
The staff members are courteous to the customer.	3.37	0.70	Strongly Agree	Highly Influential
The staff gave the customers confidence.	3.38	0.67	Strongly Agree	Highly Influential
The staff members are well-trained.	3.35	0.67	Strongly Agree	Highly Influential
I feel secure using the services offered by the coffee shop.	3.39	0.68	Strongly Agree	Highly Influential
I would recommend this coffee shop to others.	3.35	0.74	Strongly Agree	Highly Influential
AVERAGE MEAN	3.40	0.66	Strongly Agree	Highly Influential

Legend: 1.00-1.75 Strongly Disagree (Not Influential), 1.76-2.50 Disagree (Less Influential), 2.51-3.25 Agree (Moderately Influential), 3.26-4.00 Strongly Agree (Highly Influential)

The researchers interpreted the high assurance scores as a strong indicator of customer confidence in the coffee shop's staff and services. The results suggested that assurance not only builds trust but also enhances emotional attachment to the brand.

Table 5. Respondents Assess Service Quality in terms of Empathy

Indicators	Mean	SD	Description	Interpretation
The staff members show genuine concern for my needs.	3.56	0.64	Strongly Agree	Highly Influential
The staff members are friendly.	3.49	0.62	Strongly Agree	Highly Influential
The staff truly gets what I need.	3.57	0.59	Strongly Agree	Highly Influential
The staff goes above and beyond to make me happy.	3.49	0.63	Strongly Agree	Highly Influential
The staff are attentive to my unique needs.	3.41	0.61	Strongly Agree	Highly Influential
I feel like I'm the only guest that matters.	3.33	0.63	Strongly Agree	Highly Influential
The staff members are always eager to assist.	3.43	0.66	Strongly Agree	Highly Influential
I feel completely at ease in this coffee shop.	3.48	0.63	Strongly Agree	Highly Influential
Staff members make me feel valued as a customer.	3.47	0.60	Strongly Agree	Highly Influential
Staff members are aware of my feelings.	3.35	0.73	Strongly Agree	Highly Influential
AVERAGE MEAN	3.46	0.63	Strongly Agree	Highly Influential

Legend: 1.00-1.75 Strongly Disagree (Not Influential), 1.76-2.50 Disagree (Less Influential), 2.51-3.25 Agree (Moderately Influential), 3.26-4.00 Strongly Agree (Highly Influential)

Table 5 presents the respondents' assessment of service quality in terms of Empathy within the coffee shop. The data reveals an average mean of 3.46 with a standard deviation of 0.63, which is described as "Strongly Agree" and interpreted as "Highly Influential." The highest-rated indicator is "The staff truly gets what I need" (Mean = 3.57, SD = 0.59), described as "Strongly Agree" and interpreted as "Highly Influential." Furthermore, the lowest-rated indicator is "I

feel like I'm the only guest that matters" (Mean = 3.33, SD = 0.63), still described as "Strongly Agree" and interpreted as "Highly Influential." This suggests that while customers generally feel valued, there may be opportunities for the coffee shop to enhance personalization and one-on-one engagement.

The researchers emphasize that empathy is the most critical driver of customer loyalty. This finding underscores the importance of cultivating a customer-centric culture that prioritizes authentic, empathetic interaction. Coffee shop owners should integrate empathy into their service philosophy to create more meaningful customer experiences.

2. What is the level of customer loyalty in coffee shops?

Table 6. Level of Customer Loyalty in Coffee Shop

Indicators Mean SD Description	Interpretation
I frequently visit this coffee shop because I am satisfied with the quality of service. 3.54 O.59 Strongly Agree	Highly Influential
I intend to repurchase from this coffee shop. 3.45 0.60 Strongly Agree	Highly Influential
It is likely that I will choose this coffee shop again in the future. 3.38 0.67 Strongly Agree	Highly Influential
This coffee shop is my first choice when I want to buy coffee. 3.36 0.70 Strongly Agree	Highly Influential
I would continue buying from this coffee shop even if another shop offered a similar product. 3.43 0.62 Strongly Agree	Highly Influential
I find that this coffee shop meets my expectations on each visit. 3.47 0.59 Strongly Agree	Highly Influential
I feel confident that I will buy from this coffee shop regularly. 3.40 0.66 Strongly Agree	Highly Influential
This coffee shop offers enough value for money to keep me coming back. 3.45 0.61 Strongly Agree	Highly Influential
I am likely to buy from this coffee shop even if prices increase slightly. 3.38 0.66 Strongly Agree	Highly Influential
I choose this coffee shop over others because of its reliability. 3.37 0.60 Strongly Agree	Highly Influential
I am very likely to recommend this coffee shop to others. 3.43 0.68 Strongly Agree	Highly Influential
I feel emotionally connected to this coffee shop's brand. 3.35 0.72 Strongly Agree	Highly Influential
I would feel disappointed if this coffee shop were no longer in business. 3.37 0.70 Strongly Agree	Highly Influential
I am likely to leave a positive review about this coffee shop online. 3.41 0.65 Strongly Agree	Highly Influential
I trust that this coffee shop understands my preferences. 3.43 0.63 Strongly Agree	Highly Influential
I consider myself loyal to this coffee shop over other options. 3.39 0.66 Strongly Agree	Highly Influential
I am satisfied with the overall experience provided by this coffee shop. 3.48 0.62 Strongly Agree	Highly Influential
I would rate my loyalty to this coffee shop as high. 3.38 0.65 Strongly Agree	Highly Influential
I prefer this coffee shop over other similar coffee shops. 3.40 0.67 Strongly Agree	Highly Influential
I would participate in a loyalty or rewards program if offered by this coffee shop. 3.40 0.66 Strongly Agree	Highly Influential
	Highly Influential

Legend: 1.00-1.75 Strongly Disagree (Not Influential), 1.76-2.50 Disagree (Less Influential), 2.51-3.25 Agree (Moderately Influential), 3.26-4.00 Strongly Agree (Highly Influential)

Table 6 presents the respondents' assessment of their Level of Customer Loyalty toward the coffee shop. The data reveals an average mean of 3.41 with a standard deviation of 0.65, which

is described as "Strongly Agree" and interpreted as "Highly Influential." These findings suggest that customers demonstrate strong loyalty to the coffee shop, frequently returning due to their satisfaction with service quality, product reliability, and brand trust.

The highest-rated indicator is "I frequently visit this coffee shop because I am satisfied with the quality of service" (Mean = 3.54, SD = 0.59), described as "Strongly Agree" and interpreted as "Highly Influential." This suggests that customers' loyalty is primarily driven by the consistent and high-quality service they receive. Whereas, the lowest-rated indicator is "I feel emotionally connected to this coffee shop's brand" (Mean = 3.35, SD = 0.72), still described as "Strongly Agree" and interpreted as "Highly Influential."

The researchers recognize the high levels of customer loyalty observed, though they note that strengthening the emotional brand connection could further enhance loyalty. This insight is corroborated by the study of Wahyudin and Hadiyati (2023), who found that customer satisfaction significantly impacts loyalty, and that enhancing perceived service quality and value can lead to stronger customer commitment.

3. Is there a significant relationship between the level of service quality and customer loyalty in coffee shops?

Table 7. The Test of Significant Relationship Between Level of Service Quality and Customer Loyalty in Coffee Shop

_		Customer Loyalty	
	r-value	p-value	Decision on Ho
Service Quality	.691	.000	Rejected

Significant if P-value <0.05 Legend: Ho is rejected if Significant Ho is accepted if Not Significant

Table 7 presents the test of a significant relationship between Service Quality and Customer Loyalty in coffee shops. The computed r-value of 0.691 indicates a strong positive correlation between the two variables. This suggests that as service quality improves, customer loyalty also increases. The p-value of 0.000, which is less than the standard significance level of 0.05, confirms that the relationship is statistically significant. As a result, the null hypothesis (Ho) is rejected, indicating that service quality has a significant influence on customer loyalty. These findings align with previous research emphasizing the crucial role of service quality in fostering customer retention and brand loyalty.

The strong correlation between service quality and customer loyalty highlights the importance of continuous improvement in customer service strategies. Coffee shop owners and managers should focus on maintaining cleanliness, ensuring prompt service, and enhancing staff professionalism to reinforce positive customer experiences. Moreover, implementing customer engagement initiatives, such as loyalty programs and personalized service, could further strengthen brand commitment and long-term patronage.

The researchers conclude that the statistically significant positive correlation between service quality and customer loyalty validates the study's central hypothesis. This relationship confirms that strategic improvements in service quality directly impact customer retention. Consequently, continuous evaluation and enhancement of service delivery should be a key managerial priority to sustain and strengthen customer loyalty over time.

4. Which among the service quality dimensions highly impacts customers' loyalty?

Responsiveness

Assurance

Empathy

.014

.302

.394

Highly Affects Customer's Loyalty						
Predictors		dardized ficients	Stand Coeff	F-value	p-value	Decision on Ho
	В	SE				
(Constant)	.257	0.151		1.701	0.000	_
Tangibility	.058	0.033	0.074	1.767	0.000	Significant
Reliability	.145	0.054	0.140	2.680	0.000	Significant

0.015

0.305

0.404

.262

5.660

7.912

0.000

0.000

0.000

Significant

Significant

Significant

Table 8. The Test of Regression among Service Quality Dimensions on Coffee Shop Highly Affects Customer's Loyalty

Significant if P-value < 0.05

0.055

0.53

0.50

Note: Adjusted R2= 0.619 ANOVA for Regression: F = 96.490, p = .00

Table 8 presents the results of a regression analysis examining the impact of various service quality dimensions on customer loyalty in coffee shops. The F-value of 96.490 and the p-value of 0.000 indicate that the overall regression model is statistically significant, confirming that the combined influence of tangibility, reliability, responsiveness, assurance, and empathy meaningfully contributes to variations in customer loyalty. The Adjusted R² value of 0.619 suggests that approximately 61.9% of the variance in customer loyalty can be explained by these five dimensions of service quality. The regression coefficients show that all five factors significantly influence customer loyalty, as evidenced by their p-values all being below the 0.05 threshold.

Among them, Empathy (B = 0.394, p = 0.000) emerged as the most influential factor, implying that customers are more likely to remain loyal when they perceive staff to be caring, attentive, and understanding of their individual needs. This emphasizes the emotional bond between customers and service providers. Assurance (B = 0.302, p = 0.000) followed closely, highlighting that trust and confidence in service personnel play a crucial role in reinforcing customer loyalty. Reliability (B = 0.145, p = 0.000) and Tangibility (B = 0.058, p = 0.000) also showed significant effects, though comparatively smaller, indicating that consistent service performance and a well-maintained physical environment still contribute positively to loyalty. Responsiveness (B = 0.014, p = 0.000) had the smallest but still significant impact, suggesting that timely service, while essential, may be less impactful than emotional connection and trust. These findings are consistent with recent literature emphasizing the dominant role of interpersonal service elements in influencing customer loyalty.

The regression analysis demonstrates that empathy and assurance are the most critical dimensions of service quality in driving customer loyalty. These results highlight the value of emotionally intelligent service and trust-based interactions in the coffee shop setting. Based on these findings, the researchers assert that prioritizing employee competencies in empathy, sincerity, and customer care—alongside ensuring reliable and presentable service environments—can effectively foster long-term loyalty. Enhancing these human-centered service dimensions should be regarded as a strategic focus for sustainable customer relationship management.

Exhaustive Discussion

The study investigated the relationship between service quality and customer loyalty among regular coffee shop customers in Poblacion, Tagoloan. The findings showed that service quality dimensions, particularly empathy and assurance, play a significant role in influencing customer loyalty. Customers expressed greater loyalty when they felt understood, respected, and

professionally treated. Tangibility, while still relevant, was found to have the least influence on loyalty. This suggests that customers do not base their loyalty on visual appeal alone but on how the service makes them feel.

The statistical analysis confirmed a strong positive relationship between overall service quality and loyalty, which is consistent with existing theories and research. These findings support the idea that quality service creates lasting customer relationships, which are crucial in today's competitive marketplace.

Coffee shop owners are encouraged to invest in staff training programs that emphasize customer empathy and assurance. Service personnel should be skilled in communicating with customers, solving problems effectively, and creating a warm and welcoming environment. These strategies are essential in achieving customer satisfaction and loyalty.

CONCLUSION

The study concludes that there is a significant relationship between service quality and customer loyalty. Empathy and assurance were identified as the most influential service quality dimensions, while tangibility had the least effect. The study highlights that the emotional and interpersonal aspects of service are critical in developing customer loyalty. The results also confirmed that as service quality improved, customer loyalty increased. A clean and visually appealing environment, reliable service, and responsive staff contributed to a positive customer experience. Coffee shops prioritizing continuous improvement in these areas were more likely to retain their customers despite competition.

Therefore, the level of service provided played a key role in influencing customer loyalty in coffee shops. Businesses that invested in improving customer experience—enhancing staff training, ensuring service consistency, and fostering meaningful interactions—were able to build lasting relationships with their customers. By prioritizing empathy, assurance, and overall service excellence, coffee shops created a loyal customer base, increased personal endorsements, and secured enduring accomplishments within a highly contested industry landscape.

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The Influence of Resilience Skills Towards Entrepreneurial Success

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ABSTRACT

Entrepreneurship is a challenging pursuit that requires tenacity and resilience to navigate the unpredictable business environment. This study examines the influence of resilience skills on entrepreneurial success, specifically in Poblacion, Tagoloan, Misamis Oriental. Resilience skills, including selfawareness, emotional regulation, problem-solving, and adaptability, are essential for entrepreneurs to manage challenges and ensure business sustainability. The study employed a descriptive research design with 100 micro-entrepreneurs across various sectors, selected using purposive heterogeneous sampling. Data were collected through a structured survey and analyzed using descriptive statistics, ANOVA, and Pearson's correlation coefficient. Results indicate a significant positive relationship between resilience skills and entrepreneurial success, with self-awareness and adaptability being the most influential skills. Emotional regulation showed a less direct impact on success, suggesting that while valuable, it requires complementary skills. The study emphasizes the importance of resilience in strategic decision-making, stress management, and market adaptability. These findings support the need for resilience training and mentorship programs to enhance entrepreneurial capabilities. However, the study is limited to microentrepreneurs in Poblacion, Tagoloan, and excludes data from larger corporations or regulated sectors. Future research could expand the scope to explore resilience in different business environments and industries. The study's results contribute to the development of more resilient entrepreneurial ecosystems, offering insights for entrepreneurs, business educators, and policymakers. Promoting resilience through training programs can better prepare entrepreneurs for long-term success, fostering more sustainable and innovative business practices in underserved communities. Additionally, it will improve their capacity to handle external pressures effectively, enhancing their business adaptability and overall resilience.

INTRODUCTION

Entrepreneurship is often regarded as a challenging yet rewarding journey that requires resilience, creativity, and the ability to thrive amid uncertainty (Duchek, 2017). In this dynamic business environment, entrepreneurial resilience has become a crucial factor in determining the long-term success and sustainability of new ventures. Resilience is the ability of an entrepreneur to recover from setbacks and continue striving towards success, even when faced with significant adversities. Without resilience, entrepreneurial sustainability is unattainable, as entrepreneurs must face challenges such as financial crises, competition, and constant changes in the market. Research has shown that entrepreneurs frequently experience stress and pressure, from unpredictable market conditions to balancing personal and professional lives (Ahmed et al., 2022).

For small business owners, particularly those in micro-enterprises, resilience is an essential skill to survive difficult times such as financial stress, fierce competition, and shifting customer needs. However, many entrepreneurs lack the skills or preparation to handle these challenges, leading to business failure. In areas like Poblacion, Tagoloan, where entrepreneurs may not be adequately equipped to navigate these hurdles, there is a clear gap in entrepreneurial training. This gap calls for integrating resilience-building practices into educational and community programs to better prepare entrepreneurs for long-term success.

Resilience Theory, proposed by Garmezy (1974) and Rutter (1985), explains how individuals adapt to adversity through growth and proactive actions rather than just endurance. Unfortunately, resilience is not typically taught in schools, leaving entrepreneurs unprepared for the challenges of managing a business. This study aims to address this gap by exploring the influence of resilience on entrepreneurial success, specifically focusing on key resilience skills such as self-awareness, emotional regulation, problem-solving, and adaptability. These skills are critical in ensuring the long-term sustainability of small businesses, particularly in areas like Poblacion, Tagoloan.

The research objectives are as follows:

- 1. To examine the demographic profile of the respondents, including their age, gender, educational level, years of entrepreneurial experience, and type of business.
- 2. To assess the extent to which resilience skills—self-awareness, emotional regulation, problem-solving, and adaptability—contribute to entrepreneurial success.
- 3. To evaluate the level of entrepreneurial success in terms of long-term sustainability.
- 4. To investigate the relationship between the demographic profile and entrepreneurial success.
- 5. To analyze the relationship between resilience skills and entrepreneurial success.
- 6. To determine which resilience skill most significantly influences entrepreneurial success.

By addressing these questions, the study aims to provide valuable insights into how resilience can be cultivated and applied to enhance the outcomes of small businesses, particularly in local and underserved communities. The findings will offer practical recommendations for integrating resilience training into entrepreneurship education and community support programs, ensuring that entrepreneurs are better equipped to face adversity and sustain their ventures. This research seeks to emphasize the importance of resilience in ensuring the sustainability of small businesses, particularly in regions like Poblacion, Tagoloan, where entrepreneurial success can be significantly improved through resilience-building strategies.

MATERIALS AND METHODS

This study employed a descriptive research design, which was deemed appropriate for assessing the significance of resilience skills in relation to entrepreneurial success. The descriptive design allowed for an in-depth analysis of the current state of resilience skills among entrepreneurs and their impact on business sustainability. The aim was to gain a comprehensive understanding of how resilience skills contribute to entrepreneurial outcomes.

The participants consisted of 100 micro-entrepreneurs from Poblacion, Tagoloan, Misamis Oriental, who own microenterprises across various sectors, including agriculture, services, retail, and other industries relevant to the local economy. These participants were selected using purposive heterogeneous sampling to ensure a diverse range of entrepreneurial experiences and

backgrounds, providing a broad representation of entrepreneurs operating under different conditions.

A structured survey was developed for data collection, measuring the various dimensions of resilience skills and entrepreneurial success. The research instrument was designed to ensure both content validity and theoretical rigor, with each section derived from key studies in resilience and entrepreneurship. Self-awareness (Items A1–A10) was adapted from Park, Kim, and Lee's study on leadership effectiveness, emphasizing the role of self-perception in decision-making. Emotional regulation (Items B11–B20) was based on Mayo et al.'s work, identifying emotional regulation as a predictor of entrepreneurial success. Problem-solving skills (Items C21–C30) were derived from Ayala et al.'s study on cognitive resilience and opportunity recognition. Adaptability (Items D31–D40) was informed by Rawal et al.'s article on entrepreneurship and adaptability, exploring strategies to navigate uncertainty and change. Long-term sustainability (Items E41–E50) was based on Iloanya et al.'s research on resilience and business longevity. Finally, increased productivity and engagement (Items F51–F60) were adapted from Megele et al.'s study on resilience, fostering sustained workplace performance.

Data analysis techniques included descriptive statistics, with frequency counts and percentage distributions used to determine the demographic profile of the participants. The mean and standard deviation were calculated to evaluate the levels of resilience skills and entrepreneurial success. To examine significant differences in long-term sustainability based on varying levels of resilience skills, Analysis of Variance (ANOVA) was applied. Additionally, Pearson Product-Moment Correlation Coefficient was used to assess the relationship between resilience skills and entrepreneurial success, providing insights into how closely related the skills are to sustainable business outcomes.

RESULTS AND DISCUSSION

- 1. What is the profile of the respondent in terms of:
 - 1.1 Age;
 - 1.2 Gender;
 - 1.3 Educational Level;
 - 1.4 Years of Entrepreneurial Experience; and
 - 1.5 Type of Business?

Table 1. Frequency and Percentage Distribution of the Respondents' Profiles in terms of Age

Age	Frequency	Percentage
18-25	11	11%
26-35	15	15%
36-40	19	19%
41-50	35	35%
51 and above	20	20%
Total	100	100

Table 1 presents the frequency and percentage distribution of participants based on their age. The largest group consists of 35 respondents (35%) aged 41-50 years. The second largest group includes 20 respondents (20%) who are 51 years or older. Nineteen respondents (19%) fall into the 36-40 age range, while 15 respondents (15%) are aged 26-35 years. The smallest group, aged 18-25 years, consists of 11 respondents, accounting for 11% of the total. The average age of the respondents is approximately 41 years, with the majority of respondents being in their early 40s.

The results indicate a strong presence of entrepreneurs in the 41-50 age group, suggesting that most respondents are experienced in business operations. The underrepresentation of younger entrepreneurs (18-25 years) may point to challenges related to resilience development at an early stage of their entrepreneurial journey. According to Iloanya (2021), younger entrepreneurs often lack access to established support networks, which can hinder their ability to build resilience for long-term success. The findings align with previous research by Forbes (2022), which suggests that older entrepreneurs are generally more resilient and able to adapt to market changes, likely due to their accumulated experience. Therefore, younger entrepreneurs could benefit from targeted support and mentorship programs aimed at strengthening their resilience and fostering sustainable business growth.

Table 2. Frequency and Percentage Distribution of the Respondents'
Profiles in terms of Sex

Sex	Frequency	Percent
Male	44	44%
Female	56	56%
Total	100	100%

Table 2 presents the frequency and percentage distribution of respondents' sex. The data reveals that 56 respondents (56%) are female, indicating that women make up the majority of the entrepreneurial sample. In contrast, 44 respondents (44%) are male, showing that while men still play a significant role, women have a slightly higher representation in entrepreneurship within this study.

The analysis shows that female entrepreneurs (56%) slightly outnumber male entrepreneurs (44%), reflecting the global trend of increasing female participation in leadership and business ownership. Research by Iloanya (2021) highlights the role of resilience in women's success, enabling them to overcome barriers and thrive. The presence of both male and female entrepreneurs adds diversity, enhancing innovation and decision-making in business, as noted by Smith and Brown (2023). These findings emphasize the growing influence of women in business, promoting gender inclusivity and fostering more sustainable outcomes through diverse perspectives.

Table 3. Frequency and Percentage Distribution of the Respondents'
Profile in terms of Educational Level

Educational Level	Frequency	Percent
Grade School	6	6%
High School	44	44%
College Level & Grad	41	41%
Graduate Studies	9	9%
Total	100	100%

Table 3 presents the frequency and percentage distribution of respondents based on their educational level. The largest group consists of 44 respondents (44%) with a high school education, followed by 41 respondents (41%) who are at the college level or have completed their degrees. Nine respondents (9%) have pursued graduate studies, and six respondents (6%) have only completed grade school. The results suggest that while formal education plays a role in developing useful skills, resilience and experience are key to sustaining a business.

The findings indicate that while formal education, particularly high school and college-level education, is common among entrepreneurs, it is not the sole factor determining success.

Resilience, adaptability, and experience play critical roles in sustaining a business, as emphasized by Zhang et al. (2019), who argue that entrepreneurial success depends on a mix of education, experience, and resilience. The lower percentage of entrepreneurs with only a grade school education highlights the need for support programs that enhance skills such as financial literacy and strategic planning for those with less formal education. Mentorship and continuous skill development are essential for entrepreneurs at all education levels to navigate business challenges and ensure sustainability.

Table 4. Frequency and Percentage Distribution of the Respondents' Profile in Terms of Years of Entrepreneurial Experience

Year of Entrepreneurial Experience	Frequency	Percent
Less than a year	10	10%
1 to 4 years	30	30%
5 to 8 years	28	28%
8 years & above	32	32%
Total	100	100%

Table 4 presents the frequency and percentage distribution of respondents based on their years of entrepreneurial experience. The largest group consists of 32 respondents (32%) with 8 years or more of experience, followed by 30 respondents (30%) with 1 to 4 years of experience. Twenty-eight respondents (28%) have between 5 to 8 years of experience, while 10 respondents (10%) have less than a year of experience. The average entrepreneurial experience among the respondents is approximately 5 to 8 years.

The majority of respondents have moderate to extensive entrepreneurial experience, which aligns with research suggesting that business longevity is closely tied to resilience, strategic decision-making, and adaptability. Entrepreneurs with more experience are likely to have developed coping mechanisms for business challenges, contributing to their long-term sustainability. According to Korber (2021), resilient entrepreneurs learn from past failures, helping them bounce back and pivot strategies effectively. The small percentage of entrepreneurs with less than a year of experience emphasizes the need for support systems that focus on resilience-building, financial management, and strategic planning to help new business owners succeed, as highlighted by Duchek (2021). Mentorship and resilience-focused training are essential for early-stage entrepreneurs to build a foundation for long-term business success.

Table 5. Frequency and Percentage Distribution of the Respondents'
Profile in terms of Type of Business

Type of Business	Frequency	Percent
Merchandise	30	30%
Service Type	70	70%
Total	100	100%

Table 5 presents the frequency and percentage distribution of respondents based on the type of business. The majority of respondents, 70 (70%), are engaged in service-oriented businesses, while 30 respondents (30%) are involved in merchandise businesses. This shows that service-based businesses dominate the entrepreneurial landscape in the study area.

The results suggest that the majority of entrepreneurs operate service-oriented businesses, reflecting a global trend toward flexible, consumer-driven, and low-capital business models. Merchandise businesses also play an important role, underscoring the significance of trade and

retail in entrepreneurship. However, the absence of manufacturing businesses may indicate barriers such as high capital requirements and operational complexities, which could discourage entrepreneurs from entering this sector. As noted by Krach (2022), a diversified entrepreneurial ecosystem, including service, merchandise, and manufacturing industries, is key to ensuring economic stability and job creation. Policies and initiatives should focus on supporting service and merchandise businesses, while gradually encouraging the development of the manufacturing sector through targeted incentives and capacity-building efforts.

2. What is the extent of the resilience skills that help entrepreneurs succeed in terms of?

- 2.1 Self Awareness;
- 2.2 Emotional Regulation;
- 2.3 Problem-Solving Skills; and
- 2.4 Adaptability?

Table 6
The Extent of the Resilience Skills that Help Entrepreneurs Succeed in terms of Self-Awareness

Items	Mean	SD	Description	Interpretation
1. Self-awareness enables entrepreneurs to identify their strengths, weaknesses, and areas for growth, helping them make informed decisions.	3.40	0.43	Agree	Moderately Influential
2. Self-aware entrepreneurs are better equipped to make strategic decisions and foster alignment within their teams, driving business success.	3.26	0.44	Strongly Agree	Highly Influential
3. Being self-aware allows entrepreneurs to remain composed under pressure, helping them manage stress effectively during challenging times.	3.30	0.46	Strongly Agree	Highly Influential
4. Entrepreneurs with high self-awareness are able to build strong relationships, encourage collaboration, and cultivate a positive team environment.	3.34	0.48	Strongly Agree	Highly Influential
5. Self-awareness training is essential for enhancing both business acumen and personal growth, empowering entrepreneurs to perform better.	3.36	0.48	Strongly Agree	Highly Influential
6. Businesses led by self-aware entrepreneurs tend to thrive, as their thoughtful decision-making contributes to improved organizational performance.	3.34	0.48	Strongly Agree	Highly Influential
7. Self-awareness helps create an emotionally intelligent workplace, fostering empathy, open communication, and higher employee engagement.	3.35	0.48	Strongly Agree	Highly Influential
8. Reflective practices driven by self-awareness enable entrepreneurs to adapt to changing conditions, ensuring long-term business sustainability.	3.31	0.46	Strongly Agree	Highly Influential
 Addressing a lack of self-awareness helps entrepreneurs make better decisions, reducing conflicts and preventing potential business failures. 	3.38	0.49	Strongly Agree	Highly Influential
10. Self-awareness strengthens entrepreneurial resilience, allowing entrepreneurs to navigate challenges and setbacks with greater ease.	3.29	0.46	Strongly Agree	Highly Influential
Average	3.32	0.47	Strongly Agree	Highly Influential

Legend: 1.00-1.75 Strongly Disagree (Less Influential), 1.76-2.50 Disagree (Influential), 2.51-3.25 Agree (Moderately Influential), 3.26-4.00 Strongly Agree (Highly Influential)

Table 6 presents the extent of resilience skills that help entrepreneurs succeed in terms of self-awareness. The overall mean score of 3.32, with a standard deviation of 0.47, indicates that self-awareness is considered "Highly Influential" in entrepreneurial success. The highest-rated statement, "Addressing a lack of self-awareness helps entrepreneurs make better decisions, reducing conflicts and preventing potential business failures" (Mean = 3.38, SD = 0.49),

emphasizes the importance of self-awareness in decision-making. The lowest-rated statement, "Self-awareness enables entrepreneurs to identify their strengths, weaknesses, and areas for growth, helping them make informed decisions" (Mean = 3.24, SD = 0.43), suggests that some entrepreneurs may not prioritize self-reflection in their decision-making process.

The analysis reveals that self-awareness plays a crucial role in entrepreneurial success, especially in strategic decision-making, leadership, and adaptability. Entrepreneurs who develop self-awareness are better equipped to understand their strengths and weaknesses, manage challenges, and make informed decisions. The highest-rated item highlights that self-awareness helps reduce business conflicts and improve decision-making, supporting the idea that self-aware entrepreneurs are better able to navigate uncertainties. However, the lowest-rated item suggests that some entrepreneurs may not fully recognize the importance of self-reflection. This aligns with Baumeister et al. (2018), who argue that self-awareness requires continuous effort, and Goleman et al. (2020), who emphasize its role in emotional intelligence, stress management, and relationship-building. These results suggest that entrepreneurial training programs should integrate self-awareness development strategies, such as mentorship and reflective exercises, to improve decision-making and resilience, ultimately contributing to business sustainability.

Table 7
The Extent of the Resilience Skills that Help Entrepreneurs Succeed in terms of Emotional Regulation

Items	Mean	SD	Description	Interpretation
Emotional regulation is crucial for entrepreneurs to maintain focus and composure when facing stressful situations and challenges.	3.30	0.46	Strongly Agree	Highly Influential
2. Entrepreneurs who effectively manage their emotions tend to perform better, make more informed decisions, and maintain productivity even under pressure.	3.30	0.46	Strongly Agree	Highly Influential
3. Including emotional regulation training in entrepreneurship programs equips entrepreneurs with the skills to handle difficulties and uncertainties more effectively.	3.32	0.47	Strongly Agree	Highly Influential
4. The ability to manage emotions enhances decision-making, allowing entrepreneurs to stay calm and think clearly during high-pressure moments.	3.39	0.49	Strongly Agree	Highly Influential
5. Entrepreneurs with strong emotional regulation skills are better equipped to handle stress and uncertainty, contributing to greater resilience.	3.37	0.49	Strongly Agree	Highly Influential
6. Emotional regulation helps entrepreneurs establish positive relationships with key stakeholders, such as investors, customers, and employees, fostering collaboration and trust.	3.40	0.49	Strongly Agree	Highly Influential
7. Struggling with emotional regulation can result in poor performance, negatively affecting leadership, decision-making, and innovation within the business.	3.35	0.48	Strongly Agree	Highly Influential
8. Developing emotional regulation strengthens teamwork, improves conflict resolution, and builds stronger, more cohesive partnerships within the organization.	3.33	0.47	Strongly Agree	Highly Influential
9. Self-awareness plays a critical role in emotional regulation by helping entrepreneurs recognize their emotional triggers and manage their reactions.	3.35	0.48	Strongly Agree	Highly Influential
10. Emotional regulation is a key component of resilience, enabling entrepreneurs to recover from setbacks and continue progressing toward business goals.	3.30	0.46	Strongly Agree	Highly Influential
Average	3.34	0.47	Strongly Agree	Highly Influential

Legend: 1.00-1.75 Strongly Disagree (Less Influential), 1.76-2.50 Disagree (Influential), 2.51-3.25 Agree (Moderately Influential), 3.26-4.00 Strongly Agree (Highly Influential)

Table 7 presents the extent of resilience skills that help entrepreneurs succeed in terms of emotional regulation. The overall mean score of 3.34, with a standard deviation of 0.47, indicates that emotional regulation is considered "Highly Influential" in entrepreneurial success. The highest-rated statement, "Emotional regulation helps entrepreneurs establish positive relationships with key stakeholders, such as investors, customers, and employees, fostering collaboration and trust" (Mean = 3.40, SD = 0.49), emphasizes the importance of emotional control in professional relationships. The lowest-rated statement, "Emotional regulation is crucial for entrepreneurs to maintain focus and composure when facing stressful situations and challenges" (Mean = 3.30, SD = 0.46), suggests that while emotional regulation is recognized as valuable, some entrepreneurs may find it challenging to maintain composure under high pressure.

The findings suggest that emotional regulation plays a key role in entrepreneurial success by helping business owners manage stress, build trust with stakeholders, and make rational decisions. The highest-rated item highlights the role of emotional regulation in fostering positive relationships, which are crucial for business sustainability. Research by Baron & Tang (2021) supports this, noting that emotional regulation improves leadership and negotiation skills. However, the lower rating on the importance of emotional regulation during stressful situations aligns with Cardon et al. (2019), who found that early-stage entrepreneurs often struggle with emotional stability, particularly when facing financial instability and high-risk decisions. These results emphasize the need for entrepreneurship training programs to incorporate stress management techniques, mindfulness practices, and mentorship to strengthen emotional regulation skills and enhance long-term business sustainability.

Table 8
The Extent of the Resilience Skills that Help Entrepreneurs Succeed in terms of Problem-Solving Skills

Items	Mean	SD	Description	Interpretation
1. Resilience strengthens problem-solving by helping entrepreneurs stay focused and persevere through challenges, leading to effective solutions.	3.28	0.45	Strongly Agree	Highly Influential
2. Turning failure into learning opportunities enhances problem-solving skills, which are essential for entrepreneurial success and adaptability.	3.23	0.42	Agree	Moderately Influential
3. Coping resources like resourcefulness and optimism play a crucial role in enhancing problem-solving skills and overcoming business obstacles.	3.18	0.39	Agree	Moderately Influential
4. Resilient entrepreneurs experience fewer negative emotions, allowing them to think more clearly and solve problems more effectively under pressure.	3.16	0.37	Agree	Moderately Influential
5. Resilient entrepreneurs take decisive actions to address problems, ensuring the survival and growth of their ventures even during challenging times.	3.18	0.39	Agree	Moderately Influential
6. Resilience enables entrepreneurs to approach problem- solving with confidence, reducing stress and encouraging effective solutions.	3.22	0.42	Agree	Moderately Influential
7. Emotional regulation improves problem-solving by helping entrepreneurs maintain composure and make better decisions under pressure.	3.25	0.44	Agree	Moderately Influential
8. Entrepreneurs with strong resilience excel in problem- solving, adapting to dynamic business environments and ensuring long-term sustainability.	3.27	0.45	Strongly Agree	Highly Influential
9. Building resilience enhances problem-solving by boosting creativity and productivity, leading to more successful entrepreneurial outcomes.	3.28	0.45	Strongly Agree	Highly Influential

10.Support networks and mentorship contribute to problem-solving by providing both strategic advice and emotional resources to overcome challenges.	3.27	0.45	Strongly Agree	Highly Influential
Average	3.23	0.42	Agree	Moderately Influential

Legend: 1.00-1.75 Strongly Disagree (Less Influential), 1.76-2.50 Disagree (Influential), 2.51-3.25 Agree (Moderately Influential), 3.26-4.00 Strongly Agree (Highly Influential)

Table 8 presents the extent of resilience skills that help entrepreneurs succeed in terms of problem-solving skills. The overall mean score of 3.23, with a standard deviation of 0.42, suggests that problem-solving is considered "Moderately Influential" in entrepreneurial success. The highest-rated statement, "Resilience strengthens problem-solving by helping entrepreneurs stay focused and persevere through challenges, leading to effective solutions" (Mean = 3.28, SD = 0.45), highlights the strong connection between resilience and problem-solving. The lowest-rated statement, "Resilient entrepreneurs experience fewer negative emotions, allowing them to think more clearly and solve problems more effectively under pressure" (Mean = 3.16, SD = 0.37), suggests that some entrepreneurs may struggle to maintain emotional stability when solving business challenges under pressure.

The analysis indicates that problem-solving skills play a critical role in entrepreneurial success, allowing entrepreneurs to navigate challenges, adapt to uncertainty, and sustain operations. The highest-rated item supports the notion that resilience enhances problem-solving by promoting perseverance and focus, which aligns with Bullough & Renko (2022), who found that resilient entrepreneurs are committed to their ventures and develop creative solutions. However, the lower-rated item suggests that some entrepreneurs may struggle with maintaining emotional stability under stress, which is critical for effective problem-solving. This aligns with Uy et al. (2020), who noted that while emotional control is essential, many entrepreneurs face difficulties remaining calm in high-pressure situations. These findings imply that entrepreneurs would benefit from additional support in emotional regulation and stress management to strengthen their problem-solving abilities. According to Obschonka et al. (2021), resilient entrepreneurs who apply problem-solving strategies effectively experience higher business sustainability and growth. Therefore, entrepreneurial training programs should focus on resilience-building exercises, stress management techniques, and decision-making workshops to improve problem-solving skills and emotional stability.

Table 9 presents the extent of resilience skills that help entrepreneurs succeed in terms of adaptability. The overall mean score of 3.24, with a standard deviation of 0.43, suggests that adaptability is considered "Moderately Influential" in entrepreneurial success. The highest-rated statement, "Adaptability plays a key role in an entrepreneur's ability to make informed decisions in uncertain and rapidly changing environments" (Mean = 3.30, SD = 0.46), highlights the importance of adaptability in decision-making and managing uncertainty. The lowest-rated statement, "Overemphasizing adaptability can undermine the stability and consistency necessary for sound business operations" (Mean = 3.19, SD = 0.39), indicates that while excessive adaptability is not seen as a major risk, frequent strategic shifts may lead to inefficiencies.

The analysis suggests that adaptability is a crucial skill for navigating uncertainty and making informed decisions in a changing business environment. The highest-rated item underscores the value of adaptability in strategic decision-making, which aligns with Zhou et al. (2022), who argue that adaptability enables entrepreneurs to create agile business models that respond efficiently to market changes. However, Urban & Wood (2021) caution that excessive adaptability may lead to instability and frequent strategic shifts, which can negatively affect business efficiency. While most entrepreneurs in this study do not perceive over-adaptability

as a significant risk, the findings suggest that maintaining a balance between adaptability and strategic consistency is key to long-term business sustainability. As Breznik & Hisrich (2020) note, adaptable entrepreneurs are better equipped to thrive in dynamic environments. Therefore, training programs should emphasize adaptability alongside structured planning and risk management strategies to ensure sustainable business growth.

Table 9
The Extent of the Resilience Skills that Help Entrepreneurs
Succeed in terms of Adaptability

Items	Mean	SD	Description	Interpretation
1. Adaptability is essential for entrepreneurs to successfully navigate environmental shifts and achieve sustainable business growth.	3.27	0.45	Strongly Agree	Highly Influential
2. Entrepreneurs who are adaptable are better positioned to embrace technical and market changes that drive innovation.	3.23	0.42	Agree	Moderately Influential
3. Adaptability plays a key role in an entrepreneur's ability to make informed decisions in uncertain and rapidly changing environments.	3.30	0.46	Strongly Agree	Highly Influential
4. Excessive adaptability may lead to instability in decision-making, causing entrepreneurs to change strategies too frequently without enough analysis.	3.25	0.44	Agree	Moderately Influential
5. Entrepreneurs should prioritize adaptability over long-term planning and consistency to stay competitive in evolving markets.	3.23	0.42	Agree	Moderately Influential
6. Being adaptable allows entrepreneurs to recognize new opportunities and respond to uncertainty with greater resilience.	3.25	0.44	Agree	Moderately Influential
7. Adaptability in entrepreneurship should be balanced with strategic foresight and careful decision-making to ensure long-term success.	3.24	0.43	Agree	Moderately Influential
8. Overemphasizing adaptability can undermine the stability and consistency necessary for sound business operations.	3.19	0.39	Agree	Moderately Influential
9. Adaptability is one of the most important skills for entrepreneurs to thrive in uncertain business environments.	3.20	0.40	Agree	Moderately Influential
10. Future research should focus on the relationship between adaptability and other entrepreneurial competencies to create a more holistic approach to business success.	3.20	0.40	Agree	Moderately Influential
Average	3.24	0.43	Agree	Moderately Influential

Legend: 1.00-1.75 Strongly Disagree (Less Influential), 1.76-2.50 Disagree (Influential), 2.51-3.25 Agree (Moderately Influential), 3.26-4.00 Strongly Agree (Highly Influential)

3. What is the extent of entrepreneurial success in terms of:

3.1 Long-term Sustainability?

Table 10 presents the extent of entrepreneurial success in terms of long-term sustainability. The overall mean score of 3.23, with a standard deviation of 0.42, suggests that resilience is considered "Moderately Influential" in ensuring business longevity. The highest-rated statement, "Entrepreneurial resilience enhances the ability to sustain a business by enabling effective decision-making and adaptation to challenges" (Mean = 3.27, SD = 0.45), highlights the importance of resilience in making strategic decisions and adapting to challenges. Meanwhile, the lowest-rated statement, "Organizations that cultivate resilience are more likely to sustain their competitive advantage and long-term viability" (Mean = 3.17, SD = 0.38), suggests that while resilience is seen as important, other factors like financial management, innovation, and strategic planning are also crucial for long-term success.

Table 10
The Extent of Entrepreneurial Success in terms of Long-Term Sustainability

Items	Mean	SD	Description	Interpretation
1. Resilience is both an individual and organizational characteristic that defines the long-term sustainability of businesses.	3.24	0.43	Agree	Moderately Influential
2. Entrepreneurs lacking resilience may struggle with crises, reducing their ability to adapt and jeopardizing long-term business sustainability.	3.24	0.43	Agree	Moderately Influential
3. Organizations that prioritize resilience are more likely to overcome challenges and achieve sustainable growth.	3.21	0.41	Agree	Moderately Influential
4. Adapting quickly to market changes is essential for maintaining long-term business sustainability and competitive advantage.	3.26	0.44	Strongly Agree	Highly Influential
5. Resilient entrepreneurs can maintain operations and recover more quickly from setbacks, ensuring the longevity of their business.	3.22	0.42	Agree	Moderately Influential
6. Organizational resilience plays a pivotal role in sustaining success in competitive markets over the long term.	3.22	0.42	Agree	Moderately Influential
7. Financial resilience, when combined with adaptability, is crucial for maintaining the sustainable performance of businesses.	3.26	0.44	Strongly Agree	Highly Influential
8. Entrepreneurial resilience enhances the ability to sustain a business by enabling effective decision-making and adaptation to challenges.	3.27	0.45	Strongly Agree	Highly Influential
9. Learning from past mistakes fosters resilience, which is essential for maintaining long-term business success.	3.19	0.39	Agree	Moderately Influential
10. Organizations that cultivate resilience are more likely to sustain their competitive advantage and long-term viability.	3.17	0.38	Agree	Moderately Influential
Average	3.23	0.42	Agree	Moderately Influential

Legend: 1.00-1.75 Strongly Disagree (Less Influential), 1.76-2.50 Disagree (Influential), 2.51-3.25 Agree (Moderately Influential), 3.26-4.00 Strongly Agree (Highly Influential)

Table 10 presents the extent of entrepreneurial success in terms of long-term sustainability. The overall mean score of 3.23, with a standard deviation of 0.42, suggests that resilience is considered "Moderately Influential" in ensuring business longevity. The highest-rated statement, "Entrepreneurial resilience enhances the ability to sustain a business by enabling effective decision-making and adaptation to challenges" (Mean = 3.27, SD = 0.45), highlights the importance of resilience in making strategic decisions and adapting to challenges. Meanwhile, the lowest-rated statement, "Organizations that cultivate resilience are more likely to sustain their competitive advantage and long-term viability" (Mean = 3.17, SD = 0.38), suggests that while resilience is seen as important, other factors like financial management, innovation, and strategic planning are also crucial for long-term success.

The analysis indicates that resilience plays a key role in ensuring business sustainability, enabling entrepreneurs to navigate challenges and make informed decisions. The highest-rated item supports the view that resilience enhances decision-making and adaptability, aligning with Fisher et al. (2022), who argue that resilient entrepreneurs demonstrate strong problem-solving skills and higher adaptability, both essential for long-term business sustainability. However, the lower-rated item suggests that entrepreneurs may not view resilience as the sole driver of success, as other factors such as financial management, strategic planning, and innovation are also considered crucial for business sustainability. This aligns with Brewton et al. (2021), who

emphasize the need for a multifaceted approach combining resilience with other business competencies. These findings suggest that entrepreneurial support programs should integrate resilience training with financial literacy, strategic planning, and customer engagement to enhance business sustainability and competitiveness.

4. Is there a significant difference between the profile of the respondents and entrepreneurial success?

Table 11
The Test of Significant Difference between the Profiles of the Respondents and Entrepreneurial Success

Profile	Entrepreneurial Success						
Sex	t-value .007	p-value .054	Remarks Not Significant	Decision on HO Accept			
Sea	F-value	p-value	Remarks	Decision on HO			
Age	2.256	.069	Not Significant	Accept			
Educational Level	1.452	.233	Not Significant	Accept			
Years of Entrepreneurial	1.102	.352	Not Significant	Accept			
Experience							
Type of Business	2.185	.143	Not Significant	Accept			

Significant if P-value <0.05 Legend: Ho is rejected if Significant Ho is accepted if Not Significant

Table 11 presents the test of significant differences between the respondents' profile and entrepreneurial success. The results indicate that none of the profile variables significantly influence entrepreneurial success. The p-values for sex (t = 0.007, p = 0.054), age (F = 2.256, p = 0.069), educational level (F = 1.452, p = 0.233), years of entrepreneurial experience (F = 1.102, p = 0.352), and type of business (F = 2.185, p = 0.143) are all greater than 0.05, suggesting that these factors do not significantly impact entrepreneurial success. As a result, the null hypothesis (Ho) is accepted in all cases, confirming that no statistically significant differences exist between the respondents' profile and their entrepreneurial success.

These findings align with Shane (2020), who suggests that entrepreneurial success is more influenced by factors such as market conditions, business innovation, and strategic decision-making than by personal demographic factors. Similarly, Ahmad and Hoffmann (2019) emphasize that while experience and education provide foundational knowledge, success in entrepreneurship is largely driven by adaptability, risk-taking, and business networks. The results imply that entrepreneurial development programs should focus on enhancing business strategy, adaptability, and market responsiveness rather than emphasizing demographic factors. Wu et al. (2021) further support this view, highlighting that economic and industry-related factors play a more significant role in determining business success than individual characteristics. Therefore, support programs should prioritize providing entrepreneurs with training in market analysis, financial management, and strategic decision-making, along with access to capital, mentorship, and networking opportunities, to help them navigate market challenges and foster long-term growth.

5. Is there a significant relationship between resilience skills and entrepreneurial success?

Table 12 presents the test of a significant relationship between resilience skills and entrepreneurial success. The analysis shows a significant relationship, as indicated by an r-value of 2.083 and a p-value of 0.000. Since the p-value is below the 0.05 significance level,

the null hypothesis (Ho) is rejected, confirming that resilience skills have a strong and positive influence on entrepreneurial success.

Table 12
The Test of Significant Relationship between Resilience Skills and
Entrepreneurial Success

	Entrepreneurial Success				
	r-value	p-value	Decision on Ho		
Resilience Skills	2.083	.000	Rejected		

Significant if P-value <0.05 Legend: Ho is rejected if Significant Ho is accepted if Not Significant

Table 12 presents the test of a significant relationship between resilience skills and entrepreneurial success. The analysis shows a significant relationship, as indicated by an r-value of 2.083 and a p-value of 0.000. Since the p-value is below the 0.05 significance level, the null hypothesis (Ho) is rejected, confirming that resilience skills have a strong and positive influence on entrepreneurial success.

The results suggest that entrepreneurs with strong resilience skills are more likely to succeed, as they are better able to navigate challenges, adapt to uncertainties, and maintain their businesses in competitive markets. This aligns with studies by Smith & Doe (2019) and Brown et al. (2023), which emphasize the importance of resilience in entrepreneurship. Resilient entrepreneurs can handle setbacks, recover from failures, and make strategic decisions that support long-term growth (Davis & Green, 2024). Additionally, resilience helps maintain emotional stability and persistence, critical for business success, and contributes to effective risk management (Martinez & Santos, 2022). These findings reinforce the need for resilience training and mentorship programs to help entrepreneurs develop essential skills for sustaining and growing their businesses.

5. Which among the resilience skills highly influence entrepreneurial success?

Table 13
The Test of Regression among the Resilience Skills Highly Influences
Entrepreneurial Success

Predictors	Unstanda	ardized Coefficients	Stand	F-value	p-value	Decision on
	В	SE	Coeff			Но
(Constant)	1.674	0.425		3.936	0.000	
Self-Awareness	0.186	0.080	0.234	2.326	0.022	Significant
Emotional Regulation	-0.005	0.083	-0.006	-0.057	0.015	Significant
Problem Solving Skills	0.093	0.104	0.097	0.898	0.031	Significant
Adaptability	0.186	0.097	0.197	1.916	0.015	Significant

Significant if P-value < 0.05

Note: Adjusted R2 = 0.105

ANOVA for Regression: F = 3.991, p = .006

Table 13 presents the results of the regression analysis, indicating that resilience skills significantly influence entrepreneurial success, as confirmed by the ANOVA for regression (F = 3.991, p = 0.006). The adjusted R² value of 0.105 suggests that resilience skills explain about 10.5% of the variance in entrepreneurial success. The regression coefficients reveal that self-

awareness (B = 0.186, p = 0.022), adaptability (B = 0.186, p = 0.015), and problem-solving skills (B = 0.093, p = 0.031) all significantly contribute to entrepreneurial success. However, emotional regulation had a negative coefficient (B = -0.005, p = 0.015), suggesting that while it is statistically significant, it does not directly contribute to entrepreneurial success in the same manner as other resilience skills.

The regression analysis highlights that self-awareness and adaptability are the most significant resilience skills in influencing entrepreneurial success, aligning with the findings of Brown et al. (2023) and Carter & Williams (2022), who emphasize the critical role these skills play in decision-making and business sustainability. Entrepreneurs who are self-aware can make informed decisions and manage their strengths and weaknesses effectively. Similarly, adaptability is essential for navigating market changes and sustaining long-term growth. Problem-solving skills also significantly contribute to entrepreneurial success, supporting Garcia and Lopez's (2021) assertion that strong problem-solving abilities help entrepreneurs overcome obstacles and innovate. However, emotional regulation, while important for managing stress and maintaining focus (Johnson & Clarke, 2021), appears to have a lesser direct impact on entrepreneurial success compared to self-awareness and adaptability. The results underscore the importance of resilience-building programs that focus on enhancing self-awareness, adaptability, and problem-solving skills to support entrepreneurs in achieving long-term success and sustainability.

CONCLUSION

The study highlighted the significant influence of resilience skills on entrepreneurial success, emphasizing the critical role of self-awareness, adaptability, and problem-solving skills in fostering long-term business sustainability. Among the resilience skills analyzed, self-awareness emerged as the most influential factor, indicating that entrepreneurs who have a clear understanding of their strengths, weaknesses, and emotional responses are better positioned to make strategic decisions and navigate challenges effectively. Adaptability also plays a vital role, allowing entrepreneurs to respond swiftly to market shifts and uncertainties, ensuring business growth and competitiveness. Additionally, problem-solving skills significantly contribute to entrepreneurial success by enabling entrepreneurs to develop innovative solutions and make informed decisions under pressure.

While emotional regulation is an essential component of resilience, its influence on entrepreneurial success was found to be less significant compared to other resilience skills. This suggests that while managing emotions supports interpersonal relationships and overall well-being, entrepreneurial success is more strongly driven by an individual's ability to remain self-aware, adaptable, and solution-oriented.

Moreover, the findings reinforce the importance of resilience in entrepreneurship and highlight the need for entrepreneurial training programs that focus on enhancing self-awareness, adaptability, and problem-solving capabilities. By cultivating these resilience skills, entrepreneurs can strengthen their ability to overcome challenges, seize opportunities, and achieve sustainable success in highly dynamic business environments.

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The Influence of Tour Guide Performance Towards Tourist Experience

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ABSTRACT

This study explores the critical role of tour guide performance in shaping the overall tourist experience. Thus, this study aimed to determine the influence of tour guide's performance on the tourist experience. The researchers utilized an adapted questionnaire which was distributed to the one hundred-nine (109) hospitality management students who recently joined the Cebu Educational Tour under subject THC 4 (Philippine Tourism, Geography and Culture) of Tagoloan Community College. Results revealed that the tourists had a good experience in terms of the tour guide's professional competence, interpersonal skills, empathy, tour services, and guiding services. Thus, this study reveals that there is a significant relationship between the tour guide's performance and tourist experience. The study recommends that the Department of Tourism and other tourism organizations should invest in the training and continuous development of tour guides and implement a system for regular performance assessments and feedback for tour guides. Equip tour guides with additional resources, such as multimedia presentations, maps, and reference materials, to enhance the educational aspect of the tour. These resources can help convey information more effectively and keep tourists engaged.

INTRODUCTION

Tourism has become an experience-based industry that connects the abstract picture of potential travelers with the destinations they visit (Meacci et al., 2018). During their actual visit, tourists need more information about the conditions, circumstances, history, and exciting content to better understand the destination's uniqueness. The performance of tour guides has sparked intense academic discussions due to the crucial role they fulfill in enabling a wide range of tourist experiences (Željko et al., 2022). The performance of a tour guide can have a significant influence on the overall tourist experience. A tour guide plays a crucial role in enhancing the quality of the tour, providing valuable information, and creating a positive and engaging atmosphere for the tourist experience (Lin et al., 2019).

Moreover, tourists expect their tour guide to provide them with accurate information about the destination, offer engaging and informative commentary, and facilitate smooth and efficient trips. According to Alrawadieh et al. (2019), the effects of tour guide performance on the tourist experience are considered an important aspect of a tourist's overall journey. Thus, Prebensen et al. (2018) have argued that tourist experience has a determining effect on shaping and enhancing tourist value and future behavioral outcomes, such as word-of-mouth (WOM) publicity, revisit intention, and increased loyalty. Thus, the effectiveness of tour guides can affect tourists' experiences. It is critical to understand that a tour guide's performance can greatly contribute to and enhance the tourist experience. One of the significant dimensions of evaluating tourists' experiences is determining the tour guide's performance (Hwang & Lee, 2018). According to Chen et al. (2018), it is crucial to comprehend how tour guides influence

the tourist experience to respond effectively to tourist needs. In the context of the tourism industry, understanding and evaluating the tourist experience is critical since it gives travel agencies and tour guides an idea of how to improve their services.

This study addresses the lack of research on the relationship between tour guide performance and tourist experience. Moreover, previous studies have concentrated on the impact of the life satisfaction of tour guides. While there is existing research on tour guides' influence on tourist satisfaction in general, there is a need for further investigation on how tour guides' specifically affect the tourist experience. By filling this gap, the study aims to provide insights that can be used to improve the tourist experience.

The study aimed to determine the tour guide's performance in terms of professional competence, interpersonal skills, empathy, and tourist experience with tour services and guiding services. It also aimed to determine if a tour guide's performance may influence the tourist experience. In the tourism and hospitality industries, tour guides' qualifications are vital as they may affect the tourist experience. Therefore, tour operators and travel agencies need to understand these aspects to contribute to a positive tourist experience and train their guides accordingly. Therefore, the research is conducted.

MATERIALS AND METHODS

This research utilized a quantitative, descriptive correlational research design to determine the relationship between tour guide performance and tourist experience. Correlational research is a non-experimental quantitative design in which the researcher applies correlational statistics to measure and describe the degree of association among variables or sets of scores (Creswell., 2012).

The descriptive method best suits this study as it describes the characteristics of the population and explains the occurrence of a certain phenomenon. In this study, a correlational design was utilized to explore the relationship between tour guide performance and tourist experience.

The study was conducted in Tagoloan Community College, located in MH Del Pilar St., Baluarte, Tagoloan, Misamis Oriental, specifically in the College of Hospitality Management. This place was selected knowing the efficiency of data to be collected among 2nd-year Hospitality Management students who recently participated in the Cebu Educational tour.

The respondents of the study were the one hundred nine (109) hospitality management students of Tagoloan Community College, who recently joined the Cebu educational tour. The respondents were selected as they have experienced different tours accompanied by Department of Tourism Accredited Tour Guides.

This study will utilize non-random sampling, specifically purposive sampling. The respondents are selected intentionally based on specific characteristics or criteria relevant to the research question. In this research, respondents are those who joined the Cebu Educational tour last March 2023.

The researchers utilized the universal sampling method to come up with a reliable and accurate number of respondents.

Table 1. Frequency Distribution of Respondents

Students who Joined the Cebu Educational Tour	Frequency
Male	40
Female	69
TOTAL	109

The researchers asked permission by giving the letter to the Dean of College Hospitality Management to conduct the study. Upon approval, the researchers sent an informed consent letter to the students who recently joined the Cebu educational tour. They were informed about the objective of the study and the information-gathering process, assuring them that in the gathering of data, all information was kept with the utmost confidentiality.

The researchers personally administer the data gathering using the printed form for the gathering of data to survey at the most convenient time for students. The researchers provided respondents with the assurance of the anonymity and privacy of the gathered data.

The researchers utilized an adapted questionnaire from the study of Huang et al (2009) entitled Tour guide performance and tourist satisfaction: A study of the package tours in Shanghai which helped the researchers construct the research instrument.

The research instrument has six parts. The first part consists of professional competence, the second part consists of Interpersonal skills, the third part consists of empathy, the fourth part consists of tourist experience, the fifth part consists of tour services, and the sixth part consists of guiding services. The researchers employed a 4-point Likert scale.

To ensure the validity of the instrument's content, the researchers sought advice from the experts as well as from the panels to refine the questionnaire. The questionnaire was pilottested to thirty (30) students, who joined the Cagayan de Oro Educational tour. The researcher used Cronbach's alpha coefficient to determine its reliability; the Cronbach's alpha result must be 0.70 and above for a questionnaire to be reliable (Shemwell, Chase, & Schwartz, 2015).

A scoring procedure was employed to guide the researchers in interpreting the data and was utilized as a guide to score the respondents' responses fairly and objectively. The respondents chose the criteria from strongly agree to strongly disagree, whichever best presented their opinion on each statement/question.

Mean Range Description Interpretation Scale 4 3.75 - 4.0Strongly Agree Very good experience 3 2.75 - 3.0Agree Good experience 2 1.75 - 2.0Poor Experience Disagree 1 1.00 - 1.75Strongly Disagree Very poor experience

Table 2. Scoring Procedure

RESULTS

Respondent's Profile

Table 1 shows the Frequency and Percentage Distribution of Respondents in Terms of Gender. The data revealed that males had 40 or 34.80 percent and females had 75 or 65.20 percent. This means that most of the respondents are female.

Table 1
The Frequency and Percentage Distribution of Respondents in Terms of Gender

Profile	Characteristics	Frequency	Percentage
	Male	40	34.80
Gender	Female	75	65.20
	Total	115	100

Table 2 shows the Frequency and Percentage Distribution of respondents by educational attainment. The data revealed that college-level had 115 or 100.00 percent. This means that most of the respondents are college-level.

Table 2
The Frequency and Percentage Distribution of Respondents in Terms of Educational

Profile	Characteristics	Frequency	Percentage
	Elementary Level	0	0
	Elementary Graduate	0	0
	High School Level	0	0
Educational	High School Graduate	0	0
Attainment	College Level	155	100.00
	College Graduate	0	0
	Total	155	100

1. What is the tour guide's level of performance in terms of the following:

- 1.1 Professional competence;
- 1.2 Interpersonal Skills; and
- 1.3 Empathy?

Table 3 presents the tour guide's level of performance in terms of professional competence. The data exposed that the tour guide's level of performance in terms of professional competence is 3.67 and the SD of 0.50, or "Good Experience". This implied that the tour guide is generally doing a decent job in terms of professional competence, but there may be areas for improvement or individual preferences among the participants that lead to variability in the ratings. (Lin et al., 2017).

Table 3. The Tour Guide's Level of Performance in Terms of Professional Competence

Items	Mean	SD	Description	Interpretation
The tour guide knows the destination's tourist attractions.	3.78	0.47	Strongly Agree	Very Good Experience
The tour guide takes good care of tourist needs.	3.66	0.53	Agree	Good Experience
The tour guide has good communication skills.	3.81	0.42	Strongly Agree	Very Good Experience
The tour guide is knowledgeable of basic first-aid procedures.	3.56	0.53	Agree	Good Experience
The tour guide can organize the related activities.	3.65	0.48	Agree	Good Experience
The tour guide shows a good sense of humor.	3.64	0.50	Agree	Good Experience
The tour guide's ability to answer questions and provide accurate information.	3.68	0.49	Agree	Good Experience
The tour guide communicates information and instructions during the tour.	3.71	0.47	Agree	Good Experience
The tour guide manages the pace and timing of the tour, ensuring that all scheduled activities are covered.	3.57	0.56	Agree	Good Experience
The tour guide is good at interpersonal communication.	3.63	0.50	Agree	Good Experience
Average	3.67	0.50	Agree	Good Experience

Legend: 1.0-1.75 (Very Poor Experience), 1.75-2.0 (Poor Experience), 2.75-3.0 (Good Experience), 3.75-4.0 (Very Good Experience)

Data showed that the highest item on the extent of the tour guide's level of performance in terms of professional competence is "The tour guide has good communication skills," with a mean of 3.81 and SD of 0.42, or "Very Good Experience". This implies that the ability to communicate clearly and engage with the audience is a significant aspect of a tour guide's performance and can greatly enhance the quality of the tour. (Yang et al., 2022)

Furthermore, the lowest item is "The tour guide is good at interpersonal communication," with a mean of 3.63 and SD of 0.50, or "Good Experience". Thus, this item is recommended for further improvement since it does not meet the highest mean standard deviation.

Table 4 presents the tour guide's level of performance in terms of interpersonal skills. The data exposed that the tour guide's level of performance in terms of professional competence is 3.59, with a SD of 0.52, or "Good Experience". This implied that a tour guide's professional competence is generally rated positively. (Al-Okaily, 2022).

Moreover, the highest item on the extent of the tour guide's level of performance in terms of interpersonal skills is "The tour guide manages the group dynamics and ensures a positive and harmonious experience for everyone," with a mean of 3.65 and SD of 0.48, or "Good Experience". This implies that the tour guide's ability to handle various personalities and ensure that all participants have an enjoyable and harmonious experience during the tour. (Syakier & Hanafiah, 2022).

Table 4
The tour guide's level of performance in terms of interpersonal Skills

Items	Mean	SD	Description	Interpretation
1. The tour guide is capable of handling	3.58	0.53	Agree	Good Experience
tourist Complaints properly.				
2. The tour guide can generate rapport	3.48	0.58	Agree	Good Experience
among tourists.				
3. The tour guides know the destination's	3.64	0.50	Agree	Good Experience
history.	2.55	0.55	g. 1 .	W G 15
4. The tour guide pays immediate attention	3.57	0.55	Strongly Agree	Very Good Experience
to his/ her tourist needs.	2.65	0.40	A	C 1 F
5. The tour guide shows good interaction with his/ her tourist.	3.65	0.48	Agree	Good Experience
6. The tour guide creates a memorable and	3.59	0.53	A graa	Good Experience
exciting experience.	3.39	0.55	Agree	Good Experience
7. The tour guide knows how to negotiate	3.57	0.50	Agree	Good Experience
conflicts and misunderstandings.	3.37	0.50	rigico	Good Experience
8. The tour guide manages the group	3.65	0.48	Agree	Good Experience
dynamics and ensures a positive and		****	8	
harmonious experience for everyone.				
9. The tour guide addresses any safety	3.64	0.50	Agree	Good Experience
concerns or precautions during the tour.			C	•
10. The tour guide accommodates the	3.55	0.55	Agree	Good Experience
diverse needs and preferences of the				
participants.				
Average	3.67	0.50	Agree	Good Experience

Legend: 1.0-1.75 (Very Poor Experience), 1.75-2.0 (Poor Experience), 2.75-3.0 (Good Experience), 3.75-4.0 (Very Good Experience)

Furthermore, the data revealed that the lowest item is "The tour guide can generate rapport among tourists." with a mean of 3.48 and SD of 0.58 or "Good Experience". Thus, this item is recommended for further improvement since it does not meet the highest mean standard deviation.

Table 5 presents the tour guide's level of performance in terms of empathy. The data exposed that the tour guide's level of performance in terms of empathy is 3.58, with a SD of 0.53, or "Good Experience". This implies that empathy can be a crucial skill for tour guides to create a positive and memorable experience for tourists. (Ap & Wong, 2001).

Moreover, the highest item on the extent of the tour guide's level of performance in terms of empathy is "The tour guide displays empathy towards the local communities and the impact of tourism on their lives," with a mean of 3.65 and SD of 0.51, or "Good Experience". This implies that the tour guide is not only attentive to the needs and feelings of the tourists but also deeply respects and understands the local communities and the potential challenges they face due to tourism. (Abiew et al., 2020).

Furthermore, the lowest item is "Tour guide dependable in occurrences of conflicts," with a mean of 3.45 and SD of 0.52, or "Good Experience". Thus, this item is recommended for further improvement since it does not meet the highest mean standard deviation.

Table 5
The Tour Guide's Level of Performance in Terms of Empathy

Items	Mean	SD	Description	Interpretation
1. The tour guide empathizes with the	3.62	0.54	Agree	Good Experience
physical limitations or special requirements				
of individuals in the tourist.				
2. The tour guide shows empathy in their	3.59	0.51	Agree	Good Experience
communication style, considering the				
diverse backgrounds and perspectives of the				
tourists.	2.65	0.51		G IF '
3. The tour guide displays empathy towards	3.65	0.51	Agree	Good Experience
the local communities and the impact of				
tourism on their lives.	2.61	0.54	A	C . 1 F
4. The tour guide knows how to take	3.61	0.54	Agree	Good Experience
accountability for tourist decisions.5. Tour guide dependable in occurrences of	3.45	0.52	Agraa	Good Experience
conflicts.	3.43	0.32	Agree	Good Experience
6. The tour guide showcases excellent	3.49	0.57	Agree	Good Experience
problem-solving skills.	5.17	0.57	rigiee	Good Experience
7. The tour guide shows the ability to work	3.57	0.53	Agree	Good Experience
under pressure.			1-8-11	T
8. The tour guide showcases good listening	3.59	0.58	Agree	Good Experience
skills.			Č	Ī
9. The tour guide knows how to find an	3.57	0.51	Agree	Good Experience
alternative as a solution to find alternatives				
as a solution to issues/ conflicts.				
10. The tour guide knows how to handle	3.61	0.49	Agree	Good Experience
conflicts and issues professionally.				
Average	3.58	0.53	Agree	Good Experience

Legend: 1.0-1.75 (Very Poor Experience), 1.75-2.0 (Poor Experience), 2.75-3.0 (Good Experience), 3.75-4.0 (Very Good Experience)

Problem 2: What is the extent of tourist experience in terms of the following dimensions:

- 2.1 Tour Services; and
- 2.2 Guiding Services?

Table 6 presents the extent of the tourist experience in terms of tour services. The data exposed that the tourist experience in terms of tour services is 3.57, with an SD of 0.56, or "Good Experience". This implies that it is essential for tourism providers to maintain this level of quality to continue attracting and satisfying customers. (Alexandra Matos Pereira, 2015).

Moreover, the highest item on the extent of the tourist experience in terms of tour services is "The tour destination visited creates a safe and enjoyable environment for the students," with a mean of 3.66 and SD of 0.54, or "Good Experience". This implies that a safe and engaging setting significantly enhances the overall educational and recreational experience for students during the tour. (Lin et al., 2017).

Furthermore, the lowest item is "The tour services provide good value for the price you paid," with a mean of 3.49 and SD of 0.63, or "Good Experience". Thus, this item is recommended for further improvement since it does not meet the highest mean standard deviation.

Table 6
The Extent of Tourist Experience In Terms of Tour Services

Items	Mean	SD	Description	Interpretation
1. The tour services offer opportunities for cultural immersion or interaction with local communities.	3.56	0.56	Agree	Good Experience
2. The tour service provider assures the safety and security of the students.	3.57	0.58	Agree	Good Experience
3. The tour services offer flexibility and options for personalization, allowing you to tailor the experience to your preferences.	3.55	0.57	Agree	Good Experience
4. The tour destination visited creates a safe and enjoyable environment for the students.	3.66	0.54	Agree	Good Experience
5. The amount of time given to visit the destination is enough for the students to explore and enjoy the area.	3.50	0.64	Agree	Good Experience
6. The transportation organizer considers the quantity and comfortable travel spaces for tourists.	3.55	0.55	Agree	Good Experience
7. The tour services provide good value for the price you paid.	3.49	0.63	Agree	Good Experience
8. The tour services meet your expectations in terms of providing a memorable and enjoyable experience.	3.61	0.52	Agree	Good Experience
9. The transportation arrangements made by the tour service provider.	3.60	0.51	Agree	Good Experience
10. The tour service ability to create a memorable and enjoyable experience for you as a tourist.	3.63	0.52	Agree	Good Experience
Average	3.57	0.56	Agree	Good Experience

Legend: 1.0-1.75 (Very Poor Experience), 1.75-2.0 (Poor Experience), 2.75-3.0 (Good Experience), 3.75-4.0 (Very Good Experience)

Table 7 presents the extent of the tourist experience in terms of guiding services. The data exposed that the tourist experience in terms of guiding services is 3.59 and the SD of 0.52 or "Good Experience". This implied that the majority of tourists share a favorable perception of the guiding services. (Yang et al., 2022).

Moreover, the highest item on the extent of the tourist experience in terms of guiding services is "The tour guide's performance impacts the overall experience of tourists." with a mean of 3.67 and SD of 0.47 or "Good Experience". This implies that tourists place a substantial emphasis on the tour guide's competence, communication skills, and ability to provide an informative and engaging experience. This also means that tourists perceived that the tour guides possessed good communication that they were able to convey information effectively and answer tourists' questions. (Syakier & Hanafiah, 2022).

Furthermore, the lowest item is "The accommodation service provided by the tour organizer satisfies my needs." with a mean of 3.41 and SD of 0.59 or "Good Experience". Thus, this item

is recommended for further improvement since it does not meet the highest mean standard deviation. The mean score of 3.41 implies that, on average, respondents find the accommodation service moderately satisfactory, as it falls between a neutral and positive evaluations.

Table 7
The Extent of Tourist Experience in Terms of Guiding Services

Items	Mean	SD	Description	Interpretation
1. The tour guide's performance impacts the overall experience of tourists.	3.67	0.47	Agree	Good Experience
2. The tour guide officer shares wisdom about the place's history.	3.64	0.50	Agree	Good Experience
3. The accommodation service provided by the tour organizer satisfies my needs.	3.41	0.59	Agree	Good Experience
4. The tour guide's ability to handle unexpected situations and challenges contributes to a positive tourist experience.	3.56	0.53	Agree	Good Experience
5. The tour guide shows genuine care and concern for the safety and well-being of the tourist.	3.48	0.54	Agree	Good Experience
6. The tour guide demonstrates good leadership and organizational skills throughout the tour.	3.63	0.48	Agree	Good Experience
7. The tour guide creates a friendly and welcoming atmosphere during the tour.	3.62	0.56	Agree	Good Experience
8. The tour guide provides clear and accurate information about the attractions and destinations visited.	3.59	0.49	Agree	Good Experience
9. The tour guide's voice is loud and clear for tourists to hear.	3.65	0.48	Agree	Good Experience
10. The tour guide allows the tourist to share their ideas and opinions	3.61	0.54	Agree	Good Experience
Average	3.59	0.52	Agree	Good Experience

Legend: 1.0-1.75 (Very Poor Experience), 1.75-2.0 (Poor Experience), 2.75-3.0 (Good Experience), 3.75-4.0 (Very Good Experience)

Problem 3: Is there a significant relationship between the tour guide's performance and tourist experience?

Ho1: There is no significant relationship between the tour guide's performance towards the tourist experience.

Table 8 depicts the significant relationship between the tour guide's performance and tourist experience.

Table 8
Test of the Significant Relationship Between the Tour Guide's Performance and Tourist Experience

	Tourist Experience							
Tour Guide's	Tour Guide's R-Value P-Value Decision on Ho							
Performance	Performance .651 .000 Rejected							

Significant if P-value <0.05 Legend: Ho is rejected if Significant Ho is accepted if Not Significant.

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The data exposed that (r=.651**, p-value=.000) there is a significant relationship between the Tour Guide's Performance and the Tourist Experience since the p-value is less than 0.05. This means that the null hypothesis is rejected. A similar result was affirmed by Chang, K. C. (2014), who stated that the tour guide's performance has a positive and significant effect on the tourist experience.

DISCUSSION

The study used quantitative research in the form of non-probability sampling for the selected Hospitality Management students who have the subject for THC4—Philippine Tourism, Geography, and Culture of Tagoloan Community College and recently joined the Cebu Educational Tour.

The study focused more on a descriptive correlational research design to determine the relationship between tour guide performance and tourist experience in Tagoloan Community College. The data and output of the study were used as a basis for an organizational enhancement plan for successful operations.

The results of the data that were gathered were presented and analyzed.

1. What is the demographic profile of the respondents in terms of gender and educational attainment?

In terms of gender distribution among the respondents, it indicates that most of the respondents are female. The respondents' educational attainment shows that the entirety of the respondents holds a college-level educational background.

2. What is the tour guide's level of performance in terms of professional competence, interpersonal skills, and empathy?

The data underscores the importance of effective communication, group management, and empathy in tour guides' performance, with room for improvement in certain areas to enhance the overall tour experience. To further enhance their service, tour guides may benefit from addressing the areas that received lower ratings and focusing on continuous improvement.

3. What is the extent of tourist experience in terms of tour services and guiding services?

The data highlights the importance of creating safe and engaging tour environments for students and underscores the significant role of tour guides in shaping the overall tourist experience. While many aspects receive positive ratings, there is clear room for improvement in aspects related to value for money and accommodation services, which could enhance overall customer satisfaction and loyalty.

Based on the findings and conclusions of the study, the following recommendations are drawn:

- 1. Tourism organizations should invest in the training and continuous development of their tour guides. This includes providing comprehensive knowledge about the destinations, history, culture, and local customs. Guide training should also focus on communication skills, customer service, and handling diverse groups of tourists.
- 2. The Department of Tourism should implement a system for regular performance assessments and feedback for tour guides. This can include collecting feedback from tourists, peers, and supervisors, as well as conducting periodic evaluations. These assessments can help identify areas for improvement and provide constructive feedback to guides.

- 3. Tour guides should have the flexibility to tailor tours to the preferences and interests of the tourist group. This personalized approach can significantly enhance the tourist experience by making the tour more engaging and relevant to participants.
- 4. Encourage guides to engage with tourists, answer questions, and create a friendly and inclusive atmosphere during the tour. Guides should be approachable and open to dialogue.
- 5. Tour guides should be culturally sensitive and aware of the diverse backgrounds of tourists. This includes respecting cultural norms and being mindful of potential cultural differences among tourists. Cultural sensitivity can greatly impact the overall experience.
- 6. Equip tour guides with additional resources, such as multimedia presentations, maps, and reference materials, to enhance the educational aspect of the tour. These resources can help convey information more effectively and keep tourists engaged.
- 7. Actively seek feedback from tourists through surveys or post-tour evaluations. Analyze this feedback to identify trends and areas for improvement. Adjust based on this input to continually enhance the tourist experience.
- 8. Future Researchers may consider other variables on tourist experience and tour guide performance, such as problem-solving skills, tourist satisfaction, and perceived services. As the industry evolves, future research may investigate the factors that will impact the tourist experience.

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The Role of Community-Based Programs on Teenage Pregnancy Prevention in Mitigating Unwanted Cases: A Perspective Among Selected Residents of Tagoloan, Misamis Oriental

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ABSTRACT

Teenage pregnancy remains a pressing public health concern, especially in the Philippines, where the incidence rate continues to rise despite existing interventions. This study focuses on the municipality of Tagoloan, Misamis Oriental—the province's highest in teenage pregnancy cases—to assess the effectiveness of community-based prevention programs. Using a quantitative research design, data were gathered from residents participating in these programs to evaluate socio-demographic profiles, awareness levels, and beliefs about contraceptive practices and their influence on teenage pregnancy rates. Findings revealed that most respondents, mainly young adults including a notable number of males, demonstrated a good level of awareness of prevention initiatives such as seminar workshops; however, the need for enhanced consultation and reproductive health services was emphasized. Statistical analysis confirmed a significant correlation between community programs and reduced teenage pregnancy rates, indicating that awareness efforts contribute to behavioral change and improved outcomes. Nonetheless, gaps remain in service accessibility and youth engagement. The study concludes that while current initiatives are beneficial, their impact can be strengthened through targeted outreach to marginalized sectors, comprehensive sexual education in schools, and increased youth-friendly health consultations. It further recommends fostering collaboration between local leaders, educators, and healthcare professionals to design interactive, culturally sensitive interventions that encourage open dialogue and responsible decision-making among adolescents. Ultimately, empowering the youth with adequate knowledge, support, and opportunities is vital in reducing teenage pregnancy and ensuring a healthier, more sustainable future for the young population of Tagoloan.

INTRODUCTION

Teenage pregnancy, defined as childbearing among females aged thirteen to nineteen, remains a major public health and social issue that continues to affect millions globally. The World Health Organization reported in 2022 that approximately sixteen million girls between the ages of ten and nineteen give birth each year, representing about eleven percent of all global births. This phenomenon perpetuates cycles of poverty, limits educational and employment opportunities, and poses serious health risks for both mothers and their infants.

In the Philippines, the challenge remains severe, with the Philippine Statistics Authority recording 180,916 adolescent live births in 2019. Despite numerous national initiatives led by the Department of Education, Department of Health, Department of Social Welfare and Development, and the Population Commission, the rates of teenage pregnancy remain among

the highest in Southeast Asia. In Northern Mindanao, the municipality of Tagoloan, Misamis Oriental, has emerged as a focal point of concern, with the National Demographic and Health Survey (2022) identifying it as having the highest incidence of teenage pregnancies in the province.

Existing interventions in Tagoloan include school-based lectures, reproductive health seminars, and awareness campaigns. However, the persistence of high rates suggests that these efforts may not be sufficiently comprehensive or sustainable. The study therefore draws upon Social Learning Theory, which emphasizes observational learning and behavioral modeling within a community setting, and Community Empowerment Theory, which promotes participatory involvement and shared responsibility among stakeholders. These frameworks highlight the importance of education, awareness, and community engagement in shaping responsible behaviors among adolescents.

Objectives of the Study

The purpose of this study is to evaluate the effectiveness of community-based programs in Tagoloan by examining how awareness, attitudes, and engagement among residents relate to teenage pregnancy prevention. It aims to provide a clearer understanding of local dynamics and to inform the design of more inclusive and effective interventions that empower youth, parents, educators, and local authorities to work collaboratively toward holistic and sustainable solutions.

Statement of the Problem

This study determines the effectiveness of the role of community-based programs in preventing teenage pregnancy among the residents of Tagoloan being top in the number of cases of teenage pregnancy in the province of Misamis Oriental (MPDO, 2023). Furthermore, the study will answer the following problems:

- 1. What is the level of awareness among residents in Tagoloan, Misamis Oriental, regarding community-based programs in preventing teenage pregnancy in terms of:
 - 1.1 Information Drive
 - 1.2 Seminar Workshops
 - 1.3 Consultation
 - 1.4 Budget Allocation
- 2. What is the level of effectiveness in the practice of contraceptives and celibacy in mitigating unwanted cases of teenage pregnancy?
- 3. Is there a significant relationship between Community-based programs and mitigating unwanted cases of teenage pregnancy?
- 4. What are the gaps in this research study?

METHODOLOGY

Research Design and Locale

This study employed a quantitative-descriptive design conducted in Tagoloan, Misamis Oriental, selected for its high incidence of teenage pregnancies. The study focused on evaluating community-based initiatives aimed at prevention and awareness.

Respondents and Sampling

A total of 300 respondents from ten barangays participated in the study, using a self-selection survey method. Participants included residents actively involved in community-based programs addressing reproductive health and adolescent issues.

Data Collection

Primary data were gathered through a structured questionnaire consisting of three sections: (1) demographic profile, (2) awareness and participation in community-based programs, and (3) perceptions of teenage pregnancy prevention strategies. Secondary data were obtained from the Municipal Social Welfare and Development Office (MSWDO) and Municipal Health Office (MHO).

Data Analysis

Data were analyzed using descriptive statistics (frequency, percentage, mean) and correlation analysis to determine relationships between community initiatives and teenage pregnancy prevention.

Scoring Procedure

To assess participants' attitudes and perceptions, this study utilized a Likert scale, a widelyused scoring method in social sciences research. Each survey item was presented with a set of response options ranging from strong agreement to strong disagreement, enabling participants to express the extent of their agreement with each statement. Specifically, a five-point Likert scale was used, with the following scoring:

Numerical Value	Description
4	Strongly Agree (SA)
3	Agree (A)
2	Disagree (D)
1	Strongly Disagree (SD)

In this scale, higher scores indicate stronger agreement or a more positive response toward the statement, while lower scores indicate disagreement or a more negative response. The responses were scored numerically and then analyzed to determine trends, average responses, and the general sentiment of the participant group. This quantifiable approach facilitated a more precise measurement of subjective opinions, allowing for meaningful statistical analysis.

Furthermore, aiming to address Statement of Problem No. 2, the scoring procedure with its interpretation is used:

Rating Scale	Range Values	Verbal Description	Interpretation
4	3.26 - 4.00	Strongly Agree	Very High
3	2.51 - 3.25	Agree	High
2	1.76 - 2.50	Disagree	Low
1	1.00 - 1.75	Strongly Disagree	Very Low

and for Statement of Problem No.3, the interpretation of the values is appropriate as follows:

Rating Scale	Range Values	Verbal Description	Interpretation
4	3.26 - 4.00	Strongly Agree	Very Effective
3	2.51 - 3.25	Agree	Effective
2	1.76 - 2.50	Disagree	Less Effective
1	1.00 - 1.75	Strongly Disagree	Not Effective

This scoring method was chosen because it effectively captures varying degrees of attitudes, beliefs, or perceptions, making it particularly suitable for measuring complex psychological and social constructs. The aggregated data from the Likert scale responses provided a basis for understanding overall tendencies within the sample and for comparing sub-groups to identify any significant differences in perception.

Ethical Considerations

Informed consent was obtained from all participants. Confidentiality and anonymity were maintained throughout the research process, consistent with ethical standards in human subject research.

Hypothesis of the Study

This study is guided by the assumption that community-based programs play a significant role in reducing the incidence of teenage pregnancy in Tagoloan, Misamis Oriental. Based on the objectives and framework of the study, the following hypotheses were formulated:

Null Hypothesis (H₀):

There is no significant relationship between community-based programs and the reduction of teenage pregnancy cases among the selected residents of Tagoloan, Misamis Oriental.

Alternative Hypothesis (H₁):

There is a significant relationship between community-based programs and the reduction of teenage pregnancy cases among the selected residents of Tagoloan, Misamis Oriental.

RESULTS AND DISCUSSION

Statistical analysis confirmed the significance of community-based programs in reducing unwanted teenage pregnancies, rejecting the null hypothesis. This meant that community programs played an important role in reducing cases of teenage pregnancy All analyzed programs demonstrated meaningful correlations, indicating their effectiveness in addressing this pressing social issue. These findings underscore the necessity for continued investment in community initiatives that engage both young individuals and their families, fostering a supportive environment for discussions around sexual health. By doing so, communities can work collaboratively to empower teenagers with the knowledge and resources needed to make informed decisions, ultimately reducing the incidence of teenage pregnancy.

Problem 1. What is the level of awareness among residents in Tagoloan, Misamis Oriental, regarding community-based programs in preventing teenage pregnancy in terms of:

Table 1 presents the level of awareness of residents in Tagoloan regarding Information Drives on preventing teenage pregnancy. Overall, respondents agreed with the effectiveness of information drives, with a mean of 2.95 (SD = 0.64) interpreted as "High." The residents' overall agreement indicated that they saw these information drives as valuable in sharing knowledge about teenage pregnancy. This suggested that the community valued education and awareness as tools to combat teenage pregnancy. When people were aware of the issues and solutions, they were more likely to make informed choices. Such drives could create an environment where discussions about teenage pregnancy became normal and accepted, encouraging more young people to seek help and information. This showed a hopeful sign that the community could unite to address teenage pregnancy through shared understanding and support. A study by Somefun et al. (2021) emphasized that access to health information significantly enhances adolescents' ability to make informed decisions regarding sexual health, thereby reducing rates of teenage pregnancies.

Table 1. Level of Awareness in Preventing Teenage Pregnancy in Terms of Information Drive

Indicators	Mean	SD	Description	Interpretation
1. Information drive in our community effectively raises awareness about teenage pregnancy prevention.	2.96	0.61	Agree	High
2. The materials provided in the information drive are easy to understand and relevant to local teenagers.	2.96	0.59	Agree	High
3. Regular information drives in my community can help reduce the rate of teenage pregnancy in our community	2.93	0.74	Agree	High
4. The community's involvement in the information drive encourages open discussion on teenage pregnancy	2.96	0.65	Agree	High
5. I believe the information drive addresses the key issues surrounding teenage pregnancy effectively	2.97	0.61	Agree	High
Overall	2.95	0.64	Agree	High

The highest-rated indicator was "I believed the information drive addressed the key issues surrounding teenage pregnancy effectively," with a mean of 2.97 (SD = 0.61), interpreted as "Agree" and "High." The strong agreement on this statement suggested that residents felt the information drives were relevant to their needs. This meant that the content of the drives likely connected well with the concerns of the community. When people believed that the information given was effective, they were more likely to engage with it and share it with others. This could lead to a ripple effect, where more people become informed and involved in preventing teenage pregnancy. Such positive perceptions of the drives could encourage organizers to continue and improve these programs, making them even more impactful for the community. Research by Worku et al. (2016) found that effective communication strategies significantly improve engagement levels among adolescents in health-related programs, reinforcing the importance of content in information drives.

The lowest-rated indicator was "Regular information drives in my community could help reduce the rate of teenage pregnancy in our community," with a mean of 2.93 (SD = 0.74), interpreted as "Agree." While respondents still agreed that regular drives could be helpful, the lower score might have indicated some doubts about the actual impact of these drives on reducing teenage pregnancy rates. This could have shown that while awareness was important, the residents may have felt that more action was needed beyond just information sharing. It suggested a need for additional support and resources, such as community programs and services that addressed the root causes of teenage pregnancy. The community might have benefited from combining information drives with other strategies to create a more comprehensive approach to tackling the issue effectively. A study by Plan International (2019) highlighted that while informational campaigns are crucial, they must be supplemented with accessible healthcare services and community support initiatives to effectively reduce teenage pregnancy rates.

Noticeably, the responses of college-level students in Tagoloan, Misamis Oriental, regarding the effectiveness of information drives on teenage pregnancy prevention, reflect a nuanced perspective. Their "high" ratings across indicators suggest an appreciation for the efforts but also imply gaps or limitations are preventing these from being rated as "very high." One possible reason could be the accessibility and depth of the information provided. While the students agreed the materials were relevant and easy to understand, they may have found the

content somewhat surface-level, lacking in depth or in addressing the diverse and complex realities of teenage pregnancy. College students are often exposed to more detailed and critical analyses in their education, which might have set higher expectations for the information drives. Another factor might be the consistency and reach of these drives. Although the respondents agreed on their importance, they might have observed irregularities in their implementation or felt that the initiatives were not consistently reaching all segments of the community, particularly those most vulnerable to teenage pregnancy. This could have tempered their perception of the overall effectiveness. The lower rating for the statement about regular drives reducing teenage pregnancy rates highlights a potential skepticism about whether awareness alone is enough to address the issue. Being in college, these students likely recognize that teenage pregnancy is influenced by a range of socio-economic and cultural factors. They might feel that without tangible support systems—such as access to healthcare, contraceptives, counseling, and economic opportunities—information drives, while valuable, are insufficient to bring about significant change.

Additionally, cultural factors and taboos around discussing sexual health might have influenced their responses. Even if the information drives are effective, the broader societal reluctance to openly address such topics may dilute their impact. College students, while more open to these discussions, may still be influenced by the prevailing norms of their community, making them cautious in expressing unreserved confidence in the initiatives.

Lastly, the students' "high" ratings might also stem from a recognition of potential but unfulfilled opportunities. They may appreciate the intention and effort behind the information drives, but see room for improvement in terms of innovation, inclusivity, and engagement strategies to make them more compelling and impactful.

In essence, the respondents' feedback reflects a balanced acknowledgment of these programs' strengths while signaling areas for improvement. Their college-level education provides them with the analytical tools to identify gaps and suggests that a more comprehensive approach—integrating education, resources, and community collaboration—is needed to elevate the effectiveness of these efforts truly.

Table 2. Level of Awareness Preventing Teenage Pregnancy in Terms of Seminar Workshop

Indicators	Mean	SD	Description	Interpretation
1. The seminar workshops conducted in our community	2.89	0.56	Agree	High
provide valuable insights on preventing teenage				
pregnancy				
2. The content of the seminar-workshop is tailored to	2.90	0.60	Agree	High
the specific needs of teenagers in Tagoloan.				
3. Attending seminar workshops has influenced my	2.99	0.60	Agree	High
understanding of the causes and prevention of				
teenage pregnancy.				
4. Seminar workshops on teenage pregnancy should be	3.06	0.63	Agree	High
conducted more frequently in our community				
5. The skills and knowledge gained from the seminar-	2.98	0.58	Agree	High
workshops empower teenagers to make informed				
decisions about their reproductive health.				
Overall	2.96	0.59	Agree	High

Table 2 presents the level of awareness of residents in Tagoloan regarding the Seminar Workshops on preventing teenage pregnancy. Overall, respondents agreed with the seminar workshops, with a mean of 2.96 (SD = 0.59) interpreted as "High". The findings showed that residents were generally aware of the seminar workshops on preventing teenage pregnancy,

indicating a collective recognition of their importance in the community. This awareness may have stemmed from past experiences, where such workshops might have provided essential information to parents and teenagers alike. The overall agreement reflected a shared understanding that education played a crucial role in addressing teenage pregnancy issues. Furthermore, this response suggested that the community valued initiatives aimed at empowering youth with knowledge and resources. It was important for local leaders and organizations to continue promoting these workshops, as sustained awareness could lead to more informed choices among teenagers and their families. A significant support study by Mendez et al. (2019) highlighted that community-based education programs significantly increased awareness and knowledge about sexual health, thereby reducing rates of teenage pregnancy in similar demographics

The highest-rated indicator was "Seminar workshops on teenage pregnancy should be conducted more frequently in our community" with a mean of 3.06 (SD = 0.63), interpreted as "Agree." The strong agreement for conducting seminar workshops more frequently revealed a clear desire among residents for continued education and support in tackling teenage pregnancy. This suggested that the community saw a significant need for ongoing discussions and resources, highlighting that awareness was not enough without regular opportunities for engagement. Residents likely recognized that teenage pregnancy was a persistent issue requiring consistent attention and solutions. By advocating for more workshops, they expressed a commitment to fostering a healthier environment for young people. This enthusiasm could have encouraged local leaders to allocate more resources to these programs, leading to greater participation and a stronger impact on preventing teenage pregnancy. A study by Reyes et al. (2021) supports this finding, noting that regular educational interventions significantly improve community engagement and reduce teenage pregnancies. Additionally, the study of Philibert (2015) supports the strong community preference for more frequent seminar workshops on teenage pregnancy and highlights the effectiveness of well-structured, frequent adolescent pregnancy prevention programs. This study also emphasizes that consistent and evidencebased interventions help in shaping better knowledge, attitudes, and behaviors regarding teenage pregnancy. Programs that maintain regular engagement, such as workshops, not only provide vital information but also offer a supportive platform for discussions, reinforcing behavioral changes and long-term impact on prevention efforts.

The lowest-rated indicator was "The seminar workshops conducted in our community provided valuable insights on preventing teenage pregnancy," with a mean of 2.89 (SD = 0.56), interpreted as "Agree." While respondents agreed that the workshops provided some insights, the lower score indicated that there may have been room for improvement in the content and delivery of these seminars. Residents might have felt that the information shared could have been more relevant or practical for their specific circumstances. This suggested a need for the organizers to evaluate and enhance the workshop materials, ensuring they met the community's unique needs and concerns. By seeking feedback from participants and adapting the program accordingly, the workshops could have become more effective in equipping residents with the tools they needed to prevent teenage pregnancy. Improving the perceived value of these sessions could have led to increased engagement and more positive outcomes for the community. A relevant study by Santos et al. (2020) emphasized that educational content to meet specific community needs enhances its effectiveness in addressing issues like teenage pregnancy. The study highlights the critical role of frequent and targeted interventions, such as peer-led education and school-based workshops, in mitigating risky behaviors. By advocating for a multi-stakeholder approach, the research underscores the importance of shared responsibility in reducing teenage pregnancy rates and addressing their underlying causes.

Another relevant study supporting the result that seminars and workshops could be improved in terms of content and delivery is the research conducted by Kirby (2007). This study reviewed characteristics of effective adolescent pregnancy prevention programs, emphasizing the importance of curriculum relevance, clarity, and the method of delivery. Kirby identified that many programs failed to achieve optimal outcomes because they did not adequately consider community-specific needs or lacked interactive components that engaged participants effectively. This aligns with your findings that while the workshops provided some insights, there was room for improvement to meet the specific concerns of the community more comprehensively. Additionally, the qualitative study by Elliot and Okwumabua (1998) underscores the pivotal role of contextual relevance in the success of programs designed for adolescents. They found that such programs are most effective when they directly engage with the specific challenges and expectations faced by their target audience. This requires a deep understanding of the unique cultural, social, and personal dynamics that shape adolescents' experiences.

For example, cultural context might involve respecting and incorporating traditions, languages, or values that resonate with a particular group of adolescents. Social context could refer to addressing issues like peer influence, family dynamics, or community environments. On a personal level, tailoring content might mean considering developmental stages, individual aspirations, or the emotional realities of adolescence.

Moreover, the study highlights the importance of offering actionable and relatable strategies for change. This involves not only presenting information but also equipping adolescents with practical tools and realistic pathways to apply what they learn. By doing so, programs can empower young people to navigate their challenges and work toward positive outcomes in ways that feel relevant and achievable within their own lives. This holistic and tailored approach is critical for fostering meaningful engagement and sustained impact.

Table 3. Level of Awareness in Preventing Teenage Pregnancy in Terms of Consultation

Indicators	Mean	SD	Description	Interpretation
1. The consultation sessions provided for teenagers in our community offer useful guidance on preventing	3.01	0.63	Agree	
teenage pregnancy.				High
Consultations are accessible and confidential, making them a safe space for teenagers to ask questions.	2.94	0.64	Agree	High
3. The consultation services encourage teenagers to seek professional advice on reproductive health issues.	2.71	0.80	Agree	High
4. I believe consultations with healthcare professionals have a positive impact on teenage pregnancy prevention.	2.77	0.80	Agree	High
5. The consultation sessions help teenagers understand the consequences of early pregnancy and the importance of contraception.	3.02	0.69	Agree	High
Overall	2.89	0.71	Agree	High

Table 3 shows residents' level of awareness of Consultation services for preventing teenage pregnancy. Overall, respondents agreed with the consultation services, with a mean of 2.89 (SD = 0.71) interpreted as "High". The level of awareness among residents indicated a general acceptance of consultation services aimed at preventing teenage pregnancy. This awareness suggested that people recognized the need for such services in their community, which was crucial for addressing the issue of teenage pregnancy. Understanding these services could lead to better decisions among teenagers regarding their reproductive health. Moreover, as residents

became more informed, they might have discussed these services more openly with their peers, creating a supportive environment for teenagers. This acceptance laid a strong foundation for more effective programs in the future, ensuring that teenagers received the guidance they needed to make informed choices. A significant support study by Tsai and Wong (2015) emphasized the importance of community awareness and education in reducing teenage pregnancy rates, highlighting that informed communities are more likely to support preventive measures.

The highest-rated indicator was "The consultation sessions helped teenagers understand the consequences of early pregnancy and the importance of contraception," with a mean of 3.02 (SD = 0.69), interpreted as "Agree." This finding showed that residents believed the consultation sessions were effective in educating teenagers about the risks of early pregnancy. The fact that teenagers gained a clearer understanding of contraception and its significance could have empowered them to make better choices about their sexual health. When teenagers were aware of the consequences, they were more likely to take precautions and seek help when needed. This understanding not only helped reduce the rate of teenage pregnancies but also encouraged young people to talk to their parents and guardians about these issues. Thus, successful education through these sessions could have led to a healthier generation that valued informed decision-making. A study by Youth.gov (2016) found that comprehensive sexual health education significantly increased teenagers' knowledge about contraception and reduced rates of unintended pregnancies, reinforcing the effectiveness of such consultation sessions.

The lowest-rated indicator was 'The consultation services encouraged teenagers to seek professional advice on reproductive health issues,' which received a mean score of 2.71 (SD = 0.80), interpreted as 'Agree.' This indicates that while residents supported the idea of consultation services, they may feel that teenagers still hesitate to seek professional help. This lack of encouragement to approach health professionals could lead to gaps in knowledge and support for teenagers facing reproductive health challenges. If teenagers do not feel comfortable seeking advice, they may miss out on vital information and resources.

To address this issue, it is essential to create a more inviting atmosphere that encourages teenagers to reach out for help. Building trust and ensuring that adolescents feel safe discussing their concerns with professionals could lead to more informed choices and better health outcomes. A significant study by County Health Rankings (2023) emphasizes that increasing accessibility and comfort in seeking professional advice is crucial for improving adolescent reproductive health outcomes. Adolescents require targeted support in reproductive health issues to foster meaningful changes in their lives, particularly in addressing early pregnancy concerns. Empowering teenagers through peer education programs, community involvement, and culturally sensitive approaches can also contribute to overcoming barriers. These efforts should align with broader public health strategies to ensure sustainability and effectiveness in promoting reproductive health education and services.

Table 4 presents the level of awareness of residents in Tagoloan regarding the Budget Allocation for programs aimed at preventing teenage pregnancy. Overall, respondents agreed with the budget allocation, with a mean of 2.90 (SD = 0.70) interpreted as "High". Many residents recognized the importance of funding for programs that tackled teenage pregnancy, showing a collective understanding of how resources could make a difference. This agreement reflected a shared belief that the government should prioritize the health and future of the youth. When people saw the value in allocating funds to such programs, it often led to greater community support and engagement. As a result, this awareness inspired local leaders to allocate more resources to these important initiatives, ultimately benefiting the youth and the community. A study by Popkin et al. (2016) emphasizes that community awareness and

engagement significantly enhance support for funding initiatives aimed at adolescent health, reinforcing the idea that informed communities are more likely to advocate for necessary resources.

Table 4. Level of Awareness in Preventing Teenage Pregnancy in Terms of Budget Allocation

Indicators	Mean	SD	Description	Interpretation
1. The community allocates sufficient budget to support	2.93	0.69	Agree	High
programs aimed at preventing teenage pregnancy				
2. Increased budget allocation would significantly	3.05	0.70	Agree	High
enhance the effectiveness of teenage pregnancy prevention initiatives.				
3. I believe the current budget allocation for teenage	2.91	0.68	Agree	High
pregnancy prevention programs is well utilized.		0.00	8	8
4. The community prioritizes budget allocation for	2.82	0.71	Agree	High
teenage pregnancy prevention over other health				
issues.				
5. I feel that more financial resources should be	2.78	0.71	Agree	High
allocated to awareness campaigns and workshops on				
teenage pregnancy prevention.				
Overall	2.90	0.70	Agree	High

The highest-rated indicator was "Increased budget allocation would significantly enhance the effectiveness of teenage pregnancy prevention initiatives," with a mean of 3.05 (SD = 0.70), interpreted as "Agree." This strong agreement showed that residents believed more money could lead to better programs. When people felt confident that funding could improve initiatives, they were likely to support efforts that promoted these ideas. This understanding encouraged local governments to seek additional funding and resources, knowing that the community would back them. Increased funding also attracted experienced professionals and created more educational opportunities, further strengthening the fight against teenage pregnancy. In this way, community support and belief in financial investment led to meaningful change. Research by Smith et al. (2018) supports this notion, indicating that increased financial resources directly correlate with improved outcomes in teenage pregnancy prevention programs.

The lowest-rated indicator was "I feel that more financial resources should be allocated to awareness campaigns and workshops on teenage pregnancy prevention," with a mean of 2.78 (SD = 0.71), interpreted as "Agree." Although the response indicated some agreement, it also suggested that many residents may not have fully understood the need for more financial resources for awareness campaigns. This gap in perception could have led to fewer community discussions about the importance of education on this topic. If residents had not prioritized awareness efforts, it could have hindered the overall effectiveness of prevention programs. To address this, it was crucial to engage the community in conversations about the benefits of awareness campaigns and workshops. Raising awareness about the significance of education could have empowered residents to advocate for increased funding in this area, ultimately leading to more informed youth and healthier communities. A significant study by Johnson et al. (2020) highlights that enhancing community understanding of sexual health education is essential for garnering support for funding initiatives aimed at raising awareness about teenage pregnancy prevention.

Table 5 summarizes the overall level of awareness of residents regarding Community-Based Programs in preventing teenage pregnancy. The overall mean was 2.93 (SD = 0.66), interpreted as "High" with a verbal description as "Agree." This result suggested that residents generally recognized the importance of community-based programs aimed at preventing teenage

pregnancy. It indicated a positive level of awareness, which was crucial for encouraging participation and support for such initiatives. When community members understood these programs, they were more likely to share information and resources with others, leading to a collective effort in tackling the issue. A mean score close to 3 showed that most people saw these programs as helpful, which was a promising sign for future campaigns and activities. Overall, it highlighted the potential for increasing community involvement in programs that could foster a healthier environment for youth. This aligns with findings from Martinez-Garcia et al. (2019), which emphasized that community awareness and engagement are essential components in the effectiveness of teen pregnancy prevention initiatives.

Description **Indicators** SD Interpretation Mean Information Drive 2.95 0.64 High Agree Seminar Workshop 2.96 0.59 High Agree Consultation 2.89 0.71 Agree High **Budget Allocation** 2.90 0.70 High Agree Overall 2.93 0.66 High Agree

Table 5. Overall Summary Table of Level of Awareness in Preventing Teenage Pregnancy

The highest-rated indicator was "Seminar Workshop" with a mean of 2.96 (SD = 0.59), interpreted as "Agree." The strong support for seminar workshops indicated that residents found them valuable for learning about the prevention of teenage pregnancy. These workshops likely provided essential information, skills, and resources that empowered participants to make informed decisions. Residents appreciated the interactive nature of seminars, as they allowed for questions and discussions, making the learning experience more effective. By participating in these workshops, individuals gained confidence in discussing sensitive topics, which may have led to more open conversations in their families and communities. The high rating reflected a positive trend toward education, suggesting that continuing these workshops could have further enhanced community knowledge and engagement. This is supported by research from the Teen Pregnancy Prevention Program (TPP), which found that educational workshops significantly improve knowledge and attitudes towards sexual health among participants.

The lowest-rated indicator was "Consultation" with a mean of 2.89 (SD = 0.71), interpreted as "Agree." The lower score for consultation suggested that residents might not have fully understood the value or availability of consultation services related to preventing teenage pregnancy. This could have meant that while people agreed on its importance, they may have felt less informed or less involved in this aspect of community programs. It pointed to a need for increased promotion of consultation services, ensuring that residents knew how to access them and what benefits they offered. Encouraging more dialogue and feedback between community members and program providers could have strengthened this area and helped to create a more supportive environment for teenagers. Addressing this gap may have led to a better understanding and utilization of these essential resources. A study by the Office of Adolescent Health (2015) highlighted that enhancing communication about available resources is crucial for maximizing the impact of teen pregnancy prevention efforts.

The data in this study were analyzed using descriptive statistical measures, specifically the computation of means and standard deviations, to summarize and interpret residents' level of awareness. This statistical treatment provided a clear understanding of the responses' central tendency and variability of responses, allowing for an accurate interpretation of community perceptions and the effectiveness of information drives.

Problem 2. What is the level of effectiveness of the practice of contraceptives and celibacy in mitigating unwanted cases of teenage pregnancy?

Table 6. Residents' Beliefs on Mitigating Teenage Pregnancy Through
Contraceptive Practices

Indicators	Mean	SD	Description	Interpretation
1. I practice using contraceptive methods that are readily available.	2.69	0.79	Agree	High
2. I am using natural methods of contraception.	2.63	0.76	Agree	High
3. I undergo surgical operation as a means of contraception.	2.56	0.81	Agree	High
4. I am practicing both natural and artificial contraception.	2.71	0.72	Agree	High
5. I use contraceptive methods as my effective way of preventing unintended pregnancies.	2.78	0.73	Agree	High
Overall	2.67	0.76	Agree	High

Table 6 presents the extent to which residents believed in mitigating unwanted cases of teenage pregnancy through the Practice of Contraceptive Methods. Overall, the respondents agreed with the statements, with a mean of 2.67 (SD = 0.76) and interpreted it as "High". Many people recognized the importance of contraceptive methods in preventing unwanted pregnancies, which showed that they were aware of their options and the potential benefits. This agreement indicated that the community valued education about contraceptives, as understanding these methods could lead to healthier choices. By agreeing on this issue, residents may have felt more empowered to discuss contraception openly, which could have helped break the stigma surrounding it. This open conversation was essential, as it could lead to increased use of contraceptive methods among teenagers, ultimately reducing the rate of teenage pregnancies in the area. When people believed in the effectiveness of contraception, they were more likely to use it, leading to a healthier future for the youth. A study by Washington et al. (2016) supports this finding, indicating that increased awareness and education about contraceptive methods significantly correlated with lower rates of unintended pregnancies among adolescents.

The highest-rated indicator was "I used contraceptive methods as my effective way of preventing unintended pregnancies," with a mean of 2.78 (SD = 0.73), interpreted as "Agree." This high rating showed that many individuals felt confident in using contraceptives to prevent unintended pregnancies, reflecting a positive attitude toward family planning. People who used contraceptive methods were likely making informed decisions about their reproductive health, indicating they understood the importance of planning for the future. This proactive approach could have helped teenagers and young adults take control of their lives, reducing anxiety about unplanned events. By recognizing contraception as an effective tool, residents could have created a culture that supported responsible sexual behavior and promoted healthy relationships. This understanding could have led to more significant discussions about sexual health in the community, encouraging more young people to seek information and resources about contraceptive options. A study by the U.S. Department of Health and Human Services (2019) emphasizes that effective contraceptive use among adolescents is linked to improved outcomes in family planning and reduced rates of teenage pregnancies. Also, the report of the Guttmacher Institute (July 2020) emphasized that fully investing in contraceptive services would lead to a substantial decrease in unintended pregnancies. This reduction would, in turn, lower the need for pregnancy-related and newborn care, highlighting the cost-effectiveness and health benefits of contraceptive use.

The lowest-rated indicator was "I underwent a surgical operation as a means of contraception," with a mean of 2.56 (SD = 0.81), interpreted as "Agree." This lower rating suggested that while some individuals might have agreed with the effectiveness of surgical methods, many may have been hesitant or unsure about this approach to contraception. The concern around surgical options could have stemmed from fear of the procedure, potential health risks, or lack of information about the process. It was essential for communities to provide clear information about all contraceptive methods, including surgical options, so that individuals could make informed decisions. By addressing these concerns, healthcare providers could have helped reduce fears associated with surgical contraception and encouraged discussions about the various methods available. Understanding all options allowed residents to choose what was best for their bodies, leading to a more informed community that prioritized health and wellbeing. Research by Nascimento et al. (2021) highlights that misinformation and fear surrounding surgical contraception can significantly impact its acceptance among adolescents.

Table 7. The Extent to which Residents Believe in Mitigating Unwanted Cases of Teenage Pregnancy Through the Practice of Celibacy

Indicators	Mean	SD	Description	Interpretation
1. I abstain from engaging in pre-marital sex.	2.84	0.78	Agree	High
2. I practice celibacy.	2.77	0.79	Agree	High
3. I advocate promoting abstinence by doing it.	2.57	0.89	Agree	High
4. I adhere to no sex before marriage.	2.57	0.87	Agree	High
5. I avoid practicing pre-marital sex.	2.88	0.77	Agree	High
Overall	2.73	0.82	Agree	High

Table 7 presents the extent to which residents believed in mitigating unwanted cases of teenage pregnancy through the Practice of Celibacy. Overall, the respondents agreed with the statements, with a mean of 2.73 (SD = 0.82) and interpreted it as "High". The data indicated a strong belief among residents that practicing celibacy could help reduce unwanted teenage pregnancies. This reflected a community perspective that valued abstinence as a practical approach to preventing early pregnancies. It suggested that education and awareness about the benefits of celibacy might have been important for young people. Moreover, these results highlighted the need for support and resources that encouraged teenagers to make informed choices about their sexual health. Encouraging discussions around celibacy could have empowered young people to consider their options and understand the responsibilities that came with sexual activity. A study by Chiazor et al. (2017) supports this notion, indicating that comprehensive sex education empowers individuals to make informed decisions, thereby reducing teenage pregnancy rates through increased awareness and understanding of sexual health issues.

The highest-rated indicator was "I avoided practicing pre-marital sex," with a mean of 2.88 (SD = 0.77), interpreted as "Agree." This finding showed that most residents felt positively about avoiding pre-marital sex, which aligned with their views on celibacy as a method to prevent teenage pregnancy. It suggested that there was a strong community consensus on the importance of self-control and making responsible decisions regarding relationships. The higher mean score indicated that residents likely saw avoiding pre-marital sex as an effective way to protect themselves and their futures. This belief could also have pointed to cultural or religious influences that promoted abstinence until marriage. Building programs that reinforced this attitude could have helped strengthen the community's commitment to supporting young people in making choices that prioritized their well-being. Research by Paton et al. (2020) found that laws mandating sex education in schools can positively impact adolescent behavior

regarding sexual activity, aligning with the community's emphasis on self-control and abstinence.

The lowest-rated indicator was "I advocated promoting abstinence by doing it," with a mean of 2.57 (SD = 0.89), interpreted as "Agree." This result indicated that while residents agreed with the idea of promoting abstinence, they might have felt less confident or active in advocating for it themselves. This could have suggested a gap between personal beliefs and public advocacy, indicating that while individuals may have valued abstinence, they might not have felt equipped or motivated to share these views with others. It raised questions about the support systems available for those who wished to advocate for abstinence, such as educational resources or community programs. The lower score could also have reflected a need for more community engagement and discussion on how to effectively promote these values. Addressing this gap could have led to stronger advocacy efforts, ultimately benefiting young people in the community. A study by Skosana et al. (2020) highlighted the importance of parental involvement and community support in effectively promoting abstinence, suggesting that enhanced advocacy efforts could significantly benefit adolescents.

Table 8. Overall Summary Table on the extent to which Residents Believe in Mitigating Unwanted Cases of Teenage Pregnancy

Indicators	Mean	SD	Description	Interpretation
Practice of Contraceptive Method	2.67	0.76	Agree	High
Practice of Celibacy	2.73	0.82	Agree	High
Overall	2.70	0.79	Agree	High

Table 8 presented the summary of the extent to which residents believed in mitigating unwanted cases of teenage pregnancy. Overall, the respondents agreed with the statements, with a mean of 2.70 (SD = 0.79) interpreted as "High". The responses showed that most residents were aware of the need to reduce teenage pregnancy in their community. Their agreement suggested they recognized the importance of taking steps to address this issue. Many felt that teenage pregnancy could lead to challenges for young people and their families, affecting education and health. This understanding motivated residents to support programs and policies aimed at preventing teenage pregnancy. When people believed in the need for change, they were more likely to act, such as participating in educational activities or community initiatives. Such collective awareness and action could lead to a stronger, more informed community that valued the well-being of its youth. A study by Stroble (2016) highlights that social support significantly influences adolescent mothers' intentions and capacity to re-engage with education, emphasizing the critical role community awareness plays in addressing teenage pregnancy.

The highest-rated category was "Practice of Celibacy," with a mean of 2.73 (SD = 0.82), interpreted as "Agree." The strong support for celibacy showed that many residents believed in the value of waiting until they were older and more prepared for relationships. This idea may have stemmed from cultural or religious beliefs that encouraged young people to focus on their education and personal growth before starting families. By promoting celibacy, the community could have helped teenagers understand the importance of making informed choices about their bodies and futures. This belief could also have led to fewer risky situations that might have resulted in early pregnancies. When young people adopted such values, they may have had better chances of achieving their goals and leading more stable lives. Encouraging celibacy as a positive choice could have created a supportive environment for youth development. Research indicates that strong family support correlates with better educational outcomes for

adolescents, reinforcing the notion that community values around celibacy can foster healthier decision-making among youth (Stroble, 2016).

The lowest-rated category was "Practice of Contraceptive Method," with a mean of 2.67 (SD = 0.76), interpreted as "Agree." The lower support for using contraceptive methods indicated that there might have been some hesitance or lack of knowledge about these options among residents. This could have been due to cultural beliefs, misinformation, or limited access to resources that provided education about contraception. If residents were not fully embracing contraceptive practices, it could have led to an increase in unplanned pregnancies among teenagers. Understanding contraceptives was crucial for empowering young people to make safe and informed choices. By addressing this gap in knowledge, communities could have provided better education and resources to help reduce teenage pregnancy rates. This focus on contraception could have led to healthier choices and futures for young people, helping them avoid the challenges of early parenthood. A qualitative study found that inadequate support systems often exacerbate the challenges faced by adolescent mothers, highlighting the necessity for comprehensive education on contraceptive methods as part of community initiatives.

The statistical treatment used in this data interpretation relies on descriptive statistics to summarize and explain the findings. Specifically, measures of central tendency, such as the mean, were employed to determine the average responses for each indicator, including "Practice of Contraceptive Method" and "Practice of Celibacy." The data was also categorized into qualitative descriptions like "Agree" and "High" to provide a clearer context for interpreting the numerical values. These descriptive labels help to articulate the extent of agreement and the perceived importance of the indicators among respondents. While the analysis does not include inferential statistical methods, such as correlations or hypothesis testing, the use of descriptive statistics effectively summarizes perceptions and attitudes. Moreover, the interpretation integrates qualitative insights, such as cultural beliefs and potential gaps in knowledge, to provide a more comprehensive understanding of the results.

Problem 3. Is there a significant relationship between Community-based programs and mitigating unwanted cases of teenage pregnancy?

Table 9. Correlation Between Community-based Programs and Mitigating Unwanted Cases of Teenage Pregnancy

Correlation Community-based programs		Mitigating Unwanted Cases				
		Practice of Contraceptive Method	Practice of Celibacy	Over-all	Decision	Interpretation
Information Drive	Pearson r	0.175	0.309	0.284	Reject H ₀	Significant
	Relationship Strength	Very Weak	Weak	Weak		
	p-value	0.002	< 0.001	< 0.001		
Seminar Workshop	Pearson r	0.363	0.269	0.372	Reject H ₀	Significant
	Relationship Strength	Weak	Weak	Weak		
	p-value	< 0.001	< 0.001	< 0.001		
Consultatio n	Pearson r	0.288	0.536	0.484	Reject H ₀	Significant
	Relationship Strength	Weak	Moderate	Moderate	-	
	p-value	< 0.001	< 0.001	< 0.001		
Budget Allocation	Pearson r	0.383	0.399	0.461	Reject H ₀	Significant
	Relationship Strength	Weak	Weak	Moderate		
	p-value	< 0.001	< 0.001	< 0.001		

Note: Relationship Strength Scale: 1(Perfect); ± 0.80 to ± 0.99 (Very Strong); ± 0.61 to ± 0.79 (Strong); ± 0.41 to ± 0.60 (Moderate); ± 2.1 to $\pm .40$ (Weak); $\pm .01$ to $\pm .20$ (Very Weak). **. Correlation is significant at the 0.01 level (2-tailed); **. Correlation is significant at the 0.05 level (2-tailed). p < 0.05 (significant) and p > 0.05 (not significant)

Table 9 presents the correlation analysis results between community-based programs and their effectiveness in mitigating unwanted cases of teenage pregnancy. The analysis showed that all community-based programs, including Information Drives, Seminar Consultations, and Budget Allocations, exhibited significant correlations with mitigating unwanted cases. Overall, the findings rejected the null hypothesis (Ho). This meant that community programs played an important role in reducing cases of teenage pregnancy. When communities invest in education and resources, they can help teenagers make better choices about their bodies and futures. These programs provide knowledge and support, which are essential for guiding young people. As more teenagers receive accurate information about sexual health, they are likely to use contraceptives and consider celibacy as a viable option. This showed that with the right programs in place, communities could effectively reduce unwanted teenage pregnancies. A study by Goyder et al. (2015) supports these findings, indicating that community-based interventions significantly lower teenage pregnancy rates through educational approaches and resource allocation.

The strongest correlation was observed in Consultations, which showed a moderate relationship in overall mitigating unwanted cases of teenage pregnancy, with (Pearson r = 0.484, p < 0.001). Consultations offered teenagers personalized support and advice, helping them understand their options better. This one-on-one interaction made it easier for them to ask questions and express their concerns. When teenagers felt comfortable talking about their issues, they were more likely to seek help and learn about contraceptive methods and celibacy. This could lead to healthier choices and reduce the chances of unwanted pregnancies. The strong correlation also highlighted the importance of having accessible consultation services in the community, so that every teenager could benefit from them. A significant study by Shearer et al. (2018) found that personalized consultation services effectively reduced rates of teenage pregnancy by providing targeted support and information.

Similarly, Budget Allocation also reflected a moderate correlation with overall mitigating efforts (Pearson r = 0.461, p < 0.001). Having a dedicated budget for community programs ensured that these initiatives could run effectively and reach more young people. When funds were available, programs could expand their reach and provide more resources for education and support. This meant that teenagers could access workshops, consultations, and materials that helped them make informed decisions. A strong budget also allowed for the training of staff who could deliver these programs effectively. This financial support was crucial for reducing unwanted teenage pregnancies, as it directly impacted the quality and availability of services offered to young people. Research by the County Health Rankings team (2023) emphasizes that adequate funding for teen pregnancy prevention programs is essential for their success in reducing adolescent pregnancy rates.

The seminar and Workshop also reflected a weak correlation in mitigating unwanted cases of teenage pregnancy, with (Pearson r=0.372, p<0.001). While these programs were helpful, they may not have provided the same level of personalized support as consultations. Workshops often involved larger groups, which could make it difficult for individuals to engage and ask questions. This could limit the impact of the information shared, as some teenagers might have felt shy or uncomfortable discussing sensitive topics in front of others. However, the significance of the correlation suggested that these seminars still played a role in educating teens. Communities should have considered combining workshops with smaller group discussions or individual consultations to enhance their effectiveness in preventing unwanted pregnancies. A systematic review by Coakley et al. (2019) indicates that while group workshops are beneficial, integrating smaller group discussions can significantly improve engagement and outcomes related to teenage pregnancy prevention.

In contrast, the Information Drive revealed weaker relationships in mitigating unwanted cases of teenage pregnancy, with (Pearson $r=0.284,\ p<0.001$), but it was still significant. Information Drives often involve broad outreach strategies, such as flyers and social media campaigns, which could spread awareness quickly. However, they may have lacked the depth and personal connection found in other programs. While these drives were good for raising awareness, they might not have provided the necessary guidance and support that teenagers needed to make informed choices. The weaker correlation indicated that simply sharing information was not enough; young people may have required more interactive and engaging methods to truly understand and apply the knowledge they received. This suggested that while Information Drives were useful, they should have been part of a larger strategy that included more direct and personalized support for teenagers. A study by HHS (2022) supports this notion by highlighting that effective teen pregnancy prevention requires not only awareness but also interactive engagement strategies to foster understanding among adolescents.

The statistical treatment used in this data interpretation is correlation analysis through the use of Pearson's correlation coefficient (Pearson's r). This method evaluates the strength and direction of the relationship between community-based programs (independent variables) and their effectiveness in mitigating unwanted teenage pregnancies (dependent variables). The analysis measured the correlation strength for different initiatives, such as Information Drives, Seminar Workshops, Consultations, and Budget Allocations, in relation to outcomes like the practice of contraceptive methods, celibacy, and overall effectiveness. The significance of these relationships was determined by p-values, with all correlations in the study being statistically significant (p < 0.001), leading to the rejection of the null hypothesis (Ho). This demonstrates that community-based programs have a meaningful impact on reducing teenage pregnancy rates.

Problem 4. What are the gaps in this research study?

Findings reveal relevant research gaps that need to be considered, fostering a more inclusive study.

Underrepresentation of Female Respondents. In the discussions about teenage pregnancy, female participation is essential as their perspectives and experiences are directly relevant to understanding and addressing the issue. Their firsthand experiences provide invaluable insights into the challenges they face and the factors that contribute to or prevent early pregnancies. Furthermore, female respondents can share their knowledge and experiences, helping researchers identify gaps in current education, outreach, or community-based programs. Including female respondents ensures that the research on teenage pregnancy is grounded in real-world experiences. Their participation helps create solutions that are empathetic, practical, and tailored to the needs of those most affected. This inclusivity ultimately leads to more effective and sustainable programs and policies for teenage pregnancy prevention and support.

Deficiency in the Representation of Parents and Elderly. The representation of mothers, parents, and elderly individuals in discussions of teenage pregnancy is crucial due to their significant influence on the lives and decisions of teenagers. Parents, particularly mothers, often serve as primary caregivers and role models, shaping their children's understanding of relationships, sexuality, and reproductive health. Their perspectives provide critical insights into the family dynamics, cultural expectations, and communication patterns that can either prevent or contribute to teenage pregnancies. Including the elderly in these discussions adds a generational perspective, highlighting how societal norms and values around teenage pregnancy have evolved over time and how traditional beliefs might still impact behavior and decision-making today.

Furthermore, parents and elderly community members play a key role in fostering an environment where teenagers feel comfortable seeking guidance on sensitive topics. Their views can help identify gaps in education, healthcare, and community support systems, ensuring that interventions address real needs. By incorporating their perspectives, programs can also bridge the gap between generations, promoting shared responsibility and collective action in preventing teenage pregnancies. Ultimately, their inclusion ensures that solutions are holistic, culturally appropriate, and grounded in the lived realities of families and communities.

Lack of Representation of Barangay Health Workers (BHW). Barangay Health Workers (BHWs) play a crucial role in addressing teenage pregnancy within communities. As frontline healthcare providers, they are often the first point of contact for adolescents and families, making them essential in the dissemination of information and resources. BHWs contribute significantly to educating teenagers about reproductive health, family planning, and the consequences of early pregnancies. Through counseling and outreach activities, they create awareness about contraception, safe practices, and the importance of delaying pregnancy until the appropriate time.

Moreover, BHWs act as mediators between healthcare institutions and the community, ensuring that teenagers have access to necessary medical services, including prenatal care for young mothers and postnatal support. Their presence within the barangay allows them to foster trust and provide culturally sensitive guidance, addressing the unique challenges faced by adolescents in their specific social and cultural contexts. They also play a key role in identifying at-risk teenagers and linking them to support systems, such as community programs or social services, to prevent further complications.

In addition to health education, BHWs often advocate for policy changes and program implementation at the grassroots level, ensuring that teenage pregnancy prevention remains a priority within local governance. Their contributions are instrumental in reducing stigma, fostering open discussions about reproductive health, and creating a supportive environment where teenagers feel empowered to make informed decisions. By bridging the gap between healthcare services and the community, BHWs are indispensable in mitigating the prevalence and impact of teenage pregnancies.

Overlook Representation of Educators. The representation of educators in surveys about teenage pregnancy is crucial because they play a significant role in shaping the knowledge, attitudes, and behaviors of teenagers. Educators are often at the forefront of providing comprehensive sexual education, which is a critical tool in preventing teenage pregnancies. Their insights can highlight gaps in the curriculum, the effectiveness of existing educational programs, and the challenges in addressing sensitive topics like reproductive health. Additionally, teachers interact with students daily and are well-positioned to observe behavioral patterns, risk factors, and the influence of peer pressure that may contribute to early pregnancies.

Furthermore, educators can provide valuable perspectives on the support systems required in schools to assist at-risk students, such as counseling services and awareness campaigns. Their experiences can help identify barriers, such as cultural sensitivities or lack of resources, that hinder effective teenage pregnancy prevention strategies. By involving educators in the research, policymakers and program designers can ensure that prevention initiatives are practical, educationally sound, and aligned with the real-world needs of students. Ultimately, their participation enhances the reliability and applicability of the study, contributing to more informed and impactful interventions.

Nonexistence Representation of Community Leaders. The representation of community leaders in the conduct of a survey about teenage pregnancy is vital for several reasons. Community leaders, including local government officials, educators, health workers, and religious leaders, play a key role in shaping the attitudes, behaviors, and resources available within a community. Their involvement ensures that the survey reflects the broader social, cultural, and economic context that affects teenage pregnancy. These leaders often have firsthand knowledge of the challenges and barriers faced by young people in their communities, as well as insights into the effectiveness of current programs and policies aimed at prevention. Furthermore, community leaders can help bridge trust gaps between researchers and the residents they aim to study, facilitating greater participation and more candid responses. Their leadership and support are also crucial for ensuring that the findings of the survey are translated into actionable solutions that align with community needs. Overall, the inclusion of community leaders ensures that the survey is not only relevant and accurate but also fosters a collaborative approach to addressing teenage pregnancy in ways that are culturally appropriate and sustainable.

Nonrepresentation of Teenage Mothers. The presence of young mothers in the conduct of a study about teenage pregnancy is invaluable. Their lived experiences provide a unique and authentic perspective that cannot be captured through theoretical analysis or second-hand accounts. As individuals who have directly navigated the challenges, responsibilities, and societal perceptions associated with teenage motherhood, they offer critical insights into the complexities of this issue. Young mothers can shed light on the multifaceted realities of teenage pregnancy, including the emotional, social, and economic impacts. Their voices help uncover the nuances of their journeys, from the initial discovery of pregnancy to the day-to-day challenges of parenting. This perspective is essential for understanding the barriers they face, such as access to education, healthcare, and social support, as well as the coping mechanisms they employ to overcome these obstacles.

Including young mothers in the research process also ensures that the study remains grounded and relevant to those it seeks to represent. Their participation can help identify gaps in current policies, programs, and support systems that may not be apparent to researchers or policymakers without firsthand accounts. For example, they can provide detailed feedback on the effectiveness of sex education programs, accessibility of reproductive healthcare, and the adequacy of community resources.

Moreover, their involvement lends a sense of empowerment and validation to young mothers. By actively contributing to the research, they become partners in shaping solutions, rather than passive subjects of study. This collaborative approach fosters trust, enriches the data with real-world experiences, and promotes a more inclusive and compassionate understanding of teenage pregnancy.

In sum, the presence of young mothers in studies about teenage pregnancy is not just beneficial—it is essential. Their contributions ensure that the findings are comprehensive, impactful, and reflective of the true needs and experiences of the population being studied. Their voices bring depth, authenticity, and humanity to the research, paving the way for more effective and empathetic interventions.

Methodological Challenges. Addressing the gap in methodological challenges in the conduct of surveys about teenage pregnancy is vital to ensure the reliability, accuracy, and ethical soundness of the research. Methodological challenges, such as accessing teenage populations, ensuring confidentiality, and gaining informed consent, can hinder the collection of comprehensive and representative data. These barriers, if unaddressed, may lead to incomplete or biased findings, which can misinform policies and interventions. Moreover, ethical considerations, particularly when engaging with minors, are crucial to maintaining the integrity

of the research and protecting respondents from potential harm or stigma. Overcoming these challenges allows for the inclusion of diverse voices, especially those directly affected by teenage pregnancy, ensuring that the study captures a holistic view of the issue. By addressing these gaps, researchers can design effective, culturally sensitive, and actionable strategies that contribute to reducing teenage pregnancy rates and mitigating its social, health, and economic impacts.

Geographical Biases. Addressing the gap of geographical bias in surveys about teenage pregnancy is critical for ensuring a comprehensive and equitable understanding of the issue. Geographic bias occurs when research disproportionately focuses on certain areas, such as urban settings while neglecting rural or underserved regions. This bias can result in findings that are not representative of the diverse circumstances influencing teenage pregnancy. For instance, teenagers in rural areas may face unique challenges, such as limited access to healthcare services, inadequate sexual education, and cultural norms that differ significantly from those in urban areas. Without including these perspectives, interventions may fail to address the root causes of teenage pregnancy in specific communities.

Moreover, addressing geographical bias ensures that resources and programs are allocated more effectively and equitably. Policymakers and stakeholders need accurate, location-specific data to design tailored solutions that cater to the needs of all populations. Furthermore, addressing geographical biases ensures that interventions are context-specific, effectively targeting both urban and rural communities with tailored solutions.

The statistical treatment used in the data interpretation is descriptive analysis. The interpretation identifies and discusses various research gaps related to underrepresentation across specific groups, including female respondents, parents, elderly individuals, barangay health workers (BHWs), educators, community leaders, and teenage mothers. These gaps highlight areas where the inclusion of diverse perspectives would enhance the comprehensiveness and relevance of research on teenage pregnancy. The descriptive approach explores themes and challenges such as methodological limitations, geographical biases, and the roles of different community members, emphasizing the need for inclusivity and representation. By examining these gaps intentionally, the study identifies barriers to holistic research and highlights the importance of engaging directly affected groups to inform more practical, equitable, and effective interventions for preventing teenage pregnancy. This method provides a nuanced understanding of the issue, focusing on real-world implications rather than statistical relationships. Ultimately, this descriptive approach provides a framework for developing equitable policies and programs that are grounded in comprehensive, culturally sensitive insights.

CONCLUSION

Community-based programs emerged as a key factor in mitigating unwanted cases of teenage pregnancy. Among the various initiatives, Seminar Workshops received the highest ratings, showcasing their effectiveness in promoting engagement and understanding of the issues at hand. These interactive sessions encourage participants to discuss and reflect on teenage pregnancy prevention actively. By fostering an environment that promotes open dialogue, these programs not only educate but also empower individuals to make informed choices regarding their sexual health.

The belief in the Practice of Celibacy as a means of preventing teenage pregnancy indicates a strong cultural inclination toward abstinence until individuals are more prepared for relationships. This insight highlights the need for programs that not only provide education but

also address cultural and social values that influence teenage behavior. Such an approach can lead to a more comprehensive understanding of the factors contributing to teenage pregnancy and the development of more effective prevention strategies.

Statistical analysis confirmed the significance of community-based programs in reducing unwanted teenage pregnancies, rejecting the null hypothesis. All analyzed programs demonstrated meaningful correlations, indicating their effectiveness in addressing this pressing social issue. These findings underscore the necessity for continued investment in community initiatives that engage both young individuals and their families, fostering a supportive environment for discussions around sexual health. By doing so, communities can work collaboratively to empower teenagers with the knowledge and resources needed to make informed decisions, ultimately reducing the incidence of teenage pregnancy.

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