ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

CANOSSA COLLEGE
College of Nursing

"I Pink I Can" Breast Cancer Intervention Program: Its Effectiveness in Raising Knowledge among Junior High School Students of San Pablo City Integrated High School

[1]Joseph Gandrix D. De Leon; [2]Maria Ravelyn T. Balmes; [3]Fiorella Carla A. Dy Ning; [4]Fiona M. Almario; [5]Jewel Shein Feliciano; [6]Girlie Mannphy A. Lacambra, R.M, R.N, M.A.N; [7]Marc Lester F. Quintana, Ed.D., M.A.N., R.N. (US-RN)
Department of Nursing, Canossa College - San Pablo City, Inc.
NCM-115: Nursing Research 2
Dr. Marc Lester F. Quintana

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

APPROVAL SHEET

In partial fulfillment of the requirements for the Bachelor of Science in Nursing degree, this undergraduate thesis entitled "I Pink I Can" Breast Cancer Intervention Program: Its Effectiveness in Raising Awareness among

Junior High School Students of San Pablo City Integrated High School, has been prepared and submitted by FIONA M. ALMARIO, MARIA RAVELYN T. BALMES, JOSEPH GANDRIX D. DE LEON, FIORELLA CARLA A. DY NING, and JEWEL SHEIN FELICIANO, who are hereby recommended for Final Oral Examination.

GIRLIE MANNPHY A. LACAMBRA M.A.N., R.N., R.M.
Adviser

Approved and recommended by the Committee on Oral Examination with a grade of ____.

MARC LESTER F. QUINTANA, Ed.D., M.AN., R.N. (US-RN)
Chairperson

KATHLEEN B. CORCOLON, M.A.N., R.N.
Co-Chairperson

PAUL ADRIAN S. AVECILLA, RPm
Panel Member

Accepted and approved partial fulfillment of the requirements for the degree
BACHELOR OF SCIENCE IN NURSING.

SISTER RITA D. NEDTRAN, FdCC
Dean, College of Nursing

Date: April 28, 2024

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

ACKNOWLEDGEMENT

The road to success is constantly challenging, however, we are privileged and blessed to be surrounded by such incredible individuals. The researchers would like to extend their sincere gratitude to the following individuals for helping in making this study feasible and successful:

To Sr. Rita D. Nedtran, FdCC, the Dean of College of Nursing, for her guidance and unwavering support on this journey.

To Mr. Marc Lester F. Quintana, Ed.D., M.AN., R.N. (US-RN), our research teacher, who shared his extensive expertise and knowledge in creating a comprehensive thesis paper.

To Ms. Girlie Mannphy A. Lacambra, MAN, RN, RM, our research adviser, for giving the researchers the drive to be successful, and for her time and effort in making sure that we are providing a comprehensive thesis paper.

To Mr. Ryan Michael Oducado, for allowing the researchers to use and adopt their validation tool.

To Mrs. Lucila Bujactin, LPT, MACDDS, for giving the researchers her time and effort in checking and correcting the Filipino translation of the research instrument.

To Ms. Angela Jean C. Reyes, RPm, the researchers' statistician, whose expertise in statistics provided invaluable throughout the data collection, analysis, and interpretation.

To Ms. Jessica A. Montoya, LPT,MAEd, the researcher's english critic, her time and effort in checking and correcting the research paper.

To Ms. Norlen Dwight Valmon,RN, Clinical Instructor, in attending to researchers' needs and requests.

To Dr. Celeste Castillo-Santiago M.D. and Dr. Aldine Astrid Basa M.D. for giving the researchers their time and effort in validating the research instrument.

To Mrs. Cristeta E. Uy, Ed.D. for allowing the researchers to use San Pablo City Integrated High School as the research locale.

To Mr. John Roldan C. Dimaano, LPT, for his steadfast support and assistance throughout the data gathering phase of the research.

To Ms. Cecile Arrogancia,LPT, Ms.Ludy Casia,LPT, Ms.Rhea Lopez,LPT, and Mr. Darren Alinea,LPT, for allowing the researchers to use their advisory class as the subjects.

To Mr. Paul Adrian Avecilla, RPm, Statistician/Panel Member, for being a big help by giving suggestions to the researchers.

To Mrs. Kathleen B. Corcolon, MAN, RN, clinical instructor, for her comprehension and assistance to every student conducting their research.

To Mrs. Vivian P. Lajara, MAN, RN, clinical instructor, for lending the researchers her time and effort in validating the research instrument and by providing support for every student undertaking their research.

To our Family and Friends, for their unwavering love, support, and words of motivation throughout our journey in thesis writing.

To Ms. Lynette Cariño, for her help with printing and her generous overtime support to assist the researchers in completing the paper.

To Ms. Vynz Ardeyn Bacay, Ms. Althea Jean delos Reyes, Ms. Isabelle Mandap, Ms. Helyslyth Osuna and Mr. Gabriel Pangadan, for lending their time to give research study advice and never-ending support.

To the Junior High School Students of San Pablo City Integrated High School, who took part in the study as the subjects, as they cooperated and actively answered the questions from pretest to post-test, which enabled the researchers to achieve their study's aim.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

To Canossa College Nightingales Class of 2025, for the love, encouragement, and support they have given to each group that is doing their best to finish and create a reliable and well-written thesis paper.

To Mr. Henry Gapit and Hon. Maria Evita Arago-Gapit, for being distinguished sponsors who provided financial assistance to the researchers.

Lastly, to the Almighty God, for giving the researchers the guidance, strength, wisdom, patience, and perseverance all throughout the thesis writing.

F.M.A.
M.T.R.B.
J.G.D.D.L.
F.C.A.D.N.
J.S.F.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

C E R T I F I C A T I O N

This is to certify that the study of **FIONA M. ALMARIO, MARIA RAVELYN T. BALMES, JOSEPH GANDRIX D. DE LEON, FIORELLA CARLA A. DY NING,** and **JEWEL SHEIN FELICIANO,** titled **"I Pink I Can" Breast Cancer Intervention Program: Its Effectiveness in Raising Awareness among Junior High School Students of San Pablo City Integrated High School"** has been reviewed and evaluated grammatically.

This certification is issued upon the request of the abovementioned names for whatever legal purpose it may serve.

Given this 18th day of July, 2024 at Liliw, Laguna.

JESSICA A. MONTOYA, LPT, MAEd
English Critic

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

DEDICATION

To our loving parents, this thesis is dedicated to you, with heartfelt gratitude for your boundless support and unyielding belief in our dreams. Thank you for never doubting us for a second; you have been our inspiration throughout this academic endeavour.

To our supportive friends, CNB 2025, the difficult process of finishing our research papers has really been made enjoyable and doable by your constant encouragement and support. Thank you for being an incredible part of our batch, and we look forward to continuing our camaraderie in the future.

This entire research paper is a humble offering to Your infinite compassion and healing grace, our All-Powerful God, the source of all knowledge, wisdom, strength, and understanding. May the fruits of this labor exalt Your glory. Amen.

F.M.A.
M.T.R.B.
J.G.D.D.L.
F.C.A.D.N.
J.S.F.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

ABSTRACT

As incidence rates rise from one in ten women to one in eight by 2023, breast cancer continues to be a serious worldwide health concern. Regardless of its rarity in men, this study included men in addition to women who frequently get breast cancer. Both sexes are affected by breast cancer, and its effects frequently get worse when discovered in advanced stages. This study highlights the importance of breast cancer education for people of all genders, in order to improve early detection and treatment outcomes. It aims to support the Sustainable Development Goal of "Good Health and Well-Being" by increasing Junior High Students' knowledge about breast cancer through an intervention program. Using a quasi-experimental design, 156 students' knowledge was assessed via a pre-test and post-test after exposure to leaflets, posters, and health teaching. A rigorously tested questionnaire focused on: breast cancer, signs and symptoms, risk factors, risk populations, and breast cancer screening showed that while students had basic knowledge initially, misconceptions were common. Post-intervention results demonstrated a significant increase in correct responses, indicating that the program effectively improved knowledge and corrected misconceptions. This underscores the value of targeted health education in promoting breast health and encouraging preventive measures.

Keywords:- *Breast Cancer, Junior High School Students, San Pablo City Integrated School, Knowledge, Intervention Program*

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

TABLE OF CONTENTS

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

LIST OF TABLES

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

LIST OF FIGURES

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

CHAPTER ONE
THE PROBLEM AND ITS BACKGROUND

This chapter comprised the nature of the problem and its background, theoretical frameworks, statement of the problem, the significance of the study, scope and limitations, and the definition of terms, to ensure that the readers clearly comprehended and familiarized themselves with the study.

A. Introduction

Breast cancer is a condition that targets the breast part of a woman's population but can also occur in men. This happens when abnormal breast cells grow out of control (American Cancer Society, 2021). This type of condition happens in every corner of the world. In terms of risk factors, at least 50% of all cases of breast cancer that occur in women have no specific risk factor other than their age and sex. That said, only 0.5–1% of breast cancer in the world occurs in men (World Health Organization, 2023).

The World Health Organization said the world's top cancer type is breast cancer. It caused about 2,300,000 cases and 685,000 fatalities in 2020. At the end of that year, it was reported that there were at least 7, 800, 000 million women alive in the past five years who had been diagnosed with this condition. According to local statistics here in the Philippines, the total number of cancer cases is 86,484 per year, and 27,163 of these are breast cancers, which is 31.41%. Breast cancer claimed 9,926 lives among Filipino women. It's the third most significant cause of mortality among types of cancer here in the Philippines.

In fact, in the year 2019, the country had the highest rate of breast cancer in Asia, and in terms of worldwide statistics, the Philippines ranked ninth (Villanueva and Porcalla, 2023). Moreover, in 2023, there were an estimated 297,790 newly discovered cases of breast cancer that had been diagnosed in women, while in men, there were 2800 new cases that had been diagnosed (Breast Cancer Statistics, 2023).

Most of the cases of breast cancer, specifically 65-70% here in the Philippines, are diagnosed in the late or advanced stages, caused by inadequate or lack of early detection (Montemayor and Maria Teresa, 2023). The Department of Health stressed the significance of knowing and doing a proper regular breast-self-examination. The agency also reminds us about the crucial role of detecting the disease at an early stage including the utilization of breast cancer screenings and programs (Department of Health, 2021). Also, she stressed that the screening for breast cancer should start as menstruation begins. As early as 15 years old, a teenager can already have breast cancer. Furthermore, the youngest reported breast cancer patient is a 19-year-old girl whose mother was also diagnosed with the condition (Antolin, 2023). Moreover, according to the local health office of San Pablo City, there were 33 cases of breast cancer here in the city last year, in 2022. In addition, the latest tally of breast cancer cases here in San Pablo City from January up until October this year is already 21. The youngest reported breast cancer patient who died is 29 years old.

Finding new ways and perspectives that could advance innovations in disease prevention, early detection, treatment, and improving the standard of living of the members of the community, especially females during puberty, is the primary motive of the researchers in pursuing this study. Moreover, ongoing research advances people's consciousness of the condition's intricacies, giving us the chance to safeguard ourselves not only as researchers but also as individuals who are at risk of acquiring this specific noncommunicable disease.

This establishes the way for refined self-assessment and screening to reduce the chance of developing this malignancy from the earliest age someone can have it. Considering the high occurrence of breast cancer, this study focuses on dealing with existing difficulties and improving overall outcomes regarding the illness.

Despite having a consistent record that dates back more than 3,500 years to the Ancient Egyptians, who were the first ones to have known the disease (Mandal, 2019), studies and research on breast cancer persist to be very significant and timely. With no known cure in sight, breast malignant tumors continue to be highly prevalent and indicate a serious risk to women's health all across the globe. Notwithstanding all of the data that is accessible nowadays and the significant rates of morbidity and mortality connected to this disease, researchers believe that more studies and interventions for cancer prevention are necessary, for not everyone is adequately aware of or concerned about their chances of acquiring it. Another reason why the researchers conducted this study is due to the concerning rise in the incidence rate of breast cancer. Several years ago, there were one out of ten Filipina women who acquired breast cancer, but in 2023, it increased to one out of eight women. This only means that there was a rapid increase in the susceptibility to this disease. Regardless of its low occurrence in teenagers, it was very alarming that young women suffer more when they acquire breast cancer, and this severe suffering occurs even in the earliest stages of the condition (Stage I and Stage II), causing a lower survival rate compared to those older women who acquire breast cancer.

The researchers identified knowledge and population gaps. They found that there was not enough literature talking about breast cancer. Most of the literature available is mostly about older women, which is not the main subject in this study. Given the identified research gaps, the researchers conducted an intervention program that assessed the level of knowledge the subjects had regarding breast cancer.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

The aim of the study was to assess and know the efficacy of the intervention program and how it enhances knowledge among the subjects. Considering the urgency of conducting and acquiring breast cancer screening and early detection programs to address the alarming increase in terms of the incidence, morbidity, and death rate of this fatal condition, this reason urged the researchers to conduct a study that has determined the level of knowledge of the subjects and assessed their knowledge regarding breast cancer. The researchers are positive that through this study, members of our society became more aware and knowledgeable about the totality of breast cancer. This study also partakes in fulfilling the sustainable development goal of "Good Health and Well-being". This study offered relevant information regarding the proper ways of taking care of our breasts, as well as the different ways on how to properly assess and check ourselves regarding our health specifically in terms of our breasts. This showed the significance of early detection which would greatly help in terms of addressing the disease.

B. Statement of the Problem

The research is intended to increase breast cancer knowledge among high school students by utilizing the "I Pink I Can" Breast Cancer Intervention Program in light of the consistent increase in morbidity rates associated with breast cancer in the past several years.

➢ *It Precisely Strived to Address Succeeding Inquiries:*

- What is the subject's level of knowledge pertaining to breast cancer before the implementation of the intervention in terms of knowledge on:

✓ Age
✓ Grade Level

- What is the subject's level of knowledge pertaining to breast cancer before the implementation of the intervention in terms of knowledge on:

✓ Breast Cancer,
✓ Risk Population,
✓ Signs and Symptoms,
✓ Risk Factors, and
✓ Breast cancer screening?

- What is the subject's level of knowledge pertaining to breast cancer after the intervention period in terms of knowledge on:

✓ Breast Cancer,
✓ Risk Population,
✓ Signs and Symptoms,
✓ Risk Factors, and
✓ Breast cancer screening?

- Is there a significant difference in the subjects' knowledge level on breast cancer before and after the intervention?
- What actions and strategies could be added to the "I Pink I Can" breast cancer intervention program to better raise knowledge about breast cancer?

C. Hypothesis

- **Ho1:** There is no significant difference in the subject's level of knowledge regarding breast cancer before and after the intervention.

D. Theoretical Framework

➢ *Health Belief Model*

The primary framework used in this research was Godfrey Hochbaum and Irwin Rosenstock's Health Belief Model. It was used to predict health behaviors and focused on an individual's eagerness to improve their health-related habits. This theoretical framework illustrated how health-related activities were influenced by an individual's perceptions about their health and wellness issues. The model provided a point to explain the circumstances in which a person partook in a particular health behavior, which included being screened for diseases early or obtaining medical attention if necessary.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

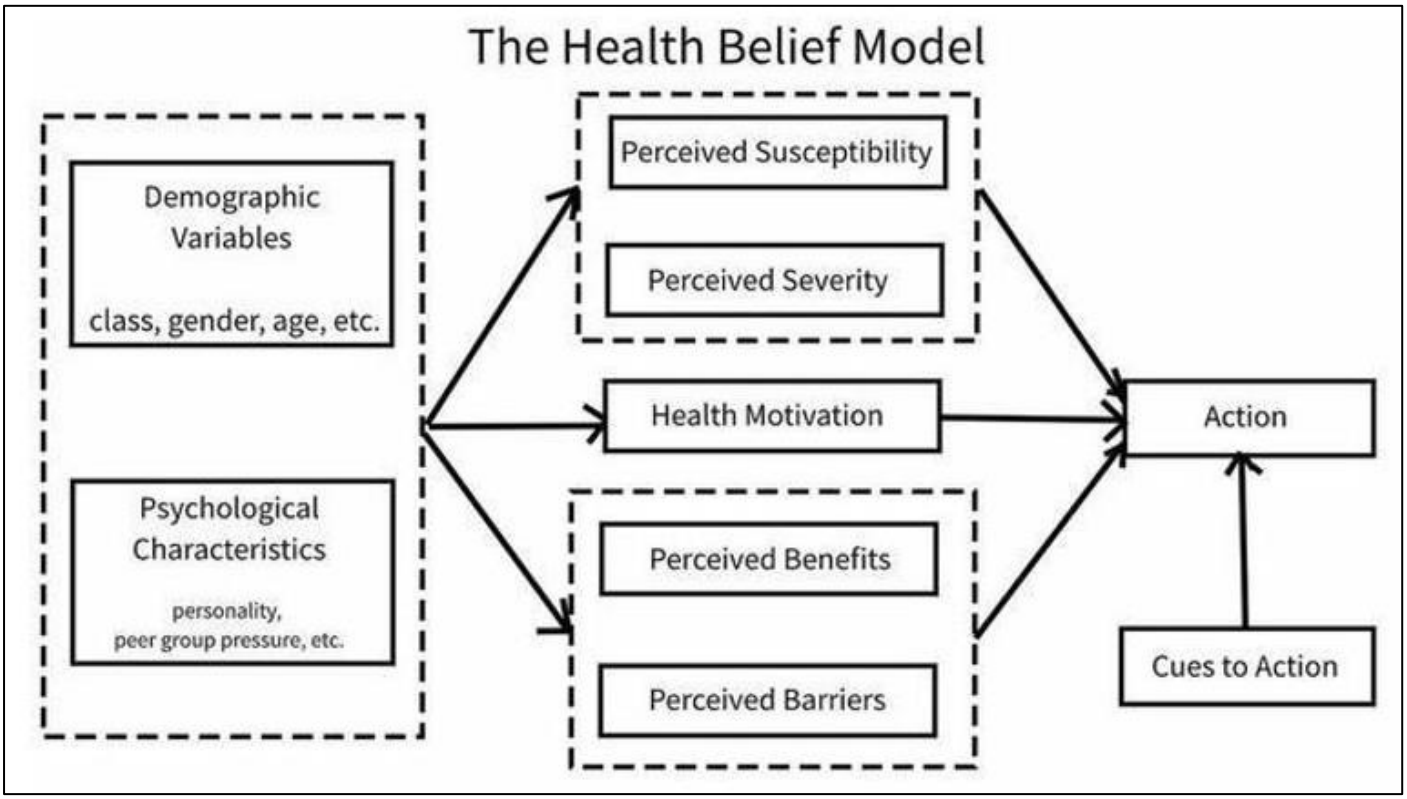


Fig 1: Godfrey Hochbaum and Irwin Rosenstock's Health Belief Model

The Health Belief Model was not meant to provide an approach for changing behaviors connected to health; more so, it was more descriptive than explanatory. Early studies about preventive health behaviors established that targeted health indicated an established connection between the desired health activity and perceived susceptibility, severity, benefits, and barriers.

The theory started with personal factors such as demographic variables, in which demographics described the uniqueness of a population, and variables were anything that could be altered and measured. Moreover, demographic variables that were used in this study were age and grade level. Age was how old a person was. Grade level refers to the educational level of the subjects.

Second, the model involved six variables that affected a person's capacity to generate decisions. Perceived Susceptibility and Perceived Severity served as important indicators of health-related behaviors. When an individual believed they had a greater likelihood of developing a disease, they were more determined to take precautions to prevent it. Perceived Susceptibility and Perceived Severity altogether worked as the key determinants of health outcomes and health-related behaviors; moreover, with the help of these two combined it may have had the ability to develop improved treatments that promote healthy habits while improving health outcomes by having a better understanding of these factors.

Perceived benefits and perceived barriers were both subjective, and they were both influenced by a range of factors, such as one's own experiences, social norms, and cultural beliefs. When people believed that an action had greater benefits than disadvantages, they were more likely to participate in it.

Moreover, when someone believed and perceived that there was a threat, risk factors, and benefits, they were more inclined to participate in beneficial actions. Moreover, this also led to a cue to action, which was the urge required to start the process of decision-making to go through with a suggested health measure.

Lastly, these all led to action, which was the main goal of the model. Healthcare providers could establish actions that were more efficient at encouraging people to make healthier choices in their lives.

Concerning the study, personal factors influenced the knowledge of the subjects. This framework was utilized in breast cancer knowledge and prevention by educating people about risk factors, highlighting the implications and effectiveness of screening methods, conducting breast self-examination, and highlighting the importance of early detection; presenting monetary help and eradicating misinformation; and providing recommendations. Breast cancer growth in incidence, morbidity, and mortality could occur as a result of late detection of the disease due to a lack of knowledge about breast screening variables, cultural differences, and feelings of embarrassment, denial, and shame while discussing breast cancer.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

➢ *Protection Motivation Theory*

The non-nursing framework applied in this study was Ronald Roger's Protection Motivation Theory (PMT). PMT focused primarily on the motives behind individuals' engagements to protect themselves rather than vulnerability. It was predominantly based on assumptions and values. Expectancy measured the population's belief that engaging in a certain duty would yield a positive effect. The value indicated the significance of an outcome to someone's interest. Therefore, individuals were more inclined to act if they accepted the validity of a matter, believed it would be effective, and genuinely cared about the conclusion (Marikyan and Papagiannidis2023).

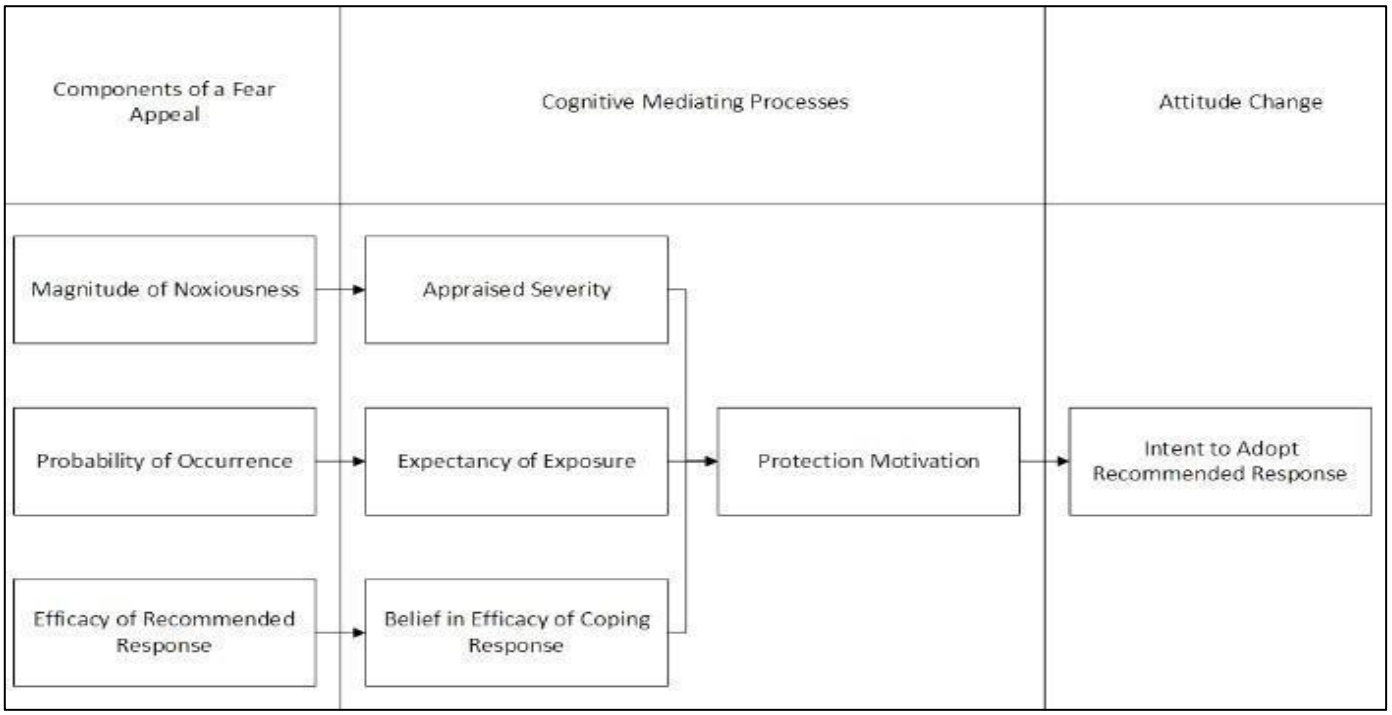


Fig 2: Ronald Roger's Protection Motivation Theory

When it came to adopting the advised conduct in an attitude state, it took the rewards into account. Fear appeals could demonstrate communication of the previously listed variables that might trigger cognitive processes. These mental processes were evaluations of the data on the noxiousness of an unfavorable experience. A cognitive process demonstrated the assessment of the seriousness of a concerning situation, the expectation of encountering the situation, and the efficiency of a coping mechanism, a measure of how serious a danger was that took into account the likelihood that an event might cause injury or damage. Every procedure was related to the element of fear appeal, such as the degree of the threat's severity and how similar it was to the intensity of the unpleasant occurrence. Since protective conduct was the result of cognitive processes, its influence should have been amplified, which implied that all beliefs should have played a crucial role in helping an individual modify their behavior, such as the conviction that a threat was imminent, which made a person susceptible to it.

Protection Motivation Theory was used as a framework for the prevention of breast cancer by educating individuals on improving how they conducted themselves, specifically on how they cared for themselves and their health in general. Thus, it was determined that the key variables influencing knowledge and intent were fear arousal, response efficacy, and response cost. A helpful method for assessing the variables that influenced women's intentions regarding breast cancer was given by the protection motivation theory. Breast cancer growth in incidence, morbidity, and mortality could occur as a result of late detection of the disease due to a lack of knowledge about breast screening variables, cultural differences, and feelings of embarrassment, denial, and shame while discussing this disease. Breast self-examination was a fundamental method to find any lumps; it was favorable for women who didn't have access to some forms of screening, including mammography. This theory was useful for persuading people to adopt protective behaviors. Women who were more likely to perceive themselves as at risk for breast cancer considered themselves to be seriously ill, and those who were knowledgeable about breast cancer were more likely to engage in breast self-examination routinely (Fazlollah Ghofranipoural et al., 2020).

Overall, the protection motivation theory aimed to enhance the knowledge and intention (i.e., the patient's plan to undertake mammography, self-examination, or clinical breast exam) for breast cancer screening among women who adopted preventive behaviors.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

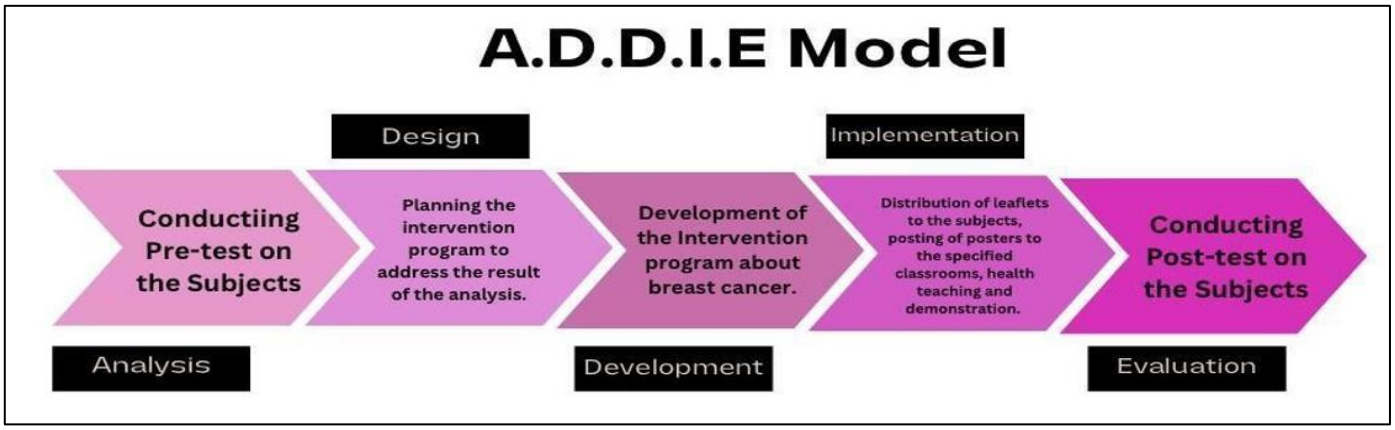


Fig 3: A.D.D.I.E Model

E. Conceptual Framework

Conceptual Framework of the Study "I Pink I Can" Breast Cancer Intervention Program: Its Effectiveness in Raising Knowledge among Junior High School Students of San Pablo City Integrated High School.

The study's conceptual framework, as depicted in the above picture, demonstrated how the variables were related to one another. The five-stage system used in this study—analysis, design, development, implementation, and evaluation—was illustrated using the ADDIE model.

To obtain a thorough analysis or foundation of the subjects' degree of knowledge regarding breast cancer, a pre-test was administered. 156 junior high school students Grades 7 to 10 from San Pablo City Integrated High School participated in it using pen and paper. Following the administration of a pre-test to each subject, the researchers developed an intervention program based on the findings of the pre-test. The researchers were able to develop an intervention program that included health education, self-breast examination demonstrations, and leaflets and posters as educational materials in order to achieve the study's objectives.

This program also helped to increase public knowledge of breast cancer. The entire program was put into action for four weeks. The researchers gave the subjects pamphlets on the first day of implementation, followed immediately by posting the posters in each subject's classroom. The researchers used the information in the pamphlets and posters, together with a demonstration of the correct breast self-examination technique, to conduct a breast cancer-focused health education program with the subjects in order to better impart knowledge to them. All of the pertinent information that was also contained in the instructional materials was covered in the health education. Following that, the subjects and their classroom were given the pamphlets and posters as a source of information to help them increase their understanding of breast cancer. Following the program's execution, a post-test was administered by the researchers to assess the intervention's efficacy and determine whether the individuals' levels of knowledge had changed significantly between the pretest and posttest.

F. Significance of the Study

The purpose of this study was to raise knowledge among Junior High School students at San Pablo City Integrated High School regarding their knowledge of breast cancer. The following were of significant value and importance to the study's outcome.

- **Junior High School Students of San Pablo City Integrated High School.** They understood the reproductive system better, how even at a young age cancer could affect them, and how they could be knowledgeable on how to properly assess themselves and be aware of the changes that were happening in their bodies.
- **San Pablo City Integrated High School.** They were made aware of how important self-assessment is even for young people and that this study would have been their guide for their current and future students to raise their knowledge regarding breast cancer.
- **Family and relatives.** They were informed and aware of breast cancer; this served as a reminder that they needed to be educated about how important self-assessment was regarding their health.
- **Nursing Education.** This study contributed to enhancing education about breast cancer, specifically the anatomy and physiology, disease process, misconceptions, prevention and treatment. Especially in Maternal and Child Nursing.
- **Local Government of San Pablo City.** This study contributed to making the statement that breast cancer is one of the most neglected types of cancer not only in the Philippines but all across the globe and that it needs a lot of focus and support in terms of studies and research.
- **Community.** This study raised knowledge, especially in correcting the myths and misconceptions about breast cancer.
- **Future Researchers.** The study served a purpose as a guide for later investigators in enhancing their study, knowing the research gaps, and as the foundation for their study regarding breast malignancy. This also served as evidence-based information.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

G. Scope and Limitations of the Study

This research aimed to understand the efficacy of a breast cancer intervention program in raising the knowledge of the Junior High School Students of San Pablo City Integrated High School, including the relation to the demographic profile of the subjects, knowledge about breast cancer, signs and symptoms, risk populations, risk factors, and screening for breast cancer. To gather the data needed for the study, the instruments that researchers used were questionnaires that consisted of thirty-one (31) questions through pen and paper for the pre-test and post-test. Also, the researchers implemented an intervention program that included health education and demonstration of proper self-breast examination, as well as the distribution and utilization of leaflets and posters that were used as educational tools. The study involved one section from each grade level from the Junior High School who had been enrolled in the school year 2023-2024 at San Pablo City Integrated High School. Additionally, this parameter did not include students aged 11 and below or 18 and above. This study was anticipated in the academic year 2023-2024.

H. Definition of Terms

- *Breast Cancer*

Breast cancer is a condition in which abnormal breast cells grow rapidly. When these cancer cells invaded nearby breast tissues, they typically formed tumors that caused lumps or thickening (World Health Organization, 2023). In this study, breast cancer was used as the independent variable to assess the level of knowledge through the determination and evaluation of knowledge of Junior High School students about the disease.

- *Breast Cancer Screening*

These were programs and tests that were done to detect breast cancer even before the manifestation of the signs and symptoms (Centers for Disease Control and Prevention). This study was used as an aspect of breast cancer to assess and determine the knowledge of the subjects about the importance of these in terms of monitoring their health, especially in their breasts.

- *Junior High School Students*

These were students in a school, typically children aged 12-15, and were usually in Grades 7 to 10 (Overview of Philippine Education, 2024). In this study, subjects were from this population to acquire and understand the preceding knowledge of Junior High School students about breast cancer.

- *I PINK I CAN*

The pink hue ribbon became significantly associated with breast cancer in 1991. It signified hope as it portrayed the vast number of people affected on a global scale by this illness and its various types (Roche, 2021). In this study, the "I PINK I CAN" breast cancer-themed program, consisting of self-made questions, health education, leaflets, and posters, was formulated to assess and enhance the level of knowledge among Junior High School students, who were adolescents aged 12 to 17 years old, regarding breast cancer.

- *Knowledge*

Comprehension of or intelligence in relation to a subject, either known by a person or by people in general, that was obtained through experience or research (Cambridge Dictionary). In this study, the researchers identified the knowledge level of Junior High School students regarding breast cancer.

- *Risk Factors*

These were factors that increased the risk. These were things that made a person more susceptible to acquiring a disease or medical condition (Britannica Dictionary). In this study, it was used as an indicator to assess the level of knowledge of the subjects regarding the things that could make them get breast cancer.

- *Risk Populations*

These were a specified group of individuals who were at high risk or susceptible to getting a disease (Science Direct). In this study, the populations that were at increased risk of getting breast cancer were used to determine the subjects' knowledge and level of knowledge regarding this aspect.

- *San Pablo City Integrated High School*

San Pablo City Integrated High School was an educational institution that offered secondary education in the city of San Pablo. It was one of the 12 public high schools in the city. In this study, this was the locale in which the data gathering was conducted.

- *Signs and Symptoms*

Any irregularities that were being manifested by the body indicated a potential disease or condition. A symptom was what the patient noticed by himself/herself, meaning this was subjective data. On the other hand, a sign was objective data that could be observed by others (Nature Journal, 2023). In this study, it was used as one of the areas of breast cancer to assess their level of knowledge regarding this aspect.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

CHAPTER TWO
REVIEW OF LITERATURE

This chapter offered a thorough summary and analysis of previous academic publications, studies, and theories that were pertinent to the topic of the investigation. An evaluation of the most recent and reliable sources on the research topic was usually included, along with a description of the knowledge gaps that the study sought to fill. In addition to providing context for the study and demonstrating its importance, the literature review also aided in framing the research questions or hypotheses under investigation.

A. Breast Cancer

The uncontrolled proliferation of breast cells is known as breast cancer. It has various types of breast cancer development depending on which breast cells cultivate into cancer (Centers for Disease Control, 2023). Breast cancer occurs when breast cells develop into malignant cells, disrupting certain processes that suppress cell division and development, which then proliferate and spread tumors, resulting in breast cancer (Cleveland Clinic, 2023). Ductal carcinoma is the most prevalent kind of breast cancer, originating in the milk duct. Conversely, lobular carcinoma starts in the lobules. When cancer cells emerge from the duct or lobules and infiltrate the tissue surrounding them, they may expand to other parts of the body and cause incurable breast cancer. When breast cancer remains specific and does not spread, it is referred to as non-invasive breast cancer (Journal of Global Biosciences, 2022).

Breast cancer is one of the most prevalent, but frequently disregarded, malignancies in the Philippines and around the world. With more cases being diagnosed of the disease every year, breast cancer is the most prevalent malignancy in women under 40 worldwide (Zhu et al., 2023). According to Porcalla (2023), there were around 86,484 cases of cancer, mainly in the Philippines, wherein 27,163 cases of breast cancer are reported every year. 9,926 Filipino women died due to breast cancer, which renders it the third most lethal type of disease that affects Filipino women. The National Capital Region (NCR), Central Luzon, Calabarzon, Bicol, and Mindanao have higher reported rates of breast cancer.

On top of that, countries with weaker healthcare systems are much more likely not to be able to handle the burden of breast cancer. Developing countries must enhance their healthcare systems. This enhancement will not only support health promotion but also allow women especially our young women to seek and have healthcare guidance (World Health Organization, 2023).

B. Anatomy of Breast

Invasive ductal carcinoma, a type of breast cancer, most frequently starts with cells in the milk-producing ducts (Mayo Clinic, 2023). The breast is a twin structure that is located in the anterior thoracic wall, anterior to the deep fascia and pectoral muscle, and lies between the second and sixth intercostal cartilages. It is more noticeable in females, especially during their puberty period, but it is present in both females and males. The mammary glands and the connective tissue surrounding them make up each breast. Two areas constitute the breast: the circular body, which is the breast's biggest and most noticeable portion, and the Tail of Spence, also known as the Axillary Tail; it is the smallest portion of the breast that passes from the inferior adjacent margin of the axillary fossa to the pectoralis major. Moreover, the nipple is found in the central region of the breast, and it is made from smooth muscle fibers. The pigmented area that surrounds the nipple is called the areola.

Breast cancer develops locally and spreads via the bloodstream, lymph nodes in the immediate vicinity, or combination. Essentially, each organ in the body can be attacked by carcinoma of the breast that has metastasized, whereas the skin, brain, lungs, liver, and bone tend to be the most often affected by it.

Certain types of breast carcinoma tend to recur at higher rates than others, thus, tumor markers are widely utilized as indicators of recurrence (Choi, 2023).

C. The History of the Pink Ribbon

The pink-colored ribbons have been utilized since the 1990s to symbolize the breast cancer awareness movement, which became internationally recognized, notably during October, known as Breast Cancer Awareness Month, or Pinktober, where the words "pink" and "October" were merged for this cause. During the course of the year 1979, the incorporation of ribbons as a representation of tribute and reinforcement was first used, with yellow ribbons fastened encircling the trees during the Iran hostage incident. Subsequently, an awareness ribbon colored red was attached to artist Jeremy Irons at the Tony Awards with the intention of fostering HIV/AIDS awareness. This catalyzed an array of movements that enacted ribbons, making 1992 "The Year of the Ribbon" by The New York Times (Monamoon Naturals, 2020).

According to Amy Paturel (2023), in the year 1991, the pink ribbon movement originated from a community-driven campaign begun by Charlotte Haley, a 68-year-old lady who handcrafted peach ribbons to increase awareness and advocate for preventative measures, research grants, and self-assessments. She disseminated an extensive quantity of ribbons and cards locally that drew the attention of Self magazine and Estée Lauder administrators, Alexandra Penney and Evelyn Lauder. As Haley declined the proposal

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

to commercialize the peach ribbon, Estée Lauder and SELF magazine decided to transition it to pink, delivering 1.5 million pink ribbons in conjunction with breast self-exam cards.

These breast cancer awareness ribbons, along with petitions, were sent to the White House to raise breast cancer research funding. Moreover, notwithstanding the peach ribbons instituted by Haley that have been eclipsed by the pink ribbon, her proactive engagement persists to be a motivation in the combat against breast cancer.

This event propelled the widespread adoption of pink ribbons, which served as the catalyst for the progression of the pink ribbon as one of the primary and universal symbols of Breast Cancer Awareness Month (Fiorillo, 2023).

D. Signs and Symptoms of Breast Cancer

The lack of symptoms in its early stages is one of the leading factors contributing to its frequent neglect. Since it doesn't exhibit obvious symptoms or pain, it is possible that someone won't become aware of it until it has progressed to a more advanced stage. Only 2%–3% of breast cancer patients in the Philippines were discovered at Stage I, whereas a significant 53% were already in Stages III and IV of the disease (Tsu-Yin and Lee, 2018).

The most prevalent early indicator of cancer in the breast is a pain free lump in the breast that we may not feel. Rather, regular screening mammography detects lumps. Breast tumor symptoms might vary from person to person. It's crucial to acknowledge that most breast lumps are benign and not cancerous (World Health Organization, 2018). Although they are not normal growths, non-cancerous breast tumors do not metastasize outside of the breast. Although they pose no threat to life, certain benign breast lumps can raise a woman's risk of experiencing breast cancer (NCI, 2018).

Early cautious signs of breast cancer typically include changes of the skin, including redness, inflammation, and other visible changes in either one or both breasts; changes in the breast(s)' size and shape; modifications to the appearance of the nipples; discharges in the nipple besides breast milk; an ache in any part of the breast; and nodes or lumps that feel inside the breast.

However, invasive breast cancer presents with a variety of warning signs, such as itchy or irritated breasts, color changes, rapid changes in breast size and shape, changes in breast feel when touched (such as hard, tender, or warm), skin peeling or flaking of the nipple, thickening or lumps in the breast(s), and pitting of the breast skin (similar to orange skin). It is important to consider the possibility that these alterations started in other, more benign circumstances in the past (City of Hope, 2022).

Furthermore, understanding how your breasts typically feel and appear is crucial to their overall health. Regular screening for breast cancer is crucial since not all cases of the disease are detected by mammography. This implies that it's important to understand how the breast should ordinarily feel and look. Symptoms include nipple retraction, dry, flaky breast skin, enlarged lymph nodes in the collarbone, and breast soreness (American Cancer Society 2020).

E. Risk Population

As reported by The Philippine News Agency's Montemayor (2023), only 1% out of 100% of breast cancer cases are males, whereas 99% of all cases are females. Even though male breast cancer is rare, there is an alarming increase in its incidence rate. One of the misconceptions is that this condition only affects women, little do they know that it is more deadly than other cancer types like testicular and prostate cancer. In that case, men's unique needs in terms of addressing this condition are unmet, and just like women, men with breast cancer are equally suffering because of this condition (Constantinou, 2023). The female population is the most prone to the disease, and it covers those females who had an occurrence of menstruation at an early age, specifically starting from age 12 and below. It also includes those populations at the late menopausal stage, which were 55 years old and older. Other population groups are those women who did not undergo pregnancy or breastfeeding. The breast cells of women were very active but still immature during the adolescent stage. These cells mature only if a woman successfully undergoes her first full-term pregnancy, they mature and, at the same time, grow regularly because of the changes in their estrogen hormone during pregnancy, making it a primary reason why it helps in terms of protection against the deadly disease (Weiss, 2023). Some of the other risk populations are those who have a family history of the disease, lymphoma, those who use birth control pills uncontrollably, and those who undergo hormone replacement therapy.

According to Jaymalin (2023), breast cancer can occur even in teenagers. Along with this, Philippine Foundation for Breast Care Incorporated volunteer Aileen Antolin stated that, as early as a girl starts menstruating, the screening for breast cancer should also begin as part of the early detection of the disease. In addition, as early as 15 years old, a teenager can already have breast cancer, and the youngest case of breast cancer that has been recorded is a 19-year-old, whose mother was also diagnosed with the disease. Moreover, 30% of young adults and teenagers diagnosed within the demographic range of 15 to 39 have breast cancer, making it the predominant form of cancer in women (Cathcart-Rake et al., 2021). When compared to women over 40 years of age, younger women typically suffer from tumors that are more hostile and naturally unfavorable in the early stages (Stage I and Stage II) of the malignancy; unlike older women, they have lower survival rates. However, elderly women have a higher mortality rate in the advanced stages of the disease (Stage III and Stage IV) (Chelmo et al., 2020).

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

F. Risk Factors of Breast Cancer

Everything that increases the probability of contracting an illness, such as breast cancer, is considered a risk factor. Nevertheless, possessing one or multiple variables does not guarantee that you will develop the medical condition (American Cancer Society, 2022). Even though it is unusual, breast malignancy can still be acquired by teenagers and young adolescents. The definite origin factors for breast cell abnormalities remain unknown in this age group. However, there are still certain common risks in the female gender, leading to a higher likelihood of developing breast cancer due to increased estrogen levels.

Nonetheless, breast cancer can strike either gender, despite it affecting men far less frequently. Additionally, inheritances of certain gene mutations also pose an invariable risk, with 5% to 10% of breast cancer cases presumed to be genetic, arising from genetic alterations passed down from parents. Although most individuals diagnosed with breast carcinoma have no familial background of breast malignancy, those with a predisposition face a greater probability.

Moreover, certain hormonal factors, such as going through a menstrual cycle earlier than the usual onset, late menopause, giving birth to your first child later than the age of 30, and not having had the opportunity to bear a child, heighten the risk of getting the disease. Some other immutable variables that may not be able to change are advanced age, race and ethnicity, and certain non-cancerous breast issues (American Cancer Society, 2021).

Various lifestyle-related determinants can be modified, such as alcohol intake. The likelihood of developing breast tumors escalates with the quantity of alcohol consumed: women who drink one bottle of alcohol every day are at a risk 7% to 10% higher than individuals who abstain from drinking, while those who consume at least two to three servings daily are at a 20% higher risk.

Additionally, using birth control methods, including vaginal rings, implants, oral contraceptives, birth prevention shots, skin patches, and intrauterine devices (IUDs) (American Cancer Society and World Health Organization, 2020), and employing postmenopausal hormone therapy drugs that use both estrogen and progesterone together to address the indicators of menopausal transition, elevated the likelihood of breast cancer. However, the probability of contracting the illness decreases when women stop administering these medications (Mayo Clinic, 2022). Moreover, physical inactivity amplifies the risk factors for mammary cancer, in line with the American Cancer Society (2020). Research has revealed that a few hours a week could potentially lower the chance of contracting the illness, but a couple of hours more seems to be preferable.

G. Misconceptions about Breast Cancer

False assumptions about this type of cancer are additional factors that contribute to the condition's frequent disregard. Dr. Kelly Rosso (2023), a surgical oncologist at Banner Del Webb Medical Center's Banner MD Anderson Cancer Center, noted that despite ongoing improvements in our understanding of breast cancer brought about by scientific research, clinical trials, and investigations, there is still a sizable amount of inaccurate information online which confuses.

The idea that this cancer can affect only elderly women is one of the frequent fallacies. However, this assumption is not entirely correct. Even though older women are at a higher risk because healthy breast cells can accumulate mutations and change into malignant cells over time, developing cancer at a younger age is still probable. Medical specialists urged early breast cancer screening because breast cancer is the most common disorder in Filipino women, and even young girls could contract it (Jaymalin, 2023). The youngest documented case of breast cancer they had seen was a 19-year-old woman whose mother was also diagnosed with the disease (Antolin, 2023).

The myth that underwire bras and wearing a bra at night can cause breast cancer is one of the often repeated and unfounded rumors that can inspire unwarranted worry (BreastCancer.org, 2023). Many people fear that underwire bras could cause breast cancer by obstructing the lymph fluid's normal flow out of the bottom of the breast and keeping it from returning to the body. However, according to BreastCancer.org, there is no scientific proof to back up these assertions. There is no discernible disparity in the risks of breast malignancy among women who do not use bras and those who do, according to research.

It's important to remember that excess body weight has been established as a risk factor for the maturation of breast carcinoma. For this reason, obese women are more likely to have larger breasts and may wear bras more frequently. Women who don't wear bras, on the other hand, are more likely to keep their weight in check. Instead of a direct connection between bras and breast cancer, it seems more likely that this weight difference is what keeps the breast cancer myth alive.

Another common misunderstanding and way of thinking about breast cancer is that it is largely a genetic disease, and if someone does not have a family history of the health issue, they will not be able to develop it. In reality, however, the majority of people who are diagnosed with this condition do not have any known relatives who have had the disease. Just 5 to 10% of breast cancers are thought to be hereditary, according to data from Breastcancer.org and “only 10% is hereditary. It doesn't mean that if you have a first-degree relative with breast cancer, you will get it, okay? 90% of breast cancer is not hereditary. So, meaning, all of us can get it. All of us are at risk, just the risk of somebody with the gene. You have to test to know if you have the gene. If it's hereditary, it's obviously much higher than somebody who just has a family history. But all of us are at risk for it.” (Basa, 2023,

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

2:48). In these circumstances, particular genetic mutations that are transferred from one generation to the next are responsible for breast cancer.

H. Characteristics of Breast Cancer in Young Women

Compared to older women, adolescents with breast cancer exhibit more severe illness symptoms. Since women under the age of 40 are frequently not included in screening programs, it is frequently discovered at a late stage and typically as a result of self-breast examination in the warning phase. In addition, young women with breast cancer behave biologically differently than older women. Moreover, the likelihood of getting breast cancer increases in response to age before menarche. Prolong the time spent being exposed to estrogen. In these patients, the median age of menarche was 13, which they claimed was consistent with prior investigations. Additionally, history in the family of breast cancer continues to be a problem, particularly in the young-aged breast cancer population, which carries significant risk factors. Numerous studies have shown that young women's breast cancers are more aggressive biologically than those in older women with the disease (Okan et al.,2021).

Although breast cancer in younger women is a rare illness, it continues to be the primary cause of young women's cancer death. Younger women are increasingly being diagnosed with breast cancer, lastly, the number of breast cancer cases is rising. In addition to that, younger women also face a variety of related issues, including pregnancy, sexual function, and the preservation of their fertility. Typically, a young age has given attention to a separate unfavorable prognostic factor that is linked to a greater chance of recurrence or morality when breast cancer in women is first identified (Fu, et al., 2018).

I. Breast Cancer Screening

It is persistently challenging to establish primary programs for breast cancer since breast cancer is an incurable malignancy, and due to its heterogeneity and low immunogenicity, advanced breast cancer is still an incurable condition (Reviews in Breast Cancer, 2022). "Because we are number one, and this is the number one cancer affecting women in the Philippines, it's really important that we raise knowledge so that we can detect it early, because that's the only way we can survive it" (Basa, 2023, 2:23).

The purpose of the population-wide range program is to lower the death rate from the disease by promoting prompt detection and efficient treatment.

Population-based screening programs must be implemented, as it could be a way of enhancing the health outcomes of women. Along with this, mammography-based screening is useful and suggested to detect breast tumors promptly. As mammography can identify any abnormality, a comprehensive screening program increases the likelihood of survival (Kashyap et al., 2022). "In mammograms, you can see yung cancer even before it becomes a 'bukol', so that's why it's important now we do the mammogramming. Yung ultrasound, 'bukol' na siya, so you really need both of them in combination because what mammogram sees, ultrasound cannot see. So the only way we can catch it is if we do both" (Basa, 2023, 3:47). Breast cancer screening is the best way to determine breast cancer ahead of time and before any symptoms appear. This does not prevent breast cancer but can help detect it in its early stages.

According to the American Cancer Society, breast cancer has a 99% five-year relative survival rate when found in the early stages. Mammography is advised for early detection, but it should be indicated that other screening options must be taken into consideration as mammography is an expensive screening method that is not suitable in nations with inadequate medical resources. Examples of ways of breast cancer screening are breast self-examination and clinical breast examination (World Health Organization, 2021).

J. Relevance of Early Detection, Screening Programs, Breast Self-Examination

Screening for breast cancer refers to the procedure of checking the breasts of women for cancer before any signs and symptoms of the illness appear. Healthcare providers should educate women about breast cancer screening. Early detection of the disease makes it simpler to treat, but screening does not prevent breast cancer from occurring (CDC Breast Cancer, 2022). The Department of Health stressed the significance of knowing and doing a proper regular breast-self-examination. The agency also reminds about the crucial role of detecting the disease at an early stage including the utilization of breast cancer screenings and programs (Department of Health, 2021). Detection and prevention of breast cancer should be one of the focuses of our national government in terms of addressing breast cancer. This is the third among all cancer types that causes mortality to our Filipino women, just trailing behind lung cancer and liver cancer, stated a lawmaker. House Deputy Speaker Camille Villar filed House Resolution 1023. This House Resolution is to raise knowledge about breast cancer being the most common cancer type among our Filipina citizens. House Deputy Speaker Villar stressed that there should be easier access to preventive screening like the self-breast examination, to detect breast cancer easier and to save more lives of our Filipinas. Furthermore, she added that there is a relevant deficiency in terms of extensive screening programs specifically in remote areas. As an effect, it hinders women from acquiring first-hand screening and clinical interventions.

Also, according to experts, the greatest way to stave off breast cancer is through early screening and detection programs, in accord with Villanueva and Porcalla (2023).

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

Based on statistical reports, 65-70% of breast cancer in the Philippines were diagnosed in the advanced stage or the worse stages of the disease. As a result, it makes it more strenuous for our fellow Filipinos with breast cancer to cure and address the fatal disease. This makes the Philippines 9th in the world and 1st in Asia in terms of having the highest rate of breast cancer. Along with this, it is reported that there are 27, 163 cases of breast cancer out of the 86,484 cases of all types of cancer every year with a percentage of 31.41% out of 100% of all cancer types. Also, in terms of new cases of mortality, breast cancer ranks top locally and globally (Philippine Cancer Society President, Dr. Corazon Ngelangel, 2023).

Screening in breast cancer refers to the procedure of checking the breasts of women for cancer before any signs and symptoms of the illness. Healthcare providers should educate women about breast cancer screening. Early detection of the disease makes it simpler to treat, but screening does not prevent breast cancer from occurring (CDC Breast Cancer, 2022).

Breast self-examination, or BSE, is an essential strategy for checking for this fatal condition. The prone position is the best position when doing a self-breast examination because it thins and flattens out the breast. The primary goal of this is to familiarize women with the appearance and feel of their breasts.

Seven to ten days after the onset of menstruation is the ideal period to perform a breast self-examination since this is the time when the breasts are most tender and lumpy. It should be performed on the same day every month. The appropriate implementation of efficient preventive measures, like a breast self-examination, is tightly linked to the knowledge of diseases and the advantages of self-examination methods. A comprehensive understanding of breast self-examination greatly lowers the complications and fatalities associated with breast cancer and enables early detection of breast abnormalities (Getu et al., 2022). Recognizing the typical appearance and touch of your breast refers to breast self-awareness. Women who correctly use breast self-examination regularly are more inclined to find a lump while it is still in the early stages of maturation. This method helps with rapid identification, which can lead to early initial treatment and diagnosis of breast cancer at an early stage.

Early detection of breast cancer is essential for enhancing the possibility of successful breast cancer management. While numerous risk factors for cancer cannot be prevented, some can. For example, there are indicators of risk such as specific gene inheritance and smoking, but only smoking may be stopped. A balanced diet and regular exercise may help prevent some cancers. Lowering risk factors and enhancing defensive factors can help you avoid cancer, but they cannot ensure it. A way that women can notice possible breast cancer ahead of time is by putting into practice the breast self-examination method, which includes women constantly checking their breasts to look for any difference or abnormality. It is not a replacement for any clinical breast exam or mammogram that should also be taken part in a woman's efficient healthcare routine, but it can be a vital addition to these exams (Sadoh et al., 2021).

K. Procedure for Self-Breast Examination

During breast assessment, bear the following points in mind: For the examination, you make use of the pads of your three middle fingers, not the tips of your fingers. Work with a more sensitive portion of your hand, such as the palm or the backs of your fingers and adjust the amount of pressure you exert. The aim is to feel every inch of breast tissue at multiple pressure levels to determine the breast's depth. To get a feel for the tissue next to the skin, use light pressure; to feel a bit more deeply, use medium pressure; and to detect the tissue closest to the chest and ribs, apply strong pressure. Before proceeding to the next location, make sure you've gone through every pressure level. Consult your physician or nurse if you have any concerns about the appropriate pressure to use.

Upon inspecting the breast, one must invest time. A comprehensive breast examination could take several minutes and follow a defined sequence. Start slightly under the collarbone, vertically move your fingers toward your nipple, and assess the area by touching it. After palpating the area, draw the pads of your fingers in a circular motion around the breast (Mayo Clinic, 2022).

L. Level of Knowledge

A significant variable that influences behavior is knowledge. The risk of death and mortality is rising due to late illness discoveries driven by ignorance about breast cancer risk factors and screening techniques. Women's preventive behavior is driven by both attitude and screening knowledge. The barriers to screening methods have been determined to be negative attitudes and inadequate understanding. Overall, knowledge, attitudes, and practices are favorably connected (Meshkani, 2022). Because breast cancer is more dangerous in younger individuals, women, especially those in their early years, should recognize the need for early detection. However, the majority of young women's educational background, knowledge of breast cancer, financial situation, and cohabiting family members may all have an impact on how well-informed they are about the disease. (Sari, 2019)

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

M. The Effectiveness of Health Education, Leaflets, and Posters

The convenience with which information is presented on the poster may be the cause of the increase in knowledge and the favorable change of views on the use of posters in this study. The poster remains in its original location for an extended period of time, allowing for the long-term retention of positive attitudes and knowledge (Hasanica et al., 2020).

The results of the study suggested that women's initial knowledge of breast cancer's early symptoms, risk factors, treatment, prevention, efficiency screening methods, and breast self-examination practice was not exactly optimal. The ongoing provision of educational sessions is crucial, given that an increased level of knowledge is essential to improving attitudes toward the early detection of breast cancer. The conclusions of this study suggest that women's knowledge and breast self-examination practice levels have improved as an outcome of the educational course on breast cancer along with breast self-examination. It is strongly encouraged that a larger, more inclusive study should be done in the future for assessing the effectiveness of breast cancer screening among various female minority populations and to evaluate changes in breast cancer screening and knowledge (Sarker et al., 2022).

N. Synthesis

The breast cancer-focused intervention primarily targeted raising knowledge among Junior High School students at San Pablo City National Integrated High School, the research locale for the study.

The level of knowledge a person had about a particular disease could be a strong hindrance to attaining optimum health and wellness if it was not adequate. The vital part of enhancing the subjects' knowledge of necessary information about breast cancer was the potential to alleviate the impact of the illness. It equipped individuals with knowledge that motivated engagement with regular screening, promoted early detection, inspired wellness practices, and cultivated beneficial health outcomes. Therefore, having the knowledge of Junior High School students tested also encouraged young adolescents to adopt a proactive stance on personal health and well-being by enabling them to aim for timely healthcare guidance.

However, despite the wealth of available textbooks, scholarly articles, and online databases, a significant number of people diagnosed with cancer or individuals at risk persisted in not knowing the procedures they could undertake to prevent the deterioration or progression of breast malignancy and improve their optimal well-being.

Breast cancer can strike either gender, despite it affecting men far less frequently (American Cancer Society, 2021). When compared to women over 40 years of age, younger women typically suffer from tumors that are more hostile and naturally unfavorable in the early stages (Stage I and Stage II) of the malignancy; unlike older women, they have lower survival rates. However, elderly women have a higher mortality rate in the advanced stages of the disease (Stage III and Stage IV) (Chelmow, et al., 2020). The highest possible uptake of these interventions are impeded by the following factors: prohibitive mammographycosts, a shortage of specialists to perform mammographic screening, and limited access to health care due to the cost and location of the centers that provide the services in urban areas (Sadoh, 2021). They also talked about how cultural problems might hinder people from screening, such as feelings of shame and anxiety about screening and a lack of encouragement from partners or relatives (Srinath et al., 2022).

Breast cancer, in its early stages, does not exhibit obvious signs and symptoms. According to City of Hope (2023), the early signs typically include changes in the skin, such as inflammation and redness, and changes in breast shape and size. Having low knowledge about breast cancer is a factor that leads to not giving importance to signs and symptoms, which leads to late illness discovery and an increasing mortality rate. Moreover, having a high level of knowledge about breast cancer is a factor that can help in early detection and prevention by utilizing necessary information that would urge them to obtain breast cancer screening programs. Overall, women's understanding and mindset about breast cancer both influence their preventative actions.

The demographic profile of the subjects, like their age, sex, history, grade level (educational attainment), and socio-economic status, could greatly affect their level of knowledge regarding breast cancer, and some of these were also part of the non-modifiable risk factors that increased their chance of acquiring the disease. Age is a non-modifiable risk factor. As early as 15 years old, a teenager could already have breast cancer, and the youngest case of this condition here in the Philippines was a 19-year-old patient. Another factor is the grade level of the subject. Associated with their age, their level of knowledge was being affected by their capacity to understand and utilize information. A result of a study noted that there is a need to increase the knowledge of teenage girls about breast cancer, stressing early detection and its benefits (Moheb, 2023).

Enhancing studies that reach numerous disciplines, each contributing a special standpoint and vital perceptions, this includes Chelmow et al. (2020), Mohebi (2023), Woodard et al. (2022), and the American Society of Clinical Oncology Educational Book (2019) that broaden and enhance our understanding, giving us a strong foundation for future research on breast cancer. The main factors contributing to a higher incidence or death rate from breast cancer, particularly in developing nations, include inadequate screening programs, delayed diagnosis, poor medical facilities, and inadequate information or knowledge of the illness. There are several forms of treatment, including chemotherapy and surgery. Furthermore, mortality and the incidence of breast cancer continue to be high despite the availability of these treatments (Kashyap et al., 2022). Many strategies exist to increase knowledge of breast cancer and provide interventions to lower its incidence. These strategies included improving the healthcare system to support health

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

promotion and enable women, particularly our young women, to seek out healthcare assistance or guidance, improving the effective training programs about breast cancer, risk factors, and ways to help teenage girls with their health habits at a young age; training community members to implement health promotion interventions as an efficient way to educate medically unserved populations; and, most importantly, educating people about physical functioning and weight management as well as improving their overall lifestyle to strive towards an early diagnosis of the disease, Advocacy and Policy that enhance improve access to care lastly support and knowledge that provides counseling and resources for patients and their families this all contributed to lowering the risks of breast cancer.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

CHAPTER THREE
RESEARCH METHODS AND MATERIALS

This chapter highlighted the research methods used by the researchers, including the research design, subjects, and locale of the study, the research instruments, ethical considerations, the appropriate statistical treatment, and the data-gathering procedure of the study.

A. Research design

The approach that was utilized in this study was quantitative in nature, a causal-comparative approach specifically one way pretest and posttest design. According to Bhandari (2022), quantitative research included collecting and evaluating numerical data; it was used in establishing the hypothesis and expanding outcomes to a wider population. Thus, it involved a significant quantity of samples, highlighting the total number of subjects. Moreover, a quantitative design was used in this study to generalize results in a specified sample group to a wider population group.

The researchers used a quasi-experimental approach. It illustrated the relationship of cause and effect between the independent and dependent variables (Thomas, 2023). Moreover, the researchers used a self-made survey instrument that was given as a pre-test to determine the prior knowledge of the Junior High School students about breast cancer and a post-test to measure the subjects' knowledge and assess if there was a significant increase in it regarding breast cancer. The researchers utilized a quasi-experimental approach because the researchers intended not just to measure the knowledge level of the subjects regarding breast cancer, but to test the intervention program's effectiveness to enhance the knowledge, correct misconceptions, and most importantly, the researchers aimed that the subjects engage in self-breast examinations and screenings as well.

B. Subjects of the Study

The subjects of this research were Junior High School students of San Pablo Integrated National High School consisting of one hundred fifty-six (156) students aged 12 to 17 and the students who were enrolled in school year 2023-2024 at San Pablo City Integrated High School from grade seven (7), grade eight (8), grade nine (9), and grade ten (10).

C. Sampling technique

In this study, researchers employed a probability method, specifically the cluster sampling technique, to identify one section from each grade 7 to 10, considering the significant population within the designated locale for participation in specific class sections. This population restriction goal was to refine the focus of the study. At its essence, cluster sampling entailed dividing a sizable demographic into smaller clusters to gather data. Each group or cluster contained a subset that could be completely analyzed by the researchers (Dovetail Editorial Team, 2023).

D. Research locale

San Pablo City Integrated High School (City High), located at Marasigan Street, Bagong Pook VI-C, San Pablo City, Laguna, Philippines, was chosen as the study's locale. This choice was driven by its diverse population and the lack of prior research regarding health and health-related topics, particularly breast cancer, in this specific area. Also, the students do not have annual medical examinations and physical assessments that are important in terms of early detection of any diseases, especially breast cancer.

E. Research Instruments

The researchers used a self-made instrument. This tool was utilized by the researchers who conducted pre-test and post-test on the respective subjects of the study. An intervention was conducted before the post-test. "I PINK I CAN" was an intervention program. A 31-item questionnaire was included in this program which was divided into five sections. These 5 sections were used to assess the level of knowledge of the Junior High School students regarding different aspects of the condition, namely knowledge in: breast cancer, risk populations, signs and symptoms, risk factors, and breast cancer screenings.

The inquiries in this questionnaire were answerable by yes or no. Subjects of this study put a check (/) on their chosen answer. They had ten (10) minutes to answer and complete the research instrument. This questionnaire was used to assess and determine the level of knowledge of the subjects regarding breast cancer. The level of knowledge was interpreted based on the answers provided by the subjects. A leaflet and poster were also part of the intervention program, composed of the different contents regarding breast cancer that answered the questions in the 31-item questionnaire. These were used as educational tools in addressing the lack of knowledge of the subjects about breast cancer. Health teaching and demonstration of the proper self-breast examination were also part of the program, where the researchers taught the subjects regarding the necessary information about breast cancer as well as the proper way on how to assess their own breasts. These were the tools that determined if this program became successful in enhancing the knowledge of the subjects about breast cancer.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

F. Ethical Consideration

The researchers were guided by the Bioethics in Medicine and Society book by Thomas F. Heston (2021). The researcher ensured that the participation of students from San Pablo City Integrated High School—San Pablo City who are between the ages of 12 to 17 does not cause any harm to them. The students had the equal right and privilege to refuse to participate. The researchers were also guided by the National Ethical Guidelines for Research Involving Human Participants (2022). Before any interventions, simplified written assent and informed consent forms signed by the parents were provided because the subjects were minors. Researchers sought permission and approval through a letter from the school principal. The study's interpretation results were handled with care and discretion, and confidentiality was followed. Furthermore, the researchers' and subjects' exchanges of ideas and discussions were conducted morally (Refer to Appendix F and G).

G. Validation of the Instrument

The research instrument underwent pilot testing. Prior to conducting the pilot test, the researchers provided assent and informed consent forms to the subjects. The self-made questionnaire was checked by a Filipino teacher for the Filipino translation of the instrument and validated by three (3) experts in their respective fields. This instrument was reviewed comprehensively by the researchers' research adviser and validated by a registered nurse with a master's degree in nursing, an obstetrics and gynecology doctor, and a breast surgeon to confirm the appropriateness of the research instrument and to make sure that it did not contain words that were too complex and may offend or confuse the subjects of the study.

A pilot test was conducted on 20 subjects to test the reliability of the research instrument assessing the breast cancer knowledge of 12 to 17 years old Junior High School students. The pilot test was conducted in Del Remedio National High School which was not part of the research locale. Statistical Package for Social Science v27 was utilized for calculating Kuder-Richardson formula-20. Table 1 presents that Knowledge on Signs and Symptoms had an acceptable reliability ($\alpha = 0.785$), Knowledge on Breast Cancer ($\alpha = 0.855$), Knowledge on Risk Population ($\alpha = 0.877$), and Knowledge on Risk Factors ($\alpha = 0.805$) had good reliability, while Knowledge on Breast Cancer Screening ($\alpha = 0.954$), and the overall ($\alpha = 0.977$) reliability of the instrument got excellent results (see Table 1).

Table 1: Reliability of Research Instrument using Kuder Richardson 20 (KR-20)

Subscales	Alpha	Interpretation
Knowledge on Breast Cancer	0.855	Good
Knowledge on Risk Population	0.877	Good
Knowledge on Signs and Symptom	0.785	Acceptable
Knowledge on Risk Factors	0.805	Good
Knowledge on Breast Cancer Screening	0.954	Excellent
Overall	0.977	Excellent

H. Statistical Treatment

The following statistical tools were used to gather needed data and served as bases for data analysis and interpretation.

➢ *Frequency Distribution.*

The frequency distribution was used to determine the distribution of the subjects regarding their age and their grade level. In statement problem number one, the said statistical treatment was applied. This specifies the number of observations for the potential value that a variable may have (Turney, 2022).

➢ *Percentage Distribution.*

Referring to problem statement number one, the question asked about the demographic profile of the subjects, specifically, their age and their grade level which were in different groupings, it was appropriate to use frequency distribution. Percentage distribution is a statistical treatment whereas individual classes of a specific category are presented through percentage ("Percent Distribution for RTRA", 2021).

With a formula of $$P = \frac{f}{N} \text{ X } 100$$

Where:
P= percentage (%)
f= frequency
N= total number of subjects
100= constant

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

➢ *Mean Formula.*

The knowledge level of the subjects, as expressed in Problem Statement number 2, was assessed using the mean formula. This statistical treatment is the average of all the values of a variable (Bhandari P., 2020). The central tendency of the data was measured through the use of this formula (Cuemath, n.d.).

With a formula of: $$\bar{X} = \frac{\Sigma x}{N}$$

Where:
X= mean
Σ x = sum of all responses
N= total number of subjects

➢ *Paired t-test*

This was utilized as the statistical treatment to test the significant difference between the prior knowledge and the acquired knowledge. Paired t-test was used to compare the means or averages of two variables or measurements that were taken at two different times from the same sample subjects.

I. Data Gathering Procedure

The researchers submitted letters of request to two public high school principals. The letter of request was noted by the researchers' research adviser and was approved and signed by the Dean of the College of Nursing. The letter of request for San Pablo City Integrated National High School was for the request to conduct the study in the said locale and determine the total population of the Junior High School students from grade 7 to grade 10, ages 12-17. The letter of request for Del Remedio National High School was for the pilot testing of the research instrument to verify its reliability.

Prior to the pilot testing, the researchers' self-made questionnaire was intensively reviewed by the researchers' research adviser and validated by three (3) experts in their respective fields. The validators of the research instrument were a registered nurse with a master's degree in nursing, an obstetrics and gynecology doctor, and a breast surgeon. The pilot test was conducted and participated in by 20 subjects. The result of the pilot test was validated and verified by the researchers' research adviser and by the statistician. The overall rating of the research instrument was excellent. The researchers made a letter and had it signed by the principal of San Pablo City Integrated High School. The researchers explained the sampling technique and after explaining the methods the research representative of the institution gave us the one (1) section each grade level that was included in the criteria and the schedule of availability.

Afterwards, the researchers explained the flow of the I Pink I Can Intervention Program and the assent and informed consent were distributed, and the day after that the signed assent and informed consents were collected. Following that the pre-test was conducted and the researchers proceeded with the distribution of leaflets, posted the posters and health teaching including the demonstration of breast self-examination and facts and myths about breast cancer. The intervention lasted for four (4) weeks. After four (4) weeks the researchers removed the posters that were posted in the respective classrooms of the subjects and then conducted the post-test.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

CHAPTER FOUR
PRESENTATION, ANALYSIS, AND INTERPRETATION OF DATA

This chapter presented the analysis and interpretation of the data obtained from the study, which aimed to raise knowledge among Junior High School students at San Pablo City Integrated High School about breast cancer. The data was gathered by conducting pre-test and post-tests using a standardized questionnaire. The findings were shown in tables following the sequence of the research problems stated in this study.

Table 2: Demographic Profile of the Subjects Regarding their Distribution in Age.

Age	Number	Percentage
12	13	8%
13	40	26%
14	39	25%
15	47	30%
16	16	10%
17	1	1%

Table 2 describes the demographic profile of the subjects in this study regarding their age. Age was also a criterion in choosing the subjects. The highest population under this criterion was aged 15 years old, with a total number of 47 and a percentage of 30%. Next to this were those aged 13 years old, with 26% having 40 subjects. Age 14 was next, with 39 subjects covering 25% of the total population of the subjects that participated in this study. Only 10%, or 16 subjects, were aged 16, and 8% of the 13 subjects were aged 12. There was only one 17-year-old subject that covered only 1%.

Junior High School students were usually aged twelve (12) to fifteen (15) years old (Overview of Philippine Education, 2024). However, there were subjects aged sixteen (16) and seventeen (17) who participated in the study because they were enrolled and were included in the official class list of the grade levels that participated in this study. Technically, they were qualified to be part of the study since they were currently in Junior High School. Based on the distribution of the subjects in terms of age, the majority of the subjects were from ages thirteen (13) to fifteen (15), which were those age groups that were the typical age groups in Junior High School, which was one of the criteria in terms of choosing the subjects in this study.

Table 3: Demographic Profile of the Subjects Regarding their Distribution in Grade Level.

Grade Level	Number	Percentage
7	37	24%
8	44	28%
9	39	25%
10	36	23%

Table 3 reveals the percentage distribution of the subjects regarding their grade level. Grade 7 had a percentage of 24% with 37 subjects who participated in the study. In terms of the grade eight (8) students, they occupied the highest percentage with 28% and 44 subjects. While the grade nine (9) level had a percentage of 25% with 39 subjects. Lastly, the lowest number of subjects under a grade level was 36 subjects with a percentage of 23% that belonged to the grade ten (10) level.

The Commission on Higher Education in their overview of Philippine education, stated that Junior High School is part of a four-stage program of the current basic education system in the Philippines. This stage is composed of grades 7 to 10 (Overview of Philippine Education, 2024). Based on the distribution, very minimal differences were noted in terms of numbers in the respective grade levels. Each grade level Junior High School was properly represented.

A. Pre-Implementation of the I Pink I Can Intervention Program

Table 4: Level of Knowledge of the Junior High School Student of San Pablo City Integrated High School about Knowledge on Breast Cancer before the Implementation of the Program

Knowledge on Breast Cancer	Yes	No	% of Correct answers
1. Is breast cancer a type of malignancy that begins in the milk ducts of the breast? Ang kanser ba sa suso ay isang uri ng malubhang sakit na nagsisimula sa daluyan ng gatas ng suso?	133	23	85%
2. Is breast cancer an incurable malignancy? Ang kanser ba sa suso ay uri ng kanser na hindi na nagagamot?	29	127	19%
3. Are all breast cysts cancerous? Ang lahat ba ng bukol sa suso ay nagdudulot ng kanser?	71	85	54%

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

4. Is breast cancer one of the most common, yet often ignored cancers in the Philippines and the rest of the world? Isa ba sa pinaka karaniwan, subalit binabaliwalang kanser sa Pilipinas at sa iba pang bansa ang kanser sa suso?	96	60	62%
5. Do young women have a higher survival rate than those cancer patients who are over 40 years of age? Mas mataas ba ang tiyansang gumaling ang mga mas batang babae kumpara sa mga babaeng edad 40 pataas na may kanser?	125	31	20%
6. Is death from breast cancer unavoidable whether it's detected in its early stage or not? Ang pagkamatay ba nang dahil sa kanser sa suso ay hindi maiiwasan, matukoy man ito ng maaga o hindi?	88	68	44%

Legend: = Correct Answer = Incorrect Answer

Table 4 specifies the dissemination of Junior High School students of San Pablo City Integrated High School in light of their fundamental understanding about Breast Cancer before the implementation of the I Pink I Can Intervention Program. Based on the results of the pre-test, the first question received the highest rate of correct answers among all the questions: with one hundred thirty-three (133) out of one hundred fifty-six (156) or eighty-five percent (85%) of the subjects answering the question correctly, *"Is breast cancer a type of malignancy that begins in the milk ducts of the breast?"*. This was followed by ninety-six (96) or sixty-two percent (62%) of the subjects correctly answering the question *"Is breast cancer one of the most common, yet often ignored cancers in the Philippines and the rest of the world?"*. Moreover, eighty-five (85) or fifty-four percent (54%) of the subjects were knowledgeable on the question "*Are all breast cyst cancerous?"*. The question *"Is death from breast cancer unavoidable whether it's detected in its early stage or not"* had sixty-eight (68) subjects or forty-four percent (44%) of the total number of subjects answering the question correctly. Thirty-one (31) or twenty percent (20%) of the subjects answered the question *"Do young women have a higher survival rate than those cancer patients who are over 40 years of age?"* correctly. Lastly, the question that had the lowest rate among the questions, with only twenty-nine (29) or nineteen percent (19%) of correct responses, was the question *"Is breast cancer an incurable malignancy?".*

This section demonstrated that on the outcome, the majority of the subjects were knowledgeable in the question: *"Is breast cancer a type of malignancy that begins in the milk ducts of the breast?"* achieved the highest rate among all questions in knowledge on breast cancer, with eighty-five percent (85%). This was followed by the question: *"Is breast cancer one of the most common, yet often ignored cancers in the Philippines and the rest of the world?"* and *"Are all breast cysts cancerous?"*, where sixty-two percent (62%) and fifty-four percent (54%) answered these questions correctly.

However, the subjects got a lower rate on the questions: *"Is death from breast cancer unavoidable whether it's detected in its early stage or not?"* forty-four percent (44%) answered it correctly. The subjects had to understand that there were factors to consider in order to prevent the severity of the condition such as avoiding smoking, avoiding drinking alcohol, taking exercise, and eating healthy foods. This was followed by the question, *"Do young women have a higher survival rate than those cancer patients who are over 40 years of age?"*, twenty percent (20%) answered it correctly. This was one of the misconceptions in terms of having a higher survival rate, the subjects anticipated that if breast cancer occurred in young adolescents, they could have the higher survival which was not true. Furthermore, the question *"Is breast cancer an incurable malignancy?"* received the lowest rate among all of the questions about knowledge on breast cancer, with nineteen percent (19%) correct answer. To sum up, this outcome implied that the subjects were knowledgeable about the most common origin of breast cancer which is in the milk ducts. The subjects were also aware that not all cysts were cancerous, there were also benign tumors that were not cancerous. In addition, the subjects were aware in terms of the prevalence of the disease, yet breast cancer was frequently disregarded in the Philippines. Lastly, the subjects needed further knowledge about the fact that younger women had a lower survival rate since their breast cells were still immature. Breast cancer was an incurable malignancy because there was no cure for this condition but there were treatments available to address the malignancy.

There were some misconceptions that needed to be changed to the subjects' understanding, especially the questions with low results. The subjects should have been corrected at some points as it could have helped them to improve their understanding with regards to breast cancer. According to Basa 2023, breast cancer is an incurable malignancy. This is due to its low immunogenicity, the ability of a material, such as an antigen, to elicit an immune response in the body and heterogeneity typically refers to a substance's varied composition or structure, which may have an impact on its immunogenicity (Reviews in Breast Cancer, 2022). Breast cancer is an incurable malignancy but there are treatments available. Also, younger women suffer more hostility in the early stages when compared to women over 40 years old, since the breast cells of the younger women are just starting to mature. Because of the changes in estrogen hormone during pregnancy and breastfeeding, they mature and grow regularly, which is one of the main ways that it helps prevent breast cancer (Chelmow, et al., 2020). According to the National Cancer Institute 2023, certain cancer risk factors can be avoided, even though many others cannot. For instance, certain gene inheritance and smoking are risk factors; however, only smoking can be avoided. There are ways to help reduce the risk of having cancer like a healthy diet and frequent exercise. You can reduce your risk of cancer and strengthen your defenses against it, but these measures cannot guarantee acquiring the condition.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

Table 5: Level of knowledge of the Junior High School Student of San Pablo City Integrated High School about Risk Populations of Breast Cancer before the Implementation of the Program

Knowledge on Risk population	Yes	No	% of Correct answers
1. Do men not have the risk of getting breast cancer? *Ang mga kalalakihan ba ay walang tiyansang magkaroon ng breast cancer?*	46	110	*71%*
2. Does breast cancer only occur in elderly women? *Ang kanser sa suso ba ay nangyayari lamang sa mga matatandang babae?*	10	146	*94%*
3. Are women who have never given birth more likely to develop breast cancer than those who have given birth one or more times? *Ang mga babae ba na hindi pa nanganak ay may mas mataas na tiyansang magkaroon ng kanser sa suso kumpara sa mga babaeng naka panganak na?*	56	100	*36%*
4. Does wearing bras at night with underwire increases the risk of getting breast cancer? *Ang pagsusuot ba ng bra sa gabi at ng mga bra na mayroong kawad ay nakakapag pataas ng tiyansang magkaroon ng kanser sa suso?*	81	75	*48%*
5. Can I get breast cancer as an adolescent? *Maaari ba akong magkaroon ng kanser sa suso sa oras na ako ay magdalaga?*	108	48	*69%*

Legend: = Correct Answer = Incorrect Answer

Table 5 describes the answers of the subjects regarding the questions that would determine their knowledge on risk population prior to the implementation of the I Pink I Can Intervention Program. In terms of question number one that asked if males can get breast cancer, out of the 156 subjects there were 46 subjects that answered "Yes" and 110 subjects that answered "No". In this particular section, 71% of the subjects answered correctly and 21% answered incorrectly. While question number two asked if breast cancer only occurs in elderly women, ten (10) subjects answered "Yes", and the majority with a number of 146 with a percentage of 94% answered "No". This meant that the majority of the subjects knew that breast cancer does not only occur in elderly women. Next question under this section asked if women who have never given birth were more likely to develop breast cancer than those who have given birth one or more times, the majority of the subjects answered incorrectly that answered "No" with 100 subjects covering 64% and only 36% with 56 subject responses answered correctly that answered "Yes". Continuing to question number 4, *"does wearing bras at night with underwire increase the risk of getting breast cancer?"*, 81 subjects responded "Yes" with a percentage of 52% and 48% answered "No" with 75 subjects answering the right answer. Lastly, the question that asked if an adolescent can acquire breast cancer, 69% out of the 100% answered correctly with 108 "Yes" responses, and only 48 subject responses with 71% answered "No" regarding this question.

The results garnered during the pre-test showed that the subjects had good prior knowledge regarding some aspects in terms of the risk populations in breast cancer. The subjects answered three (3) questions with acceptable correct responses and two (2) questions that were answered incorrectly. The subjects were knowledgeable about the questions: *"Do men not have the risk of getting breast cancer?"* with a percentage of 71% or 110 correct responses. Next is the question, *"Does breast cancer only occur in elderly women?"* with 146 subjects answered correctly out of the 156 that garnered 94%. Lastly, the question, *"Can I get breast cancer as an adolescent?"* 108 subjects or 69% of the total population agreed. But in terms of the questions: *"Are women who have never given birth more likely to develop breast cancer than those who have given birth one or more times?"* and *"Does wearing bras at night with underwire increase the risk of getting breast cancer?"*, the majority of the subjects answered incorrectly, with only 48% or 56 responses and 69% or 79 responses, respectively, that answered correctly to the question. These results implied that the subjects already knew that breast cancer can also occur in men, elderly women, and adolescents. The thing that they needed to know more about was the fact that women who had never given birth in their lives were more likely to acquire breast cancer. Another thing was that the subjects should have been more knowledgeable that women and other genders who wore bras during the night and with underwires were not really considered to be part of the risk population because wearing bras with underwires at night did not really contribute to acquiring breast cancer. These two (2) were also part of the most common misconception about breast cancer that's why the researchers thought that the subjects answered in such a certain way.

Moreover, these misconceptions hindered people from taking their first step in terms of doing the necessary things to check themselves, especially in self-checking for breast cancer. The subjects and the populations that were at great risk should have been knowledgeable regarding this information, especially those that needed to be corrected, just like the questions that got low results. According to Weiss 2023, women who did not undergo pregnancy are at risk of acquiring breast cancer. It is caused by the immature breast cells that were not able to compensate for the effect that cancer cells can bring to these breast cells. Breast cells start to mature only if a woman successfully undergoes her first-full term pregnancy. They mature and, at the same time, grow regularly because of the changes in their estrogen hormone during pregnancy, which is a primary reason why it helps in terms of protection against breast cancer. Another thing that concerned the researchers was the low knowledge of the subjects regarding the myth about wearing bras at night and wearing bras with underwires in connection to having breast cancer. BreastCancer.org stated that this myth is one of the often repeated and unfounded rumors that can inspire unwarranted worry. This myth causes fear to people. However, there is

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

no specific proof to back up the assertions regarding this issue. There is no discernible disparity in the risk of breast malignancy between women who do not use bras and those who do. With all of these, the researchers see the need for proper education regarding these misconceptions that concern the knowledge of people regarding those populations that are at great risk of acquiring the malignancy.

Table 6: Level of Knowledge of the Junior High School Student of San Pablo City Integrated High School about Signs and Symptoms of Breast Cancer before the Implementation of the Program

Knowledge on Signs and Symptoms	Yes	No	% of Correct Answers
1. Is breast pain in any location an indication of early stage breast cancer? *Ang pagsakit bas a kahit anong lokasyon ng suso ay isang indikasyon ng early-stage ng kanser sa suso?*	84	72	*46%*
2. Are unusual changes in the size, shape, or appearance of the breast normal and should not cause concern? *Ang hindi karaniwang pagbabago ba sa laki at itsura ng suso ay natural at hindi dapat pagtuunan ng pansin?*	35	121	*78%*
3. Do you think nipple discharge, whether bloody or not, is a sign of breast cancer? *Sa iyong palagay ang paglabas ng dugo o anumang likido sa iyong utong ay senyales ng kanser sa suso?*	123	33	*79%*
4. Does breast cancer cause redness or pitting of the skin that is similar to an orange peel? *Ang kanser ba sa suso ay nagsasanhi ng pamumula o pagbubukol ng balat na katulad ng isang balat ng orange (prutas), sa paligid ng suso?*	134	22	*86%*

Legend: = Correct Answer = Incorrect Answer

Table 6 describes the distribution of the Junior High School students of San Pablo City Integrated High School in accord with their knowledge on signs and symptoms of Breast Cancer prior to the implementation of the I Pink I Can Intervention Program. Based on the result of the pre-test, the highest frequency among the questions was *"Does breast cancer cause redness or pitting of the skin that is similar to an orange peel?"* with one hundred thirty-four (134) out of one hundred fifty-six (156) subjects or eighty-six percent (86%) answering the question correctly. Next was *"Do you think nipple discharge, whether bloody or not, is a sign of breast cancer?"* with one hundred twenty-three (123) subjects or seventy-nine percent (79%) knowledgeable, followed by *"Are unusual changes in the size, shape or appearance of the breast normal and should not cause concern?"* with one hundred twenty-one (121) seventy-eight percent (78%) answering correctly. Lastly, *"Is breast pain in any location an indication of early-stage breast cancer?*" with eighty-four (84) subjects or forty-six percent (46%) being knowledgeable.

This section contained the knowledge level and subject's understanding about the signs and symptoms of breast cancer before the implementation program. The results showed that the majority of the subjects were knowledgeable about the questions *" Does breast cancer cause redness or pitting of the skin that is similar to an orange peel?"*, which got the most correct answers with one hundred thirty-four (134) subjects or eighty percent (80%)*," Do you think nipple discharge, whether bloody or not, is a sign of breast cancer?"* with one hundred twenty-three (123) subjects or seventy-nine percent (79%) and *"Are unusual changes in the size, shape or appearance of the breast normal and should not cause concern?"* with one hundred twenty-one (121) subjects or seventy-eight percent (78%). However, the question *"Is breast pain in any location an indication of an early stage of breast cancer?"* got the lowest number of correct answers with seventy-two (72) subjects or forty-six percent (46%). It implied that the majority of the subjects were already aware of the skin peeling, the nipple discharge, and the changes in the breast; yet some individuals were unaware that the pain does not occur in the early stages of the disease.

Furthermore, breast pain is not typically an early sign of breast cancer; in fact, lumps are often painless in the early stage. It's crucial to be alert to other symptoms like changes in breast texture, color, or swelling, as well as variations in size or shape. While not all lumps are cancerous, feeling a lump or thickening in the breast tissue could signal invasive breast cancer. In advanced stages, breast cancer may cause changes in skin texture, like redness or a dimpled appearance, similar to an orange peel (City of Hope 2022).

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

Table 7: Level of Knowledge of the Junior High School Student of San Pablo City Integrated High School about Risk Factors of Breast Cancer before the Implementation of the Program

Knowledge on the Risk Factors	Yes	No	% of Correct Answers
1. Does the environment or my vices (such as consuming alcohol and smoking) have no any bearing on my chance of developing breast cancer? *Ang akin bang kapaligiran at bisyo (gaya ng pag-inom ng alak at paninigarilyo), ay hindi nakakaapekto sa tiyansa ko ng pagkakaroon ng kanser*	19	137	*88%*
2. Do women who are not physically active have a higher chance of getting breast cancer? *Ang mga babae ba na hindi aktibo sa pag-e-ehersisyo ay mas mataas ang tiyansa na magkaroon ng kanser sa suso?*	90	66	*58%*
3. Does breast cancer risk increase with obesity? *Ang pagiging labis ba sa tamang timbang ay nagpapataas ng pagkakataon na magkaroon ng kanser sa suso?*	55	101	*35%*
4. Do you think oral contraceptives (pills) are a risk factor for breast cancer? *Sa iyong palagay ang oral na kontraseptib (pills) ba ay isang salik upang magkaroon ng kanser sa suso?*	66	90	*42%*
5. Are an estimated 5-10% of breast cancer cases thought to be related to genetic mutations that are hereditary? *Ang tinatayang 5-10% ba ng kanser sa suso ay sinasabing may kinalaman sa mutasyon ng gene na naipapasa sa pamilya?*	120	36	*77%*

Legend: = Correct Answer = Incorrect Answer

Table 7 describes the distribution of Junior High School students at San Pablo City Integrated High School in conformity with their level of knowledge pertaining to the risk factors of the disease before the implementation of the I Pink I Can intervention program. Based on the results of the pre-tests, the first question received the highest frequency of correct answers among all the questions: *"Did the environment or my vices (such as consuming alcohol and smoking) have no bearing on my chance of developing breast cancer?"* One hundred thirty-seven (137) out of one hundred fifty-six (156) subjects, or eighty-eight percent (88%), answered the question accurately. This was followed by the question, *"Are an estimated 5-10% of breast cancer cases thought to be related to genetic mutations that are hereditary?"* One hundred twenty (120) subjects, where seventy-seven percent (77%) of the population provided the correct answer. In addition to that, fifty-eight percent (58%) or ninety (90) subjects demonstrated knowledge of the question, *"Did women who are not physically active have a higher chance of getting breast cancer?"* Sixty-six (66) subjects, equivalent to forty-two percent (42%) of the total subjects, answered the question *"Did you think oral contraceptives (pills) are a risk factor for breast cancer?"* correctly. The question *"Did breast cancer risk increase with obesity?"* had the lowest frequency among the questions in this section, with only fifty-five (55) subjects or thirty-five percent (35%) of the subjects providing the correct answer.

This section of the study showed that a predominant number of the subjects were well-versed in the question, *"Did the environment or my vices (such as consuming alcohol and smoking) have no bearing on my chance of developing breast cancer?"* It achieved the highest percentage, receiving eighty-eight percent (88%) among all questions. It was then followed by the following questions: *"Were an estimated 5-10% of breast cancer cases thought to be related to genetic mutations that are hereditary?"* and *"Did women who are not physically active have a higher chance of getting breast cancer?"*, with seventy-seven percent (77%) and fifty-eight percent (58%) respectively. Conversely, there were two risk factors that were not as widely familiar, and the number of subjects who obtained the correct answers was low. The question *"Did you think oral contraceptives (pills) are a risk factor for breast cancer?"* had only forty-two percent (42%) or sixty-six (66) of subjects answering correctly. This indicated that the majority of the subjects were not aware that contraceptives could be a risk factor for developing breast cancer due to the synthetic versions of female hormones they contained that could have an impact on the natural production and function of hormones. The lowest correct answer was obtained for *"Did breast cancer risk increase with obesity?"* with only thirty-five percent (35%) answering accurately. Most of the subjects knew that obesity was a factor for certain diseases that could compromise health; however, they may not have imagined or anticipated that obesity could also be associated with and contribute to an increased risk of developing breast cancer. In summary, out of the five questions in this category, the majority of the subjects were well knowledgeable about the three questions. In contrast, on the other two questions, most were unaware of this information, which led to their incorrect answers. This highlighted the necessity for increased focus and emphasis on those topics to facilitate improvement.

Additionally, the variables and misconceptions surrounding this disease could have remarkably elevated a person's likelihood of acquiring the illness if they were not conscious of their susceptibility. This emphasized the importance of the objectives of the I Pink I Can Intervention program, as lack of knowledge could lead to higher vulnerability due to factors such as obesity, alcohol consumption, lifestyle choices, lack of exercise, and specific medication use, according to the American Cancer Society and World

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

Health Organization (2020). Some misinformation that resulted in inaccurate responses to the questions needed to be addressed as well. For instance, while it might be true that consuming birth control elevates a person's chances of having breast cancer, it was vital to stress that the risk, according to the Mayo Clinic (2022), dropped off when women stopped using these birth pills.

Table 8: Level of Knowledge of the Junior High School Student of San Pablo City Integrated High School about Breast Cancer Screening before the Implementation of the Program

Knowledge on the Breast Cancer Screening	Yes	No	% of Correct answers
1. Should I lie down on my back or stand in front of a mirror while raising my arms above my head when doing a self-breast examination?	*108*	*48*	*69%*
2. Should I look in the mirror and place my arms on my hips and check if my breasts are symmetrical in size and if there is any unusual inversion of my nipples?	*111*	*45*	*71%*
3. Is it recommended to use the fingertips instead of the pads of the three middle fingers when palpating the breast during breast self-exam?	*81*	*75*	*48%*
4. Should I begin examining my breast by starting near my collarbone,feeling each section with my fingers as I move towards the nipple, and then proceed to the next section vertically and/or circularly?	*135*	*21*	*87%*
5. Should I pinch my nipple to check for any unusual discharge or blood,as these could be signs of breast cancer?	*55*	*101*	*35%*
6. Is examining my armpits not necessary when doing self-breast exams?	*54*	*102*	*65%*
7. Is Mammography an unreliable test for breast cancer screening?	*81*	*75*	*48%*
8. Are Mammograms unable to detect tumors in the breast hence unnecessary for the early detection of breast cancer?	*50*	*106*	*68%*
9. Do you think that the possibility of missing some early signs of breast cancer is the reason why breast ultrasound alone is not typically used as a screening tool for breast cancer?	*85*	*71*	*54%*
10.Do I no longer need to get checked regularly if I don't have any signs and symptoms?	*36*	*120*	*77%*
11. Should breast self-examination be carried out by women who are still menstruating while they're on their period?	*64*	*92*	*59%*

Legend: = Correct Answer = Incorrect Answer

Table 8 describes the distribution of Junior High School students of San Pablo City Integrated High School towards their basic knowledge regarding breast cancer before the implementation of the I Pink I Can Intervention Program. Based on the results, the highest rate among the questions with one-hundred thirty-five (135) out of one-hundred fifty-six (156) or eighty-seven (87%) answered the question, *"Should I begin examining my breast by starting near my collarbone,feeling each section with my fingers as I move towards the nipple, and then proceed to the next section vertically and/or circularly?"* were knowledgeable regarding the question. Followed by one-hundred twenty (120) or seventy-seven percent (77%) knowledgeable with the question, *"Do I no longer need to get checked regularly if I don't have any signs and symptoms?"*. Along with this, one-hundred eleven (111) or seventy-one percent (71%) were knowledgeable regarding the question, "*Should I look in the mirror and place my arms on my hips and check if my breasts are symmetrical in size and if there is any unusual inversion of my nipples?"*. Also, one-hundred eight (108) or sixty-nine percent (69%) correctly answered the question *"Should I lie down on my back or stand in front of a mirror while raising my arms above my head when doing a self-breast examination?"*. It was followed by one-hundred six (106) or sixty-eight percent (68%) who were knowledgeable about, *"Are Mammograms unable to detect tumors in the breast hence unnecessary for the early detection of breast cancer?"*. Succeeding this one-hundred two (102) or sixty-five percent (65%) were knowledgeable regarding the question *"Is examining my armpits not necessary when doing self-breast exams?"*. Moreover, ninety-two (92) or fifty-nine percent (59%) correctly answered the question *"Should breast self-examination be carried out by women who are still menstruating while they're on their period?"*. Followed by eighty-five (85) or fifty-four percent (54%) were knowledgeable regarding the question *"Do you think that the possibility of missing some early signs of breast cancer is the reason why breast ultrasound alone is not typically used as a screening tool for breast cancer?"*. Similarly questions: *"Is it recommended to use the fingertips instead of the pads of the three middle fingers when palpating the breast during breast self-exam?"* and *"Is Mammography an unreliable test for breast cancer screening?"* both gained seventy-five (75) correct answers or forty-eight percent (48%). Lastly, fifty-five (55) or thirty-five percent (35%) were knowledgeable regarding the question *"Should I pinch my nipple to check for any unusual discharge or blood, as these could be signs of breast cancer?"*

Regarding to the basic knowledge of Breast Cancer Screening prior to the implementation of the I Pink I Can Intervention Program, the result indicated that the majority of the subjects were knowledgeable regarding the questions with the following percentages: *"Should I begin examining my breast by starting near my collarbone, feeling each section with my fingers as I move towards the nipple, and then proceed to the next section vertically and/or circularly?"* with a total of one hundred thirty-five (135)

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

correct responses or eighty-seven percent (87%). The question *"Do I no longer need to get checked regularly if I don't have any signs and symptoms?"* got seventy-seven percent (77%) or one hundred twenty (120) correct responses. It was then succeeded by the question *"Should I look in the mirror and place my arms on my hips and check if my breasts are symmetrical in size and if there is any unusual inversion of my nipples?"* that garnered a total of one hundred eleven (111) correct responses or seventy-one percent (71%). The question *"Should I lie down on my back or stand in front of a mirror while raising my arms above my head when doing a self-breast examination?"* had a total of one-hundred eight (108) or sixty-nine percent (69%) correct responses. Followed by the question *"Should I lie down on my back or stand in front of a mirror while raising my arms above my head when doing a self-breast examination?"* with one hundred six (106) correct responses or a percentage of sixty-eight (68%). Succeeding this question, *"Is examining my armpits not necessary when doing self-breast exams?"* got a total of one hundred-two (102) correct responses resulting in a percentage of sixty-five percent (65%). Lastly, the question, *"Should breast self-examination be carried out by women who are still menstruating while they're on their period?"* garnered a total score of ninety-two (92) or fifty-nine (59%). However, regarding the questions: *"Is Mammography an unreliable test for breast cancer screening?"* and *"Is it recommended to use the fingertips instead of the pads of the three middle fingers when palpating the breast during breast self-exam?"* scored an average of forty-eight percent (48%) or seventy-five (75) correct answers. This indicates that the majority of the subjects lacked knowledge regarding this or simply that they did not know what mammography was and that this was the best way to promptly detect breast cancer tumors. Moreover, this showed that they still didn't have the proper knowledge on what to use in terms of what part of the fingers to use in palpating during breast self-examination. In addition, the question *"Should I pinch my nipple to check for any unusual discharge or blood, as these could be signs of breast cancer?"* also gained a low number of correct answers with only fifty-five (55) subjects that answered correctly. This indicates that they should be taught that pinching the nipples is one of the best ways to detect if there is a sign of bleeding or discharge, and that assessment or observation could help them in early detection of breast cancer.

The majority of the subjects were knowledgeable regarding breast cancer specifically in terms of the step-by-step procedure of doing a breast self-examination, what are the proper positions that they need to do to properly assess their breasts and that they also need to include their armpits during the self-breast examination. You should lie down while doing breast self-examination, breast tissue spreads out when you are lying down, which makes it thinner and easier to feel. Start slightly under the collarbone, vertically move your fingers toward your nipple, and assess the area by touching it. After palpating the area, draw the pads of your fingers in a circular motion around the breast. It is important to pinch the nipple, to check for any discharge, blood or pus (Mayo Clinic, 2022). The subjects present understanding that even if they do not have any of the signs and symptoms of breast cancer, they should still do regular breast self-exam and have their regular checkups and that this will help in early detection. According to American Cancer Society (2022), regular screening for breast cancer is crucial since not all breast cancer can be picked up by mammography, it is important to know how your breast normally feels and looks. Moreover, with your shoulders straight and your arms resting on your hips, you should first examine your breasts in the mirror. Following that, you should examine for any indications or symptoms of breast cancer. Breast Organization (2021). According to the World Health Organization (2021), mammography is advised for early detection, but it should be indicated that other screening options must be taken into consideration as mammography is an expensive screening method that is not suitable in nations with inadequate medical resources. Getu et al. (2022) stated that the most important thing that they need to know, especially for the girls, is that seven to ten days following the onset of menstruation is the ideal time to perform breast self-examination because this is when the breast is most tender and lumpy. Moreover, having an in-depth understanding of breast self-examination aids in an early detection of breast abnormalities and significantly reduces complications and mortality related to breast cancer.

B. Post-Implementation of the I Pink I Can Intervention Programme

Table 9: Comparison of the Level of Knowledge of the Junior High School Student of San Pablo City Integrated High School about Knowledge on Breast Cancer after the Implementation of the Program

Knowledge on Breast Cancer	Pre-test	Post-test	Change
Is breast cancer a type of malignancy that begins in the milk ducts of the breast?	85%	95%	10%
Is breast cancer an incurable malignancy?	19%	37%	19%
Are all breast cysts cancerous?	54%	59%	5%
Is breast cancer one of the most common, yet often ignored cancers in the Philippines and the rest of the world?	62%	81%	19%
Do young women have a higher survival rate than those cancer patients who are over 40 years of age?	20%	30%	10%
Is death from breast cancer unavoidable whether it's detected in its early stage or not?	44%	46%	2%

Legend: Pink=Increased Blue= Decreased Orange= Retained

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

Table 9 describes the answer of the subjects in light of their fundamental knowledge on breast cancer after the implementation of the I Pink I Can Intervention Program. Based on the results about knowledge on breast cancer, the following questions had the highest increase in terms of the difference regarding correct responses. First, the question *"Is breast cancer one of the most common, yet often ignored cancers in the Philippines and the rest of the world?"*, believed and correctly answered by one hundred twenty-six (126) or eighty-one percent (81%) of the subject's population, from sixty-two percent (62%) it has increased to nineteen percent (19%). Next, the question *"Is breast cancer an incurable malignancy?"* fifty-seven (57) subjects or thirty-seven percent (37%) answered the question correctly, noted an increase of nineteen percent (19%) from its previous percentage of nineteen percent (19%). This is followed by one hundred-twenty-six (126) or eighty-one percent (81%) of the subjects population believed on the question *"Is breast cancer one of the most common, yet often ignored cancers in the Philippines and the rest of the world?"* with an increased percentage of nineteen percent (19%) from its previous percentage of sixty-two percent (62%). Moreover, *"Is breast cancer a type of malignancy that begins in the milk ducts of the breast?"* agreed by one hundred-forty-eight (148) or ninety-five percent (95%) of the subjects, came from eighty-five percent (85%) it has increased in percentage of ten percent (10%). The question *"Do young women have a higher survival rate than those cancer patients who are over 40 years of age?" the number of responses that answered correctly* was forty-seven (47) or thirty percent (30%) which increased to ten percent (10%) as compared to the previous percentage of twenty percent (20%). Then, ninety-two (92) or fifty-nine percent (59%) of the subjects agreed on the question *"Are all breast cysts cancerous?"* with an increased percentage of five percent (5%) compared to its previous percentage of fifty-four percent (54%). And lastly, the question *"Is death from breast cancer unavoidable whether it's detected in its early stage or not?"* seventy-one (71) subjects or forty-six percent (46%) correctly answered the question with an increase in percentage of two percent (2%) compared to its previous percentage of forty-four percent (44%) (Refer to Appendix E).

The outcome indicated that the implementation of the I Pink I Can Intervention Program was effective in imparting information about breast cancer. When compared to the pre-test results, all the questions on knowledge on breast cancer gained an increased number of responses. The subjects were knowledgeable that breast cancer is an incurable but treatable malignancy. The subjects were aware that breast cancer is the most prevalent condition in the Philippines yet most often ignored. Overall, the subjects showed an understanding in terms of their knowledge on breast cancer. The I Pink I Can Intervention Program was effective in executing information, allowed the subjects to correct their misconceptions, and deepened their understanding with regards to breast cancer.

The totality results implied that knowledge on breast cancer gained an increased number of correct responses which only means that the implementation of the I Pink I Can Intervention Program was effective. The subjects learned more about the said condition, and an increase in knowledge would help the subjects to partake in terms of providing information and correcting misconceptions to others. By being aware about the facts, one can avoid unwarranted fear and distinguish fact from myth. Overall, being well-informed about breast cancer is crucial, the more an individual knows about breast cancer, the more it can empower and make an individual feel more in control of one's health. A key factor that contributes to behavior is knowledge. The risk of mortality has increased due to ignorance about breast cancer (Meshkani et al., 2022).

Table 10: Comparison of the Level of knowledge of the Junior High School Student of San Pablo City Integrated High School about Risk Population of Breast Cancer after the Implementation of the Program

Knowledge on Risk Population	**Pre-test**	**Post-test**	**Change**
Do men not have the risk of getting breast cancer?	71%	85%	14%
Does breast cancer only occur in elderly women?	94%	97%	3%
Are women who have never given birth more likely to develop breast cancer than those who have given birth one or more times?	36%	66%	30%
Does wearing bras at night with underwire increases the risk of getting breast cancer?	48%	71%	23%
Can I get breast cancer as an adolescent?	69%	83%	14%

Legend: Pink=Increased Blue= Decreased Orange= Retained

Table 10 describes the level of knowledge of the subjects regarding their knowledge on Risk Population after the implementation of the I Pink I Can Intervention Program. This table also illustrates the changes in terms of the percentage that answered correctly with regards to the questions under this section. The question, "Do men not have the risk of getting breast cancer?", garnered 110 or 71% correct responses from the subject, this shows that a significant increase of 14% was noted, coming from 71% to 85% after the post-test. In terms of question number 2, "Does breast cancer only occur in elderly women?", the number of responses that answered correctly is 152 with a percentage of 97% which increased 3% as compared to the percentage before the implementation of the program which is 94%. Moreover, the next question asked if women who have never given birth are more likely to develop breast cancer than those who have given birth one or more times, 103 subjects answered correctly with a percentage of 66% with 30% increase from the result before the implementation of the program with 36%. In terms of question number 4, "Does wearing bras at night with underwire increases the risk of getting breast cancer?", 71% or 111 subjects responded with the correct answer, an increase of 23% was noted. Lastly, in question number 5 which asked if an adolescent can get breast cancer, a 14% increase was seen because prior to the implementation of the program only 69% answered correctly, while after the

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

implementation, the percentage of subject responses that got the correct answer was 83% or 130 out of the 156 subjects in this study (Refer to Appendix E).

The specific results above showed the post-test results and the changes that were noted after comparing the pre-implementation and post-implementation results. The results implied that the I Pink I Can Intervention program is effective in enhancing the knowledge of the subjects regarding the risk populations in breast cancer. The subjects were most knowledgeable about the fact that breast cancer does not only occur in the elderly population. The subjects were aware that regardless of age and sex, there was still a possibility that one can acquire breast cancer. Overall, the I Pink I Can intervention program should be implemented to a wider population, to reach a bigger number of people in order for them to be knowledgeable on the risk populations and also to correct the misconceptions regarding this aspect of this condition.

Considering the increased results, this implies that health teaching and the use of posters and leaflets are useful and effective in enhancing people's knowledge. Significant increases were noted, and significant increases in the number people learned more about the risk population in breast cancer. Increase in knowledge will help in terms of changing the behavior of the people towards breast cancer. Meshkani 2022 supports that a significant variable that influences behavior is knowledge. Without knowledge and ignorance about breast cancer risk, population and other aspects will increase the risk of death and mortality due to late discovery.

Table 11: Comparison of the Level of Knowledge of the Junior High School Student of San Pablo City Integrated High School about Signs and Symptoms of Breast Cancer after the Implementation of the Program

Knowledge on Signs and Symptoms	Pre- test	Post- test	Change
Is breast pain in any location an indication of early stage breast cancer?	46%	37%	-9%
Are unusual changes in the size, shape, or appearance of the breast normal and should not cause concern?	78%	65%	-13%
Do you think nipple discharge, whether bloody or not, is a sign of breast cancer?	79%	94%	15%
Does breast cancer cause redness or pitting of the skin that is similar to an orange peel?	86%	95%	11%

Legend: Pink=Increased Blue= Decreased Orange= Retained

Table 11 describes the distribution of the Junior High School students of San Pablo City Integrated High School in accordance with their knowledge of signs and symptoms of Breast Cancer after the implementation of the I Pink I Can Intervention Program. The biggest change in the questions that the subjects answered is first, "Do you think nipple discharge, whether bloody or not, is a sign of breast cancer?" with one hundred forty-six (146) out of one hundred fifty six (156) subjects or ninety-four (94%) are knowledgeable, with fifteen percent (15%) increase from its previous percentage of seventy-nine percent (79%). It is followed by one hundred forty-eight (148) subjects answered correctly with ninety-five percent (95%) and with an increase of eleven percent (11%) from its previous result of eighty-six percent (86%) on the question "Does breast cancer cause redness or pitting of the skin that is similar to an orange peel? However, "Are unusual changes in the size, shape or appearance of the breast normal and should not cause concern?" that one hundred-two (102) or sixty-five percent (65%) answered correctly had decreased thirteen percent (13%) from 78% during the pre-implementation of the program. Lastly, "Is breast pain in any location an indication of an early stage of breast cancer? "With fifty-eight (58) or thirty-seven (37%) percent knowledgeable, the table shows that there is a decrease of nine percent (9%) from its previous result of forty-six percent (46%).

This result showed that subjects still have confusion about breast pain and this matter is one of the misconceptions that's why they still answered it incorrectly. Additionally, posters and leaflets must have been improved for better understanding of the subjects.

This section indicated that after the program, subjects' belief that breast pain signifies early-stage breast cancer and unusual changes in the size, shape or appearance of the breast normal and should not cause concern increased. This means that a significant number of subjects were confused about this information. This implied that these particular sections of the program do have spaces of improvement to better deliver more concise and clear information to the subjects. The question that showed the highest positive change was "Do you think nipple discharge, whether bloody or not, is a sign of breast cancer?" ninety-four percent (94%) of subjects answered correctly with a fifteen percent (15%) increase. Additionally, "Does breast cancer cause redness or pitting of the skin that is similar to an orange peel?" had ninety-five percent (95%) correct response with eleven percent (11%) change. Overall, these changes indicated that the subjects need to be more aware about the physical manifestations that could be signs of Breast Cancer.

The low percentage of breast cancer patients discovered at an early stage suggests a concerning trend of late-stage diagnosis, possibly exacerbated by the lack of early symptoms leading to delayed detection and more advanced disease stages upon diagnosis. This highlights the importance of increased knowledge, education, and early screening initiatives to improve the likelihood of detecting breast cancer at its earliest, most treatable stages. (According to Tsu-Yin and Lee 2018), the lack of symptoms in its early stages is one of the leading factors contributing to its frequent neglect. Since it doesn't exhibit obvious symptoms or pain, it is possible that someone won't become aware of it until it has progressed to a more advanced stage. Only 2%–3% of breast cancer patients in the Philippines were discovered at Stage I, whereas a significant 53% were already in Stages III and IV of the disease. Moreover, researchers likely emphasize the necessity of acknowledging the prevalence of benign breast lumps while also

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

underscoring the importance of medical evaluation for any new or unusual symptoms. This suggests their broader perspective on the need for early detection strategies and increased knowledge to improve breast cancer outcomes. Most prevalent early indicator of cancer in the breast is a pain free lump in the breast that we may not feel. Rather, a regular screening mammography detects lumps. Breast tumor symptoms might vary from person to person. It's crucial to acknowledge that most breast lumps are benign and not cancerous (World Health Organization, 2018). Although they are not normal growths, non-cancerous breast tumors do not metastasize outside of the breast. Although they pose no threat to life, certain benign breast lumps can raise a woman's risk of experiencing breast cancer (NCI, 2018).

Early cautious signs of breast cancer typically include changes of the skin, including inflammation, redness, or other visible changes in either one or both breasts; changes in the breast(s)' shape and size; modifications to the appearance of the nipples, discharges in the nipple besides breast milk; a pain in any part of the breast, and nodes or lumps that feel inside the breast usually indicates late stage of Breast Cancer. However, invasive breast cancer presents with a variety of warning signs, such as itchy or irritated breasts, color changes, rapid changes in breast size and shape, changes in breast feel when touched (such as tender, hard, or warm), skin peeling or flaking of the nipple, thickening or lumps in breast(s), pitting of the breast skin that's similar to orange skin. It is important to consider the possibility that these alterations started in other, more benign circumstances in the past (City of Hope, 2022).

Furthermore, American Cancer Society 2020 states that understanding how your breasts typically feel and appear is crucial to their overall health. Regular screening for breast cancer is crucial since not all cases of the disease are detected by mammography. This implies that it's important to understand how the breast should ordinarily feel and look. Symptoms include nipple retraction, dry, flaky breast skin, enlarged lymph nodes in the collarbone, and breast soreness.

Table 12: Comparison of the Level of Knowledge of the Junior High School Student of San Pablo City Integrated High School about Risk Factors of Breast Cancer after the Implementation of the Program

Knowledge on Risk Factors	Pre- test	Post- test	Change
Does the environment or my vices (such as consuming alcohol and smoking) have no bearing on my chance of developing breast cancer?	88%	90%	2%
Do women who are not physically active have a higher chance of getting breast cancer?	58%	85%	27%
Does breast cancer risk increase with obesity?	35%	74%	39%
Do you think oral contraceptives (pills) are a risk factor for breast cancer?	42%	75%	33%
Are an estimated 5-10% of breast cancer cases thought to be related to genetic mutations that are hereditary?	77%	91%	14%

Legend: Pink=Increased Blue= Decreased Orange= Retained

Table 12 describes the distribution of Junior High School students of San Pablo City Integrated High School regarding their level of knowledge about the risk factors following the implementation of the I Pink I Can intervention program. Seventy-four percent (74%) of the subjects' population, or one hundred sixteen (116) out of one hundred fifty-six (156) subjects, agreed with the question "Does breast cancer risk increase with obesity?", which represented the largest change in results from the pretest, increased by 39%. In addition, to the query, "Do you think oral contraceptives (pills) are a risk factor for breast cancer?" one hundred seventeen (117) subjects agreed, garnering seventy-five percent (75%) of the whole population. This indicated an increase in the rate of thirty-three percent (33%). Subsequently, the question "Do women who are not physically active have a higher chance of getting breast cancer?" was affirmed by one hundred thirty-three (133) subjects, or eighty-five percent (85%), representing an increase of twenty-seven percentage points (27%). On top of that, one hundred forty-two (142) subjects, which constituted ninety-one percent (91%) of the total, agreed to the question, "Are an estimated 5-10% of breast cancer cases thought to be related to genetic mutations that are hereditary?" This reflected a rise of fourteen percent (14%) from the previous test done. Finally, one hundred forty (140), or ninety percent (90%), concurred with the question: "Does the environment or my vices (such as consuming alcohol and smoking) have any bearing on my chance of developing breast cancer?", which resulted in a two percent (2%) increase from the prior result of the test done before the application of the intervention program. (Refer to Appendix E)

The preceding results depicted the deviations between the subjects' levels of knowledge prior to and following the intervention. The significant increase in the percentage of the post-test from the pretest indicated that the program and intervention applied were efficient and beneficial in amplifying the knowledge of the subjects pertaining to the risk factors of acquiring breast cancer. The subjects developed an understanding that the multifactorial nature of breast cancer risk, covering lifestyle choices, lack of physical activity, obesity, oral contraceptive use, and hereditary genetic mutations, contributed to and increased the risk of a person. It highlighted the relevance of educating young individuals about risk factors early on, since these factors were modifiable over the course of time, making prevention crucial. Results proved that education about breast cancer was important for timely detection and prevention. Some breast cancer risk factors were controllable, whereas several were not. For instance, smoking and certain gene inheritance were risk factors where genetics could not be evaded; for they were non-modifiable risk factors, so smoking needed to be eliminated. Certain malignancies could be averted with a nutrient-dense diet and regular exercise, including breast cancer, in

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

accordance with Sadoh et al. (2021). Although they couldn't assure immunity, these changes and balancing in lifestyle remained vital in refraining from acquiring breast cancer, significantly reducing the likelihood of its development.

Table 13: Comparison of the Level of Knowledge of the Junior High School Student of San Pablo City Integrated High School about Breast Cancer Screening after the Implementation of the program

Knowledge on Breast Cancer Screening	Pre- test	Post- test	Change
Should I lie down on my back or stand in front of a mirror while raising my arms above my head when doing a self-breast examination?	69%	90%	21%
Should I look in the mirror and place my arms on my hips and check if my breasts are symmetrical in size and if there is any unusual inversion of my nipples?	71%	80%	9%
Is it recommended to use the fingertips instead of the pads of the three middle fingers when palpating the breast during breast self-exam?	48%	65%	17%
Should I begin examining my breast by starting near my collarbone feeling each section with my fingers as I move towards the nipple, and then proceed to the next section vertically and/or circularly?	87%	87%	0%
Should I pinch my nipple to check for any unusual discharge or blood,as these could be signs of breast cancer?	35%	80%	45%
Is examining my armpits not necessary when doing self-breast exams?	65%	83%	18%
Is Mammography an unreliable test for breast cancer screening?	48%	58%	10%
Are Mammograms unable to detect tumors in the breast hence unnecessary for the early detection of breast cancer?	68%	72%	4%
Do you think that the possibility of missing some early signs of breast cancer is the reason why breast ultrasound alone is not typically used as a screening tool for breast cancer?	54%	49%	-5%
Do I no longer need to get checked regularly if I don’t have any signs and symptoms?	77%	85%	8%
Should breast self-examination be carried out by women who are still menstruating while they’re on their period?	59%	52%	-7%

Legend: Pink=Increased Blue= Decreased Orange= Retained

Table 13 describes the distribution of Junior High School students of San Pablo City Integrated High School towards their basic knowledge about breast cancer after the implementation of the I Pink I Can Intervention Program. Based on the subjects’ responses, the question “Should I lie down on my back or stand in front of a mirror while raising my arms above my head when doing a self-breast examination” garnered a total of one-hundred forty-one (141) or ninety percent (90%) and has an increase of twenty-one percent (21%) from sixty-nine percent (69%). Furthermore, it is followed by one hundred thirty-five (135) correct responses or eighty-seven percent (87%) with no change in terms of the percentage with the question, “Should I begin examining my breast by starting near my collarbone, feeling each section with my fingers as I move towards the nipple, and then proceed to the next section vertically and/or circularly?”. The question “Do I no longer need to get checked regularly if I don’t have any signs and symptoms?” is agreed by one hundred thirty-two (132) or eighty-five percent (85%) from its previous percentage which is seventy-seven percent (77%). Moreover, there was an increase of percentage in the question “Is examining my armpits not necessary when doing self-breast exams?”, it garnered one hundred thirty (130) correct responses or eighty-three percent (83%) from its previous percentage of sixty-five percent (65%). This is followed by the question “Should I pinch my nipple to check for any unusual discharge or blood, as these could be signs of breast cancer?” which has escalated to eighty percent (80%) with one hundred twenty-four correct responses from its previous thirty-five percent (35%) with a notable increase of forty-five percent (45%).Together with this, the question “Should I look in the mirror and place my arms on my hips and check if my breasts are symmetrical in size and if there is any unusual inversion of my nipples?” also garnered a total score of one hundred twenty-four (124) or eighty percent (80%) that increased from its previous percentage of seventy-one percent (71%) with a nine percent (9%) increase. One hundred twelve (112) or seventy-two percent (72%) showed knowledge regarding the question “Are Mammograms unable to detect tumors in the breast hence unnecessary for the early detection of breast cancer?” with an increase of four percent (4%) from its previous percentage of sixty-eight percent (68%). This is followed by the question “Is it recommended to use the fingertips instead of the pads of the three middle fingers when palpating the breast during breast-self exam?” which has been agreed by one hundred one (101) or sixty-five percent (65%) subjects with an increase of seventeen percent (17%) from its previous percentage of forty-nine percent (49%). In addition to this, ninety (90) or fifty-eight percent (58%) agreed on the question “Is Mammography an unreliable test for breast cancer screening?” that resulted with an increase of ten percent (10%) from its previous percentage of forty-eight percent (48%). This is followed by a decrease of percentage of fifty-two percent (52%) answering the question “Should breast self-examination be carried out by women who are still menstruating while they’re on their period?” However, the questions “Do you think that the possibility of missing some early signs of breast cancer is the reason why breast ultrasound alone is not typically used as a screening tool for breast cancer?” and “Should breast self-examination be carried out by women who are still menstruating while they’re on their period?” noted a decrease of five percent (5%) and seven percent (7%) respectively. The questions only garnered fifty-two (52%) and forty-nine (49%) from their previous percentages of seventy-seven (77%) and fifty-nine (59%). (Refer to Appendix E)

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

The result implied that the implementation of the I Pink, I Can Intervention Program through health teaching followed by the use of visual materials like posters and leaflets was effective in imparting knowledge and correcting their misconceptions about breast cancer screening. Along with this, the majority of the questions garnered an increase in correct responses compared to the pre-test results. The question, “Should I pinch my nipple to check for any unusual discharge or blood, as these could be signs of breast cancer?", “Should I lie down on my back or stand in front of a mirror while raising my arms above my head when doing a self-breast examination?”, “Is examining my armpits not necessary when doing self-breast exams?”, “Is mammography an unreliable test for breast cancer screening?”, “Should I look in the mirror and place my arms on my hips and check if my breasts are symmetrical in size and if there is any unusual inversion of my nipples?", and “Do I no longer need to get checked regularly if I don’t have any signs and symptoms?”, “Are mammograms unable to detect tumors in the breast, hence unnecessary for the early detection of breast cancer?”. Majority of the Subjects knowledge showed an increase in terms of the following question, they showed understanding that pinching the nipples is the best way to detect for any blood or unusual discharge that could be a sign of breast cancer, their knowledge regarding the proper position in doing self-breast examination increased, they now know that they should raise their hands above their head and that they also need to examine their armpits while doing self-breast examination. Furthermore, their knowledge about mammography has greatly increased. This shows that the subjects understood that mammography is one of the most reliable tests to detect breast lumps. In contrast, there was a decrease of percentage in the questions: “Should breast-self-examination be carried out by women who are still menstruating while they’re on their period” and “Do you think that the possibility of missing some early signs of breast cancer is the reason why breast ultrasound alone is not typically used as a screening tool for breast cancer?”. This showed that the subjects showed a lack of understanding regarding whether a woman should or should not perform breast self-examination while they are menstruating. It should be done seven to ten days after the start of menstruation. This implies that the subjects were confused in terms of pain as an indication of early stage of breast cancer wherein in reality a breast cancer patient will only feel pain in the late stages which is stage 3 and stage 4. Moreover, in regards to the changes in size, shape, and appearance of the breast the subjects were confused and did not know when they needed to become concerned with the changes happening in their breasts. Moreover, in regard to whether a woman should or should not perform breast self-examination while they are menstruating. It should be done seven to ten days after the start of menstruation. This implies that there is still a need for improvement regarding the questions about pain and when is the right time to properly do the self-breast assessment.

Breast self-examination is the best defense against breast cancer, according to Kashyap et al. (2022), there are also a number of things that should be considered in performing self-breast examination like the proper position, proper way of palpating or putting pressure on the different areas of the breast even in the armpit area and the proper time and day to perform this examination for an effective self-check. The most desirable position for performing a self-breast examination is prone, because this position flattens and thins the breast. The most appropriate time to do a breast self-examination is seven to ten days after the start of menstruation, as this is when the breasts are most tender and lumpy. It should be performed on the same day every month (Kryzak, 2023). Moreover, during breast self-examination, it is important that the pads of the fingers be used and that they must begin under the collarbone, extending the fingers vertically in the direction of the nipple, and feel the region to determine its condition. Once the area has been felt, circle the breasts with the pads of your fingertips, and then pinch the nipple to see if there is any discharge or blood. In line with this, in detecting breast cancer there is still the use of reliable diagnostic tests. In detecting breast cancer there are a lot of things that should be done and considered to properly assess and locate the lump that was felt. An example of this is the use of Mammography and Ultrasound. Mammography-based screening is favored and beneficial for the early detection of breast cancers. According to the World Health Organization (2022), mammography is recommended for early detection, it should be emphasized that alternative methods for screening should be considered as well, considering that mammography is an expensive screening procedure unsuited for use in countries with limited medical resources. Breast self-examination and clinical breast examination are two types of breast cancer screening methods. Mammography is capable of identifying any abnormalities; therefore, the chance of survival is increased by a thorough screening procedure. In addition, according to Basa in 2023, by using mammography, we can see the cancer even before it becomes a lump, and the best way to determine breast cancer is with the combination of mammography and ultrasound. Furthermore, in accordance with Tsu-Yin and Lee in 2018, They stated that one of the primary causes of frequent neglect in breast cancer is the absence of symptoms in its initial stage. It is possible that someone doesn't become aware of it until it progresses to a more advanced stage because it doesn't show any obvious symptoms or pain, that’s why this study stresses the importance of self-breast examination and screening tests to early detect breast cancer regardless if there are symptoms present or none.

Table 14: Paired Sample t-test of the Pre-Test and Post-Test Results of the Breast Cancer Knowledge

Knowledge	P-value	Interpretation
Knowledge on Breast Cancer	0.013	Significant
Knowledge on Risk population	0.017	Significant
Knowledge on Signs and Symptoms	0.888	Not Significant
Knowledge on the Risk Factors	0.029	Significant
Knowledge on the Breast Cancer Screening	0.038	Significant

Significant at <.05 Level

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

Paired sample t-test was conducted to test whether there are significant differences between the pre-test and post-test results of the participants when it comes to their knowledge on breast cancer knowledge. Results show that aside from Knowledge on Signs and Symptoms (p = .888), there are significant difference on Knowledge on Breast Cancer (p = .013), Knowledge on Risk Population (p = .017), Knowledge on Risk Factors (p = .029), and Knowledge on Breast Cancer Screening (p = .038). Therefore, the hypothesis is rejected. The effectiveness was tested and determined that it was successful in raising the subjects' knowledge that were vital in reducing the risk of acquiring the disease and preventing more severe effects if they acquire the disease. This implies that the program is effective in raising breast cancer knowledge among one hundred fifty-six (156) subjects. Major developments have been achieved regarding the understanding of risk factors, risk populations, breast cancer screening, and the disease itself. This indicates that the program was effective in educating the subjects about this condition, the risk factors that go along with it, and the importance of early detection screening. The subjects now have a better understanding of the factors that can lead to the development of breast cancer and who is more vulnerable to the disease. Furthermore, the observed rise in subjects' knowledge of breast cancer screening methods implies that they gained better insight into the relevance of routine screenings for early diagnosis and detection. In relation to the Health Belief model, increase in subjects' knowledge regarding these screening methods implied that obtaining these tests has greater benefits than disadvantages, so they are more likely to participate in it. These actions will then contribute to making better health choices in life. The knowledge of breast cancer signs and symptoms , however, remained unchanged, indicating a potential area for program enhancement.

Knowledge is a vital factor that contributes to the person's ability to take initial actions in preventing diseases, and early detection screenings and programs help people maximize the wide array of interventions if this disease is diagnosed early. The research study contributed to the subjects' knowledge and knowledge and also corrected some of the misconceptions about breast cancer, acquiring breast examinations or breast cancer screenings, risk factors, and risk populations through the provided leaflets and posters for the facts and diverse information that our subjects needed to know regarding the condition, as well as a demonstration on how to do the proper self-breast examination for early detection of the condition. Just as the theory of Protection Motivation offers, it is useful in persuading people to adopt protective behaviors. These include doing breast self-examination and assessment and obtaining breast cancer screenings which are helpful in detecting the malignancy early. Early detection is a preventive measure that ensures to address the condition immediately to prevent severe effects to the body. In addition, the result of this study greatly contributed to the health field and was a great help to the subjects, the people who were diagnosed with breast cancer, the males, even considering its rarity in this population, the family, relatives, and friends of our breast cancer patients, and also those people who are at high risk of acquiring this condition, the community, healthcare professionals, and our future researchers.

Overall, still the results suggest that the program was successful in increasing participant knowledge of breast cancer, which may contribute to better community prevention, early identification, and management of the illness.

C. Recommendations based on the Results

Based on the results of the study, it was found that the I Pink I Can Intervention Program was effective in enhancing the knowledge of the subjects regarding breast cancer. Having said that, there are recommendations that the researchers want to endorse to the San Pablo City Integrated High School's administration especially in their health committee and school clinic.

- Breast self-examination should be performed monthly, ideally 7 to 10 days after the menstruation. If there are lumps detected and unusual changes in the appearance of the breasts of the students upon physical assessment, the students should be referred to an ob-gyn or breast surgeon.
- The poster of the I Pink I Can Intervention Program should be posted in the school clinic or other parts of the school for easy access of information regarding breast cancer.
- The institution must have a wide-ranged health education program regarding breast cancer knowledge, the researchers have suggested that if the institution wants to conduct a Breast Cancer Awareness symposium, they can utilize the I Pink I Can Intervention program.

Lastly, the program should be continuously implemented and can be utilized in other learning programs of the Department of Education like the "*Catch-Up Friday"* program. This is to ensure that students will be aware about breast cancer as early as now because knowledge is the first step in the prevention of any disease.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

CHAPTER FIVE
SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATION

This chapter presents the summary of findings, the conclusion drawn from the findings, and recommendations made regarding the result of the study about raising knowledge among Junior High School students about Breast Cancer.

A. Summary of Findings

This study explores the knowledge of the subjects about Breast Cancer before and after the I Pink I Can Intervention Program.

The demographic profile reveals that the predominant age group consists of 14 and 15-year-olds, corresponding to Grade 8 and Grade 9 students, respectively. Following closely are 12 and 13-year-olds, representing Grade 7 students. Notably, the frequency of 16 and 17-year-olds, who are Grade 10 students, is the lowest among the age groups.

- **Breast Cancer.** In light of the findings, the queries "Is Breast Cancer a type of malignancy that begins in the milk ducts of the breast?" and "Is Breast Cancer one of the most common, yet often ignored cancers in the Philippines and the rest of the world?" were agreed upon by more than half of the subjects, alongside their disagreement with the statement "Are all breast cysts cancerous?", indicating that the majority of the subjects are well-informed about certain aspects of Breast Cancer even before the initiation of the intervention period.
- **Risk Population.** Preceding the implementation of the intervention, the subjects' non-agreement with the questions "Does Breast Cancer only occur in elderly women?" and "Do men not have the risk of getting Breast Cancer?", in conjunction with their agreement with the question "Can I get Breast Cancer as an adolescent?", suggests that they have a high level of knowledge about the said particular risk population, in accordance with the outcomes of the pretest. Conversely, their knowledge is low when it comes to the queries "Does wearing bras at night with underwire increase the risk of getting Breast Cancer?" and "Are women who have never given birth more likely to develop Breast Cancer than those who have given birth one or more times?", which are some of the common misconceptions about the risk population of Breast Cancer, indicating that the majority of the population still do not know that these are merely misinformation that numerous individuals are believing and need to be addressed.
- **Signs and Symptoms**. The data revealed that the consensus among the majority of the subjects on the questions "Does Breast Cancer cause redness or pitting of the skin that is similar to an orange peel?", "Do you think nipple discharge, whether bloody or not, is a sign of Breast Cancer?", and contrary on the query "Are unusual changes in the size, shape, or appearance of the breast normal and should not cause concern?" shows that the subjects are well-versed in the signs and symptoms a susceptible person to Breast Cancer may manifest even before the execution of the program. Nevertheless, the question "Is breast pain in any location an indication of early-stage Breast Cancer?" appears to be unfamiliar to the majority of the subjects and demonstrates a low level of knowledge.
- **Risk Factors.** Prior to the enactment of the intervention, most of the subjects answered no to the question, “Does the environment or my vices (such as consuming alcohol and smoking) have no any bearing on my chance of developing Breast Cancer?” and yes to the questions “Are an estimated 5-10% of Breast Cancer cases thought to be related to genetic mutations that are hereditary?”, “Do women who are not physically active have a higher chance of getting Breast Cancer?” which implies that they are well informed of the following information pertaining to the risk factors of Breast Cancer. In contrast, their affirmative responses to the queries "Do women who are not physically active have a higher chance of getting Breast Cancer?" and "Does Breast Cancer risk increase with obesity?" suggest a lower level of knowledge.
- **Breast cancer screening.** Reflecting on the outcomes of the initial evaluation before intervention, a significant portion that exceeded more than half of the subjects' population answered the inquiries: “Should I begin examining my breast by starting near my collarbone, feeling each section with my fingers as I move towards the nipple, and then proceed to the next section vertically and/or circularly?”, “Do I no longer need to get checked regularly if I don’t have any signs and symptoms?”, “Should I look in the mirror and place my arms on my hips and check if my breasts are symmetrical in size and if there is any unusual inversion of my nipples?”, “Should I lie down on my back or stand in front of a mirror while raising my arms above my head when doing a self-breast examination?”, “Are Mammograms unable to detect tumors in the breast hence unnecessary for the early detection of Breast Cancer?”, “Is examining my armpits not necessary when doing self-breast exams?”, “Should breast self-examination be carried out by women who are still menstruating while they’re on their period?”, and “Do you think that the possibility of missing some early signs of Breast Cancer is the reason why breast ultrasound alone is not typically used as a screening tool for Breast Cancer?” precisely on how to properly examine the breast for screening. On the other hand, the predominant number of the subjects inaccurately answered the questions: “Is it recommended to use the fingertips instead of the pads of the three middle fingers when palpating the breast during breast self-exam?”, “Is Mammography an unreliable test for Breast Cancer screening?”, and “Should I pinch my nipple to check for any unusual discharge or blood, as these could be signs of Breast Cancer?”, which implies that they are not well-informed about these procedures. The subject’s level of knowledge with regards to Breast Cancer after the intervention program. Major developments have been achieved regarding the understanding of risk factors, risk populations, Breast Cancer screening, and the disease itself.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

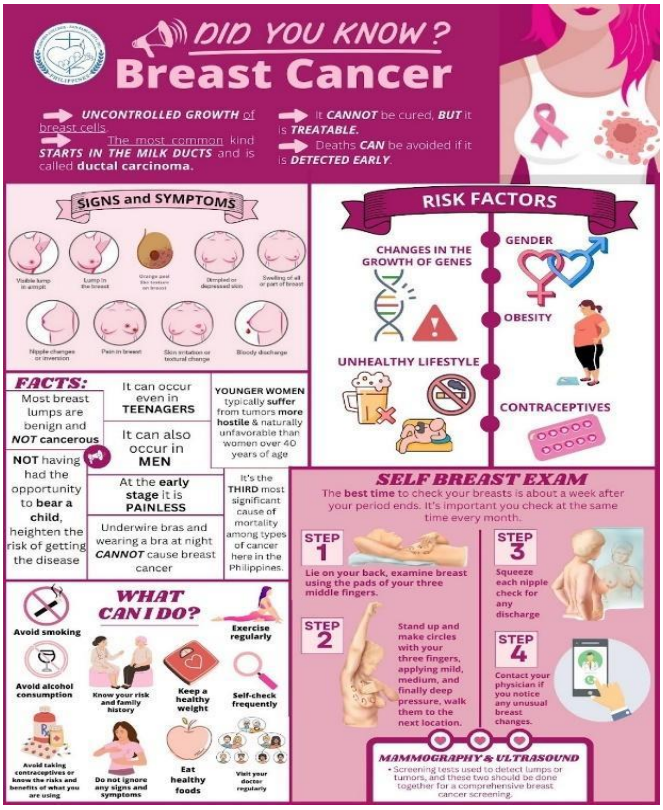
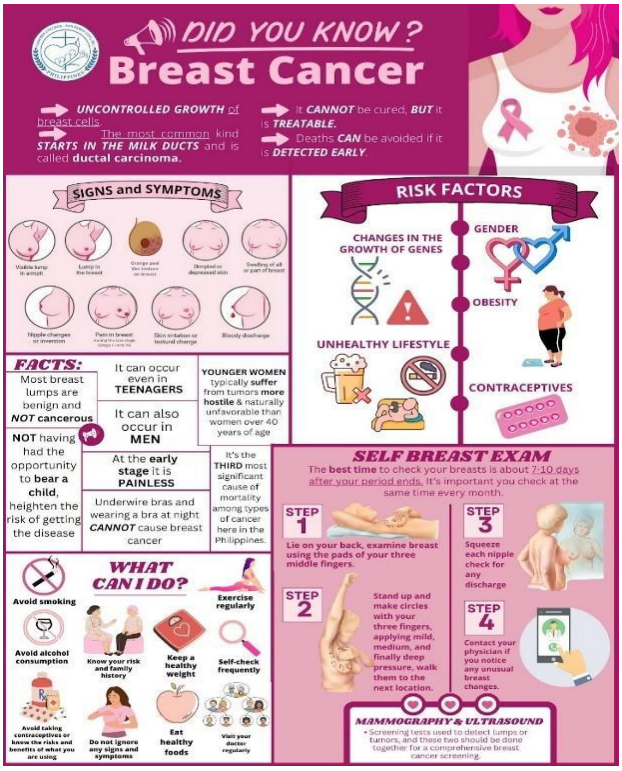
- **Breast Cancer.** After the intervention program, the results indicate the effectiveness of the Intervention Program in improving the knowledge of the subjects. This indicates that the subjects learned more about the disease itself. Moreover, this section had an overall increased average which revealed significant changes.
- **Risk Population.** Based on the results, the intervention program has shown effectiveness in enhancing subjects' knowledge about Breast Cancer in the risk population. Increased knowledge has been shown in regard to who are at risk in acquiring the disease. Overall, this section illustrates a notable rise in the subjects' level of knowledge regarding the knowledge on risk population.
- **Signs and Symptoms.** Results showed that the questions, "Do you think nipple discharge, whether bloody or not, is a sign of Breast Cancer?" and "Does Breast Cancer cause redness or pitting of the skin that is similar to an orange peel?" revealed significant changes in the warning signs and symptoms. However, the questions, "Are unusual changes in the size, shape or appearance of the breast normal and should not cause concern?" and "Is breast pain in any location an indication of an early stage of Breast Cancer?" revealed a non-significant change. In this section there was a confusion in terms of experiencing pain and when to cause concern if unusual changes in breast occur.
- **Risk Factors.** After the implementation of the program, the results of the post-test revealed an increase and significant changes with regards to the risk factors acquiring Breast Cancer. The subjects were knowledgeable in raising knowledge of the risk factors associated with Breast Cancer that are essential for early detection and favorable outcomes.
- **Breast Cancer Screening.** In light of the outcomes, nine (9) out of eleven (11) questions got improved changes or significant changes about Breast Cancer screening. This implies that the majority of the subjects have developed their understanding on how to examine the breast appropriately and the importance of being tested through mammogram and ultrasound to detect the lumps. However, there is a confusion in terms of when is the perfect time to examine the breast and the importance of mammogram and ultrasound to be done together during the screening and diagnosis.

A paired t-test was used to determine the subject's level of knowledge regarding breast cancer prior to and following the launch of the I Pink I Can Intervention Program. As per the findings of the study, the pre-test and post-test differed significantly from one another. This indicates that the programs attempt to educate the subjects with regards to knowledge of breast cancer, risk population, risk factors, and breast cancer screening were effective and the subjects gained more knowledge with regards to breast cancer. Moreover, in terms of the signs and symptoms there was not a significant distinction between the pre-test and post-test results, this implies that the subjects where confuse in terms of pain as an indication of early stage of breast cancer wherein in reality a breast cancer patient will only feel pain in the late stages which is stage 3 and stage 4. Moreover, in regard to the changes in size, shape, and appearance of the breast the subjects were confused and did not know when they need to become concerned with the changes happening in their breasts. This implies that there is still a need for improvement in regard to this section.

Actions and Strategies that can be added to the "I Pink I Can" Intervention Program.

I PINK I CAN PROGRAM	WIDER IMPLEMENTATION
Creating leaflets containing questionnaire answers and essential breast cancer information. LEAFLETS:	Modifications to the content of the leaflets and posters for greater clarity of information. MODIFIED LEAFLETS:
	

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

I PINK I CAN PROGRAM	WIDER IMPLEMENTATION
Development of posters encompassing the contents of the leaflets as another form of learning material. POSTER: 	Revisions to the content of the posters, aligned with the leaflets, aimed at enhancing the clarity of information. MODIFIED POSTER: 
Distributing leaflets and posting posters.	Posters and leaflets can be shared on social media.
Health education on topics regarding: Breast cancer Risk population Signs and Symptoms Risk Factors Breast cancer screening	Posters can be posted on different areas of the school, also in different clinical settings especially in clinics, hospitals, and health centers.
Demonstration of Breast Self-Examination	The program can be utilized in conducting symposiums and talks about Breast Cancer.
Intervention period (posters in designated classroom for 26 days)	Leaflets can be converted to QR codes for easy access to Breast Cancer information.

B. Conclusions

The study aimed to know if the I Pink I Can Intervention program will be effective in terms of enhancing knowledge regarding breast cancer of Junior High School students of San Pablo City Integrated High School. This study utilized a quantitative research design and used a quasi-experimental approach through implementing the program with the use of health education, leaflets and posters. There were one hundred fifty-six (156) subjects from San Pablo City Integrated High School who participated in this study. The students ranged from twelve (12) to seventeen (17) years old, coming from grades seven (7), eight (8), nine (9), and ten (10). In terms of the distribution according to their age, there are thirteen (13) subjects aged 12, forty (40) aged 13, thirty-nine (39) aged fourteen (14), forty-seven (47) aged fifteen (15), sixteen (16) aged sixteen (16), and one (1) that aged seventeen (17) (See table 2). In terms of the distribution in terms of their grade level, grade eight (8) students were dominant in terms of number since there are forty-four (44) out of the one hundred fifty six (156) subjects (see table 3).

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

The subjects were asked different questions under different sections about Breast Cancer. In terms of the result, it was found that the I Pink I Can Intervention program was successful in enhancing the knowledge of the subjects in most aspects about breast cancer. The subjects were able to correct the misconceptions that were present about the condition. This is a step in fully understanding breast cancer as a malignancy. However, there are specific areas about the questionnaire that need more focus or to stress on.

This study also revealed that most of the subjects were knowledgeable already about some of the facts on breast cancer, however, the things that they are most aware of are those considered common facts about the malignancy. The subjects were lacking in terms of distinguishing which information is fact and which information is a misconception. This is very evident in the pre-test results. In terms of the post-test results, significant increases were noted implying that the program that was implemented was effective. The materials used in the program were effective and were useful in raising the subjects' knowledge. It showed the importance of leaflets that were handy educational materials because anyone can use the material anywhere they are, all they just need to do is open the material and read. This study also showed that visual material like the posters used in the classrooms was effective because the subjects had access to information in their own classrooms.

With that being said, and with all of the results supporting that the program was successful and effective, this implied that more people, regardless of sex and age, should have access to the program. The program will be useful in terms of leveling up the knowledge of people regarding breast cancer. Enhancing knowledge is just one of the things that can be benefited from this program, another thing that can be changed is the behavior. A change in behavior towards health is vital to promoting health, preventing diseases, and maintaining our optimum level of functioning. This program will help lots of people change their wrong health habits to better health habits. They will be able to see the significance of understanding the disease, the importance of examining our own body, be aware of our health status, and screening procedures in addressing breast cancer.

C. Recommendations

This study's findings showed the level of knowledge of the Junior High School students about breast cancer. Thus, the following recommendations are hereby presented:

- **Junior High School Students.** This study can encourage students to educate themselves on the importance of regularly checking their breasts and to choose a healthier lifestyle and most importantly, prioritizing regular screening and maintaining regular exercise. Moreover, they can share information with their friends inside and outside the school to spread more knowledge, by then we can address persistent gaps or misconceptions. Avoid exposure to immunocompromising habits such as smoking, sedentary lifestyle, alcohol consumption, and other vices. Do not hesitate to undergo laboratory tests as they play a crucial role in disease prevention and health promotion. Cultivate a curiosity about breast cancer to foster eagerness and drive to learn, as knowledge empowers individuals to make behavioral changes that safeguard their breast health and ultimately contribute to overall well-being.
- **San Pablo City Integrated High School.** This study encourages the institution to organize more campaigns about health, especially breast cancer. They can utilize the programs and materials used in this study or create their own resources to distribute to students, teachers, staff, and parents to reinforce information about breast cancer as this study showed that the use of educational materials are helpful in raising one's knowledge. The materials can be also converted to accessible QR codes to lessen the use of papers, but still offer easy access to information.
- **Family and relatives.** This information can help them to better improve their lifestyle choices. Educating themselves in engaging in regular physical activity and a balanced diet emphasizing the importance of seeking medical health attention if any breast concerns arise.
- **Nursing Education.** This study can serve as a foundation for increasing concentration and focus on nursing education, particularly in maternal and child nursing, by expanding the knowledge of breast cancer. By emphasizing a variety of subjects, such as the disease process, anatomy and physiology, common misconceptions, treatment, and most importantly prevention, educators can get a thorough understanding of breast cancer. With this information, they may focus on emphasizing to students the importance of doing breast
- self-examinations, the vital role of pregnancy in breast cell maturation significantly aids in reducing the risk of breast cancer and enhances the mechanisms involved when breast cancer occurs, and include simulations pertaining to breast health and cancer screening. This will help students advance their clinical skills and gain confidence when discussing these issues with patients.
- **Local Government of San Pablo City.** They can participate in breast cancer awareness programs, particularly regarding accessing screening services and supporting groups for breast cancer patients, survivors, and their families by providing venues, lending resources, or disseminating information to larger platforms.
- **Community.** They can become prominent advocates who empower the community to address breast cancer through health teaching, community-based assessment, care, and interventions. The community can also utilize the materials employed in the "I Pink I Can" intervention program, particularly in their barangay health clinics, to provide easy access to information for clients, patients, and residents of the community. Knowledge plays a vital role in enhancing people's health literacy, which can motivate changes in their health practices.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

- **Future Researchers.** This study can be a valuable guide for future researchers seeking to improve their understanding of breast cancer and focusing on research gaps in the field. Future researchers can create more focused studies, develop more enhanced interventions, and investigate newly discovered areas of interest in the field of breast cancer research. All things considered; this study will offer a guide for future researchers meant to increase the understanding of the disease, and eventually lessen the occurrence of breast cancer. Most importantly, this study assessed the effectiveness of an intervention program in raising knowledge among Junior High School students of a specified locale. Having said that, this study recommends future researchers to cover the other risk populations that were not covered by this study, namely: those females who were single that did not have the chance to undergo pregnancy and never had the chance to breastfeed, obese population, those people using oral and implant contraceptives, and those who has a family history of breast cancer.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

REFERENCES

[1]. American Cancer Society. (2020, January 14). Breast cancer signs and symptoms. Cancer.org. https://www.cancer.org/cancer/types/breast-cancer/screening-tests-and-early-detection/breast-cancer-signs-and-symptoms.html

[2]. Avci, O., Tacar, S. Y., Seber, E. S., and Yetesyigit, T. (2021). Breast cancer in young and very young women; Is age related to outcome? Journal of Cancer Research and Therapeutics, 17(6), 1322–1322. https://doi.org/10.4103/jcrt.jcrt_545_20

[3]. Basa, A. (2023, October 3). Med talk health talk: breast cancer awareness. YouTube. https://youtu.be/nu3A2jWEyqU

[4]. Bhandari, P. (2023, June 22). What is quantitative research? Definition, uses and methods. Scribbr. https://www.scribbr.com/methodology/quantitative-research/

[5]. Bioethics in Medicine and Society. (2021). Google Books. https://books.google.com.ph/books?hl=en&lr=&id=cb4zEAAAQBAJ&oi=fnd&pg=PA61&dq=ethical+principle+in+breast+cancer&ots=VJ-DWOlKYv&sig=Gzw4CW6Xk87BDRjDbGWly3wgHT8&redir_esc=y#v=onepage&q=eth ical%20principle%20in%20breast%20cancer &f=false

[6]. Boskey, E. (2023, April 7). How the health belief model influences your behavior. Verywell Mind. https://www.verywellmind.com/health-belief-model-3132721

[7]. Breastcancer.org. (2023, June 22). Fears with no evidence: antiperspirants and bras do not cause breast cancer. https://www.breastcancer.org/risk/risk-factors/antiperspirants-bras

[8]. Cambridge University Press. (n.d.). Knowledge. Cambridge Dictionary. https://dictionary.cambridge.org/us/dictionary/english/knowledge

[9]. Centers for Disease Control and Prevention. (2022, November 17). What is breast cancer screening? https://www.cdc.gov/cancer/breast/basic_info/screening.htm

[10]. Choi, L. (2023, July). Breast cancer. MSD Manual Professional Edition. https://www.msdmanuals.com/professional/gynecology-and-obstetrics/bre ast-cancer/breast-cancer

[11]. City of Hope. (2022, February 18) What are the signs and symptoms of breast cancer? https://www.cancercenter.com/cancer-types/breast-cancer/symptoms#:~:text=Symptoms%20of%20breast%20tumors%20vary,shape%20of%20the%20breast(s)

[12]. Cleveland Clinic. (2023, September 25). Breast cancer. https://my.clevelandclinic.org/health/diseases/3986-breast-cancer

[13]. Conner, K. (2023, February 27). Breast cancer myths versus facts. Breastcancer.org.https://www.breastcancer.org/facts-statistics/myths-vs-facts

[14]. Dagne, A. H., Ayele, A. D., and Assefa, E. M. (2019). Assessment of breast self- examination practice and associated factors among female workers in Debre Tabor Town public health facilities, North West Ethiopia, 2018: Cross- sectional study. PLOS ONE, 14(8), e0221356. https://doi.org/10.1371/journal.pone.0221356

[15]. Fiorillo, S. (2023, September 22). Breast cancer awareness month: the history and impact. Clinical Advisor. https://www.clinicaladvisor.com/home/topics/breast-cancer-awareness-mo nth-the-history-and-impact/

[16]. Fu, J., Wu, L., Fu, W., Tan, Y., Xu, T., Hong, Z., Wang, F., and Li, S. (2018). How young is too young in breast cancer? Young breast cancer is not a unique biological subtype. Clinical Breast Cancer, 18(1), e25–e39. https://doi.org/10.1016/j.clbc.2017.05.015

[17]. Ghofranipour, F., Pourhaji, F., Delshad, M. H., and Pourhaji, F. (2020, May 2). Determinants of breast cancer screening: application of protection motivation theory. International Journal of Cancer Management, 13(5). https://doi.org/10.5812/ijcm.100535

[18]. Jaymalin, M. and Antolin, A. (2023, April 20). Even teenage girls can have breast cancer – experts. Philstar Global. https://www.philstar.com/headlines/2023/04/20/2260245/even-teenage-girl s-can-have-breast-cancer-experts/amp.

[19]. Kammath, V. (2022, February) The breasts. TeachMeAnatomy. https://teachmeanatomy.info/thorax/organs/breasts/

[20]. Kashyap, D., Pal, D., Sharma, R., Vivek Kumar Garg, Goel, N., Koundal, D., Zaguia, A., Koundal, S., and Gelaw, A. B. (2022, April 18). Global increase in breast cancer incidence: risk factors and preventive measures. BioMed Research International, 2022, 1–16. https://doi.org/10.1155/2022/9605439

[21]. Kryzak, A. (2023, September 21). Breast cancer screening. National Breast Cancer Foundation. https://www.nationalbreastcancer.org/breast-cancer-screening/

[22]. Lee, J., and Wu, T. (2018, November 21). Promoting breast cancer awareness and screening practices for early detection in low-resource settings. PubMed Central. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6385717/.

[23]. Ligibel, J., Engquist, K. B., Bea, J. (2029). Weight management and physical activity for breast cancer prevention and control. American Society of Clinical Oncology Educational Book. https://ascopubs.org/doi/full/10.1200/EDBK_237423

[24]. Mandal, A. (2019). History of breast cancer. News Medical Life Sciences. https://www.news-medical.net/health/History-of-Breast-Cancer.aspx?fbclid=IwAR37xqFmas1ZR5NEeaoOFRd-Yyt7_4zgEH9qHhB60agncKmH2qO8 gv_Ej74#:~:text=Ancient%20Greece%20and%20Egypt,breast%20that%2 0has%20no%20cure.

[25]. Marikyan, D. and Papagiannidis, S. (2023) Protection Motivation Theory: A review. In S. Papagiannidis (Ed), TheoryHub Book. https://open.ncl.ac.uk/theories/10/protection-motivation-theory/

[26]. Mayo Clinic. (2022, December 14) Breast cancer. https://www.mayoclinic.org/diseases-conditions/breast-cancer/symptoms-c auses/syc-20352470

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

[27]. Meshkani, Z., Moradi ,N., Aboutorabi, A., Noman, S., Motlagh, A.G., and Langarizadeh, M. (2022, June). Systematic review of women's knowledge, attitude, and practice towards breast cancer. PubMed Central. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9277722/
[28]. Mills, J. G. (2022, October 18). What are demographics? Examples, definitions, and step by step guide. SuperSurvey. https://www.supersurvey.com/Demographic-Information
[29]. Mohebi, Z., Sarvestani, M. H., Moradi, Z., and Naghizadeh, M. M. (2023). Female high school students' knowledge and attitude toward breast cancer. BMC Women's Health, 23(1). https://doi.org/10.1186/s12905-023-02155-z
[30]. Monamoon Naturals. (2020, October 2). The meaning of the pink ribbon - breast cancer awareness month. Monamoon Naturals. https://www.monamoonnaturals.com/blog/meaning-of-the-pink-ribbon
[31]. National Breast Cancer Coalition. (2023, October 4). Breast cancer facts and figures. https://www.stopbreastcancer.org/information-center/facts-figures/
[32]. National Cancer Institute. (2023, June 26). Breast cancer prevention. https://www.cancer.gov/types/breast/patient/breast-prevention-pdq
[33]. Olsson, R. (2023, September 21). The truth behind 10 breast cancer myths. Banner Health. https://www.bannerhealth.com/healthcareblog/teachme/breast-cancer-facts-andmyths#:~:text=Myth%20%231%3A%20A%20family%20history,family%20history%20of%20breast%20cancer
[34]. Overview of Philippine Education – Educational(2024). https://ieducationphl.ched.gov.ph/overview-of-philippineducation/#:~:text=The%20stages%20are%20Kindergarten%20to,students%2016%2D18% 20years%20old
[35]. Paturel, A. (2023, October 3). Seeing pink: awareness ribbons a troubling reminder to some. Cedars Sinai. https://www.cedarssinai.org/blog/seeing-pink-awareness-ribbons-atroubling-reminder-tosome.html#:~:text=The%20pink%20ribbon%20movement%20began,rights%20to%20her%20peach%20ribbon.
[36]. Roche. (2021, October). The pink ribbon: shades for every story. https://www.roche.com/stories/the-pink-ribbon-shades-for-every-story-in-breast-cancer
[37]. Sara, E. I. M., Alhanof, A. M., Sharifa, A. O., and Sara, M. J. (2023). Knowledge of high school female students about breast self-examination. Educational Research and Reviews, 18(2), 17–22. https://doi.org/10.5897/err2020.4306
[38]. Sari, S. Y., Desmona, D., and Djajakusumah, T. M. (2019, September). Low knowledge and negative perception about the risks of breast cancer among female high school students. ResearchGate; International Journal of Integrated Health Sciences (IJIHS). https://www.researchgate.net/publication/337351689_Low_Knowledge_and_Negative_Perception_about_the_Risks_of_Breast_Cancer_among_Fe male_High_School_Students
[39]. Team, W. H. (2021, December 30). How to do a self breast exam correctly. Cleveland Clinic. https://health.clevelandclinic.org/how-to-do-a-self-breast-exam-correctly/
[40]. Thomas, L. (2023, June 22). Quasi-experimental design | Definition, types & examples. Scribbr. https://www.scribbr.com/methodology/quasi-experimental-design/
[41]. Vaskovic, J. (2023, November3). Female breast. Kenhub. https://www.kenhub.com/en/library/anatomy/breast
[42]. Woodard, N., Chen, C., Huq, M. R., He, X., and Knott, C. L. (2022). Prior health promotion experience and intervention outcomes in a lay health advisor intervention. Health Education Research, 37(4), 266–277. https://eric.ed.gov/?q=recommendattion+about+enhancing+awareness+of+breast+cancer&ff1=dtySince_2019&id=EJ1344595
[43]. World Health Organization. (2023, February 3). World Health Organization launches new roadmap on breast cancer. https://www.who.int/news/item/03-02-2023-who-launches-new-roadmap-o n-breast-cancer
[44]. World Health Organization. (2021, February 3). Breast cancer now most common form of cancer: World Health Organization taking action. https://www.who.int/news/item/03-02-2021-breast-cancer-now-most-common-form-of-cancer-who-taking-action#:~:text=The%20global%20cancer%20landscape%20is,(IARC)%20in%20December%202020.
[45]. Zorilla, R. (2023, February 24). Common types of cancer in the Philippines. National Nutrition Council. https://nnc.gov.ph/regional-offices/mindanao/region-ix-zamboanga-penins ula/9885-common-types-of-cancers-in-the-philippines

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

APPENDIX A

Informed Consent for Participation in Research Study

Dear Respondents,

Greetings of peace!

We are third-year nursing students currently conducting a research study titled "I Pink I Can" Breast Cancer Intervention Program: Its Effectiveness in Raising Knowledge among Junior High School Students of San Pablo City Integrated High School" as part of our academic requirements at Canossa College of San Pablo in Nursing Research II. You are invited to participate in this study.

The purpose of this study is to raise knowledge about breast cancer. Your participation will involve answering our questionnaire, and we will be providing you with leaflets, posters, and health education.

Your responses and identity will be kept strictly confidential. Only the researcher and authorized personnel will have access to the information provided, and it will be used solely for academic purposes. Your participation in this study is entirely voluntary. You have the right to decline to participate or withdraw from the study at any time without any negative consequences.

However, It will be beneficial for you to increase your knowledge and guide you about what to do and this will help you to assess yourselves properly.

For any questions or concerns about the research, you can contact us at josephgandrixxx@gmail.com. If you have any concerns about your rights as a participant, you may contact the Institutional Review Board at irb@oregonstate.

By agreeing to participate, you acknowledge that you have read this consent form, understand the information provided, and voluntarily agree to take part in this research study

Participant's Name: _____Participant's Signature: _____Date: _____

If the respondent is under 18 years old:
Parent/Guardian Name: _____
Parent/Guardian Signature: _____Date: _____

Thank you for considering participation in this research study. De Leon, Joseph Gandrix D.

Almario, Fiona M.

Balmes, Maria Ravelyn T.

Dy Ning, Fiorella Carla A.

Feliciano Jewel Shein

Researchers

Ms. Girlie Mannphy A. Lacambra RM, RN, MAN

Research Adviser

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

APPENDIX B

ASSENT FORM FOR MINORS

I'm _____, and I understand that I am being invited to participate in a research study related to breast cancer. I am _____years old and acknowledge that my assent is required for my participation in this study.

I understand that the purpose of this study is to raise knowledge and provide knowledge to students about breast cancer.

I have been provided with information about what my participation will involve, which may include answering questions about breast cancer. I understand that I am not required to take part in this study, but my decision can help in my medical care and can have additional knowledge

I am aware that my participation is voluntary, and I have the right to withdraw from the study at any time without any negative consequences.

I understand that the information collected during this study will be used for research purposes and may be shared with other researchers. My confidentiality will be maintained, and my personal information will be kept private to the extent permitted by law.

I have had the opportunity to ask questions, and any concerns I had regarding the study have been addressed to my satisfaction.

I understand that I can contact 3rd year nursing students from Canossa (josephgandrixxx@gmail.com) if I have any questions or need further information about the study.

☐ I agree to participate voluntarily in the research study on breast cancer as described to me.
☐ I Disagree

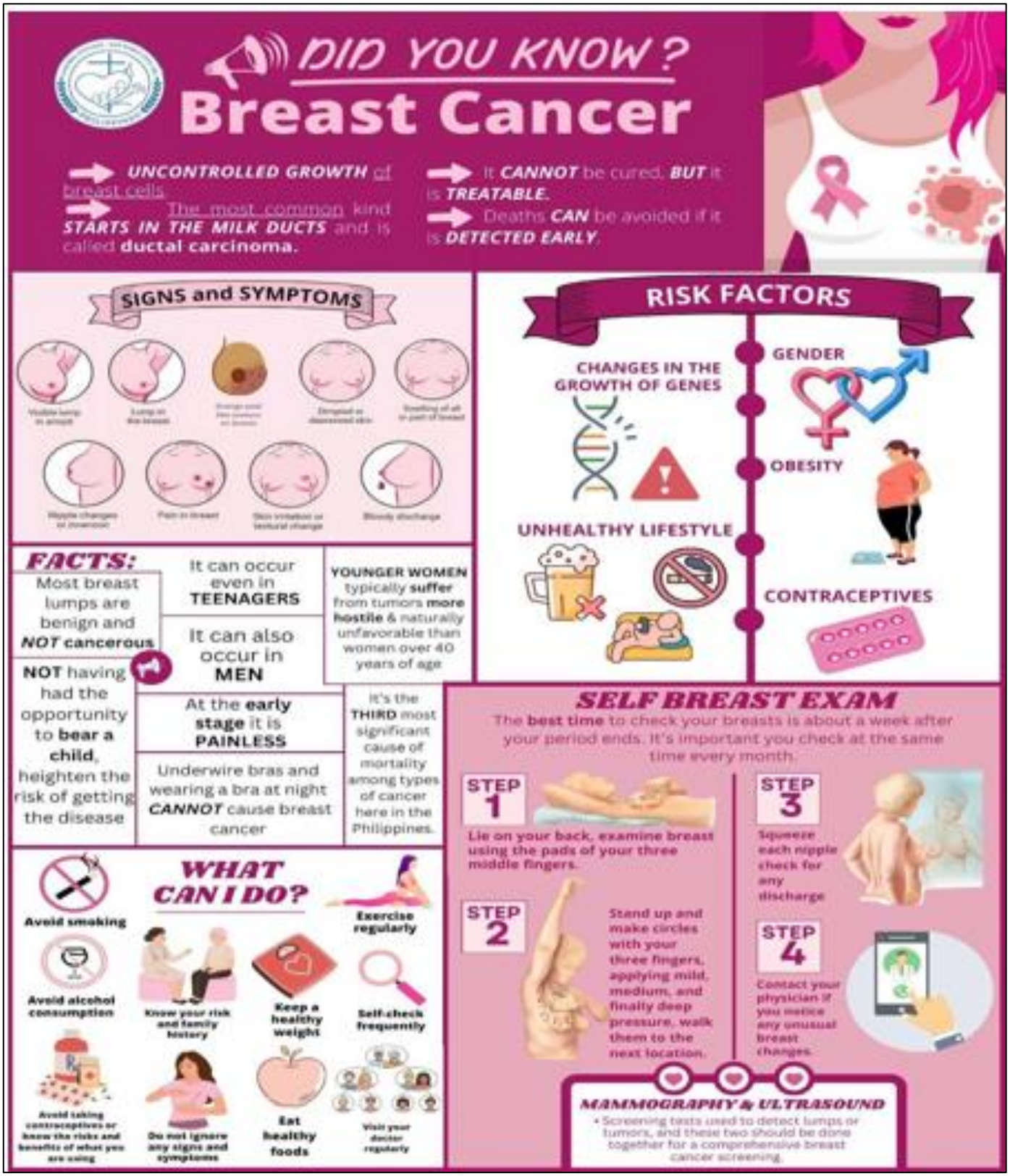
Minor's Signature: _____

Date: _____

Parent/Guardian Signature : _____

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

APPENDIX C



ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

APPENDIX D

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

APPENDIX E

Research Instrument
I PINK I CAN: Breast Cancer Intervention in Raising Breast Cancer Knowledge among Junior High School Students
Questionnaire

Name (Optional)**:**
Age:
Grade Level: ( ) Grade 7 ( ) Grade 8 ( ) Grade 9 ( ) Grade 10 ( )

Knowledge on Breast Cancer	**Yes (Oo)**	**No (Hindi)**
1. Is breast cancer a type of malignancy that begins in the milk ducts of the breast? *Ang kanser ba sa suso ay isang uri ng malubhang sakit na nagsisimula sa daluyan ng gatas ng suso?*		
2. Is breast cancer an incurable malignancy? *Ang kanser ba sa suso ay uri ng kanser na hindi na nagagamot?*		
3. Are all breast cysts cancerous? *Ang lahat ba ng bukol sa suso ay nagdudulot ng kanser?*		
4. Is breast cancer one of the most common, yet often ignored cancers in the Philippines and the rest of the world? *Isa ba sa pinaka karaniwan, subalit binabaliwalang kanser sa Pilipinas at sa iba pang bansa ang kanser sa suso?*		
5. Do young women have a higher survival rate than those cancer patients who are over 40 years of age? *Mas mataas ba ang tiyansang gumaling ng mga mas batang babae kumpara sa mga babaeng edad 40 pataas na may kanser?*		
6. Is death from breast cancer unavoidable whether it's detected in its early stage or not? *Ang pagkamatay ba nang dahil sa kanser sa suso ay hindi maiiwasan, matukoy man ito ng maaga o hindi?*		

Knowledge on Risk Population	**Yes (Oo)**	**No (Hindi)**
1. Do men not have the risk of getting breast cancer? *Ang mga kalalakihan ba ay pwedeng magkaroon ng breast cancer?*		
2. Does breast cancer only occur in elderly women? *Ang kanser sa suso ba ay nangyayari lamang sa mga matatandang babae?*		
3. Are women who have never given birth more likely to develop breast cancer than those who have given birth one or more times? *Ang mga babae ba na hindi pa nanganak ay may mas mataas na tyansang magkaroon ng kanser sa suso kumpara sa mga babaeng naka panganak na?*		
4. Does wearing bras at night and bras with underwire increase the risk of getting breast cancer? *Ang pagsusuot ba ng bra sa gabi at ng mga bra na mayroong kawad ay nakakapag pataas ng tiyansang magkaroon ng kanser sa suso?*		
5. Can I get breast cancer as an adolescent? *Maaari ba akong magkaroon ng kanser sa suso sa oras na ako ay magdalaga?*		

Knowledge on Signs and Symptoms	**Yes (Oo)**	**No (Hindi)**
1. Is breast pain in any location an indication of early stage breast cancer? *Ang pagsakit ba sa kahit anong lokasyon ng suso ay isang indikasyon ng early stage ng kanser sa suso?*		
2. Are unusual changes in the size, shape or appearance of the breast normal and should not cause concern? *Ang hindi karaniwang pagbabago ba sa laki at itsura ng suso ay natural at hindi dapat pagtuunan ng pansin?*		
3. Do you think nipple discharge, whether bloody or not, is a sign of breast cancer? *Sa iyong palagay ang paglabas ng dugo o anumang likido sa iyong utong ay senyales ng kanser sa suso?*		
4. Does breast cancer cause redness or pitting of the skin that is similar to an orange peel? *Ang kanser ba sa suso ay nagsasanhi ng pamumula o pagbubukol ng balat na katulad ng isang balat ng orange (prutas)?*		

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

Knowledge on the Risk Factors	Yes (Oo)	No (Hindi)
1. Does the environment or my vices (such as consuming alcohol and smoking) have no any bearing on my chance of developing breast cancer? *Ang akin bang kapaligiran at bisyo (gaya ng pag-inom ng alak at paninigarilyo), ay hindi nakakaapekto sa tyansa ko ng pagkakaroon ng kanser?*		
2. Do women who are not physically active have a higher chance of getting breast cancer? *Ang mga babae ba na hindi aktibo sa pag-e-ehersisyo ay mas mataas ang tiyansa na magkaroon ng kanser sa suso?*		
3. Does breast cancer risk increase with obesity? *Ang pagiging labis ba sa tamang timbang ay nagpapataas ng pagkakataon na magkaroon ng kanser sa suso?*		
4. Do you think oral contraceptives (pills) are a risk factor for breast cancer *Sa iyong palagay ang oral na kontraseptib (pills) ba ay isang salik upang magkaroon ng kanser sa suso?*		
5. Are an estimated 5–10% of breast cancer cases thought to be related to genetic mutations that are hereditary? *Ang tinatayang 5-10% ba ng kanser sa suso ay sinasabing may kinalaman sa mutasyon ng gene na namamana?*		

Knowledge on the Breast Cancer Screening	Yes (Oo)	No (Hindi)
1. Should I lie down on my back or stand in front of a mirror while raising my arms above my head when doing a self-breast examination? *Dapat ba akong mahiga o kaya naman tumayo sa harap ng salamin habang nakataas ang aking braso sa may aking ulo habang ineexamine ko ang aking suso?*		
2. Should I look in the mirror and place my arms on my hips and check if my breasts are symmetrical in size and if there is any unusual inversion of my nipples? *Dapat ba akong tumingin sa salamin at ilagay ang aking mga braso sa gilid at bewang habang nagsusuri upang malaman kung ang aking suso ba ay hindi pantay at paloob ang utong?*		
3. Is it recommended to use the fingertips instead of the pads of the three middle fingers when palpating the breast during breast-self exam? *Inirerekomenda ba ang paggamit ng dulo ng mga daliri kaysa sa pang gitnang daliri habang pinakikiramdaman at sinusuri ang sariling suso?*		
4. Should I begin examining my breast by starting near my collarbone, feeling each section with my fingers as I move towards the nipple, and then proceed to the next section vertically and/or circularly? *Dapat ba akong mag simula sa pagsusuri ng aking suso mula sa aking collarbone, pakiramdaman ang bawat seksyon gamit ang aking mga daliri patungo sa may utong, at magpatuloy sa ibang lokasyon pababa at?*		
5. Should I pinch my nipple to check for any unusual discharge or blood, as these could be signs of breast cancer? *Dapat ko bang pisilin ang aking utong habang sinusuri ang aking suso kung may hindi ito pangkaraniwang paglabas ng likido o dugo, dahil maaari itong maging palatandaan ng kanser sa suso?*		
6. Is examining my armpits not necessary when doing self-breast exams? *Ang pagsusuri ba ng kilikili ay hindi importante na isama kapag sinusuri ang sariling suso?*		
7. Is Mammography an unreliable test for breast cancer screening? *Ang mammogram ba ay hindi inaasahang metodolohiya sa pag alam ng kanser sa suso?*		
8. Are mammograms unable to detect tumors in the breast hence unnecessary for the early detection of breast cancer? *Ang mammogram ba ay hindi nakikita ang mga bukol kung kaya't hindi ito gaano makakatulong para sa maagang pagtuklas ng bukol?*		
9. Do you think that the possibility of missing some early signs of breast cancer is the reason why breast ultrasound alone is not typically used as a screening tool for breast cancer? *Sa tingin mo ba ng dahil sa posibilidad na maligtangan ang mga unang senyales ng kanser sa suso, ang ultrasound ng suso ay hindi kalimitang ginagamit para sa pagtukoy ng kanser sa suso?*		
10. Do I no longer need to get checked regularly if I don't have any signs and symptoms? *Hindi kona ba kailangan magpatingin palagi kung wala akong senyales at sintomas?*		
11. Should breast self-examination be carried out by women who are still menstruating while they're on their period? *Ang pagsusuri ba ng suso ay dapat ginagawa ng mga babae habang sila ay may regla?*		

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

APPENDIX F

Permission Letters

CANOSSA COLLEGE SAN PABLO INC.
College of Nursing
S.Y. 2023-2024

October 16, 2023

James T. Lee HO, MD, FPCS

City Health Officer

Community Health

San Pablo City, Laguna 4000

Dear Dr. James T. Lee Ho,

Greetings of peace!

We hope this letter finds you in good health and high spirits. We are Team 4 of Bachelor of Science in Nursing Level 3 of Canossa College San Pablo City Inc. Our team will be conducting research in fulfillment of our undergraduate requirement. As part of our efforts to monitor public health trends, assess the family members' as well as the patients' or clients' lived experiences regarding their health status and problem.

In line with this, we are formally requesting specific health-related data from the Community Health Office and we require access to the following data:

- Hemodialysis Centers in San Pablo City
- No. of centers
- Location of these centers
- No. of pediatric patients undergoing hemodialysis
- No. of patients with breast cancer in San Pablo City and their location (if possible.
- Mortality rate in San Pablo City (breast cancer)
- Morbidity rate in San Pablo City (breast cancer)
- No. of patients with testes cancer in San Pablo City and their location (if possible)
- Mortality rate in San Pablo City (testicular cancer)
- Morbidity rate in San Pablo City (testicular cancer)
- Comparisons: Which has higher morbidity and mortality rate in San Pablo City: Breast Cancer or Testicular Cancer?
- Data regarding the barangays with the most number of patients with Diabetes Mellitus.
- No. of patients with diabetes mellitus in SanPablo City
- No. of pediatric patients (0-18 years old) who have diabetes mellitus in San Pablo City.
- Data regarding the barangays with the most number of patients with Pulmonary Tuberculosis.
- No. of patients with pulmonary tuberculosis in San Pablo City.
- No. of pediatric patients (0-18 years old) who have pulmonary tuberculosis in San Pablo City.
- Data regarding the barangays with the most number of patients with Colon cancer.
- No. of patients with colon cancer in San Pablo City.
- Mortality rate in San Pablo City (colon cancer)
- Morbidity rate in San Pablo City (colon cancer)
- List of the top leading cancers in men in the town of San Pablo City, Laguna. Including:
- No. of patients who have the Top 1 most prevalent top-leading cancer in males.
- No. of patients who have the Top 2 most prevalent top-leading cancer in males.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

- No. of patients who have the Top 3 most prevalent top-leading cancer in males.
- What barangay/s have the most cases of these cancers in males?

We understand the importance of data privacy and security, and we assure you that any data provided will be handled in strict compliance with all applicable data protection regulations. Our team is committed to maintaining the confidentiality of the data and using it solely for academic purposes.

Thank you for your prompt attention to this matter. We believe that access to this data will greatly benefit our efforts in conducting research that will help our community regarding health, and we look forward to your positive response.
You may contact us at 09669279944 or thru email at josephgandrixxx@gmail.com.

Thank you so much and God bless.

Respectfully yours,

ALMARIO, Fiona M. **BALMES, Maria Ravelyn T.**

DE LEON, Joseph Gandrix D. **DY NING, Fiorella Carla A.**

FELICIANO, Jewel Shein

Noted by:
Girlie Mannphy A. Lacambra, RM, RN, MAN Research Adviser

Approved by:

Sr. Rita D. Nedtran, FdCC Dean, College of Nursing

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

CANOSSA COLLEGE SAN PABLO INC.
College of Nursing
S.Y. 2023-2024

Cristeta S. Uy, Ed.D.
Principal IV
San Pablo City Integrated High School San Pablo City, Laguna 4000

Thru: John Roldan C. Dimaano
Head Teacher I
Curriculum & Instruction Chairman

Dear Dr. Cristeta S. Uy,

Greetings of peace!

We hope this letter finds you in good health and high spirits. We are Team 4 of Bachelor of Science in Nursing Level 3 of Canossa College San Pablo City Inc. Our team will conduct a study titled " I PINK CAN" Breast Cancer Program:

Its Effectiveness in Raising Knowledge among Junior High School students of San Pablo City Integrated High School to Raise knowledge and enhance knowledge also to correct some of the misconceptions about breast cancer, acquiring breast examinations or breast cancer screenings, risk factors, and risk populations. In line with this, we are formally requesting to conduct our study in your school involving 1 section per Junior High School grade level as our subjects. We understand the importance of your privacy and security, and we assure you that any activities that the researchers will be doing will be in strict compliance with all applicable protection regulations of your students and school.

Our team is committed to maintaining the confidentiality of your school and we will conduct this solely for academic purposes. Rest assured that ethical guidelines will be observed during the conduct of the study.

Thank you for your prompt attention to this matter. Your approval will greatly benefit our efforts in conducting research that will help our community regarding health specifically in terms of health promotion and disease prevention, and we look forward to your positive response.

You may contact us at 09669279944 or through email at josephgandrixxx@gmail.com

Thank you so much and God bless.

Respectfully yours,

ALMARIO, Fiona M.
Student

BALMES, Maria Ravelyn T.
Student

DE LEON, Joseph Gandrix D.
Student

DY NING, Fiorella Carla A.
Student

FELICIANO, Jewel Shein
Student

Approved by:
Cristeta S. Uy, Ed.D.
Principal IV

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

Request for Approval: **Pilot Testing for** "I Pink I Can" Breast Cancer Intervention Program: Its Effectiveness in Raising Knowledge among Junior High School Students

November 15, 2023

Patrick Henry L. Ilagan
School Head
Del Remedio National High School

Dear Mr. Ilagan,

We hope this correspondence finds you well.

We are third-year students at Canossa College - San Pablo City, Inc., pursuing a Bachelor of Science in Nursing degree. We are writing to respectfully seek your approval for the implementation of a pilot testing phase involving the Junior High School students of Del Remedio National High School. This initiative is part of a quantitative quasi-experimental research study focused on evaluating the level of knowledge pertaining to breast cancer among Junior high school students.

This study's main goal is to determine how well an adapted educational program works to increase Junior High School students' knowledge and comprehension of breast cancer.

It will be crucial to refine the program's methodology and evaluate its effects on the students' knowledge levels during the pilot testing phase, which will take place in your prestigious university with this cohort of chosen students. Ideally, we are aiming to commence this pilot testing on Monday, November 20, 2023, if it aligns with the school's schedule and is suitable for your esteemed institution.

We vow to carry out this study endeavor with the highest professionalism and consideration for the academic setting. Your approval and support for this pilot study, which will involve about 20–30 students in the targeted age range (15-19 years old), would greatly increase our young women's understanding and knowledge of breast health.

Thank you for considering this request. We eagerly await your favorable response.

Respectfully yours,

ALMARIO, Fiona M. **BALMES, Maria Ravelyn T.**

DE LEON, Joseph Gandrix D. **DY NING, Fiorella Carla A.**

FELICIANO, Jewel Shein

Noted by:

Girlie Mannphy A. Lacambra, RM, RN, MAN
Research Adviser

Approved by:

Sr. Rita D. Nedtran, FdCC
Dean, College of Nursing

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

APPENDIX G

Validation Letters

CANOSSA COLLEGE SAN PABLO INC.
College of Nursing
S.Y. 2023-2024

November 21, 2023

Vivian P. Lajara, RN,MAN
Registered Nurse/Clinical Instructor
Brgy Del Remedio San Pablo City

Dear Ms. Vivian Lajara
I hope this message finds you well. We seek your expertise in reviewing and checking our research instruments.

We are in the process of conducting a research project and ensuring the accuracy and clarity of our questionnaire is crucial to obtaining reliable data. Given your esteemed reputation and proficiency, we believe your insights would greatly contribute to refining our research tool.

The instrument comprises a questionnaire regarding breast cancer, and our primary aim is to ensure that the questions are phrased accurately and effectively to elicit the necessary information from our respondents.

Your assistance in conducting a thorough questionnaire check and suggesting any necessary corrections or improvements would be precious to us. We are committed to meeting any deadlines or preferences you may have in this regard.

We truly appreciate your time and consideration in assisting us with this endeavor. Your expertise will undoubtedly enhance the quality and reliability of our research.

Please let us know if this opportunity aligns with your availability, and we will promptly provide the necessary details of the research instrument for your review.
Please let us know what we can do to show our appreciation!

Thank you very much for considering our request. We eagerly await your response.

Warm regards,
Almario, Fiona M.
Balmes, Maria Ravelyn T.
De Leon, Joseph Gandrix D.
Dy Ning, Fiorella Carla A.
Feliciano Jewel Shein
Bachelor of Science in Nursing- III
Canossa College-San Pablo City Inc.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

CANOSSA COLLEGE SAN PABLO INC.
College of Nursing
S.Y. 2023-2024

November 21, 2023

Celeste Castillio Santiago, M.D.
Doctor of Medicine
Fellow Philippine Obstetrical and Gynecological

Dear Dr. Celeste Santiago

I hope this message finds you well. We seek your expertise in reviewing and checking our research instruments.

We are in the process of conducting a research project and ensuring the accuracy and clarity of our questionnaire is crucial to obtaining reliable data. Given your esteemed reputation and proficiency, we believe your insights would greatly contribute to refining our research tool.
The instrument comprises a questionnaire regarding breast cancer, and our primary aim is to ensure that the questions are phrased accurately and effectively to elicit the necessary information from our respondents.

Your assistance in conducting a thorough questionnaire check and suggesting any necessary corrections or improvements would be precious to us. We are committed to meeting any deadlines or preferences you may have in this regard.

We truly appreciate your time and consideration in assisting us with this endeavor. Your expertise will undoubtedly enhance the quality and reliability of our research.

Please let us know if this opportunity aligns with your availability, and we will promptly provide the necessary details of the research instrument for your review.

Please let us know what we can do to show our appreciation!

Thank you very much for considering our request. We eagerly await your response.

Warm regards,
Almario, Fiona M.
Balmes, Maria Ravelyn T.
De Leon, Joseph Gandrix D.
Dy Ning, Fiorella Carla A.
Feliciano Jewel Shein

Bachelor of Science in Nursing- III
Canossa College-San Pablo City Inc.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

CANOSSA COLLEGE SAN PABLO INC.
College of Nursing
S.Y. 2023-2024

November 21, 2023

Aldine Astrid Basa, MD
Board of Director American Society of Breast Surgeons Asian Hospital and Medical Center

Dear Dr. Aldine Astrid Basa,

I hope this message finds you well. We seek your expertise in reviewing and checking our research instruments.

We are in the process of conducting a research project and ensuring the accuracy and clarity of our questionnaire is crucial to obtaining reliable data. Given your esteemed reputation and proficiency, we believe your insights would greatly contribute to refining our research tool.

The instrument comprises a questionnaire regarding breast cancer, and our primary aim is to ensure that the questions are phrased accurately and effectively to elicit the necessary information from our respondents.

Your assistance in conducting a thorough questionnaire check and suggesting any necessary corrections or improvements would be precious to us. We are committed to meeting any deadlines or preferences you may have in this regard.

We truly appreciate your time and consideration in assisting us with this endeavor. Your expertise will undoubtedly enhance the quality and reliability of our research.

Please let us know if this opportunity aligns with your availability, and we will promptly provide the necessary details of the research instrument for your review.

Please let us know what we can do to show our appreciation!
Thank you very much for considering our request. We eagerly await your response.

Warm regards,
Almario, Fiona M.
Balmes, Maria Ravelyn T.
De Leon, Joseph Gandrix D.
Dy Ning, Fiorella Carla A.
Feliciano Jewel Shein

Bachelor of Science in Nursing- III
Canossa College-San Pablo City Inc.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

CANOSSA COLLEGE SAN PABLO INC.
College of Nursing
S.Y. 2023-2024

November 21, 2023

Lucila Bujactin, LPT, MACDDS
Licensed Professional Teacher
Dolores, Quezon

I hope this message finds you well. We seek your expertise in reviewing and checking our research instruments.

We are in the process of conducting a research project and ensuring the accuracy and clarity of our questionnaire is crucial to obtaining reliable data. Given your esteemed reputation and proficiency, we believe your insights would greatly contribute to refining our research tool.

The instrument comprises a questionnaire regarding breast cancer, and our primary aim is to ensure that the questions are phrased accurately and effectively to elicit the necessary information from our respondents.

Your assistance in conducting a thorough questionnaire check and suggesting any necessary corrections or improvements would be precious to us. We are committed to meeting any deadlines or preferences you may have in this regard.

We truly appreciate your time and consideration in assisting us with this endeavor. Your expertise will undoubtedly enhance the quality and reliability of our research.

Please let us know if this opportunity aligns with your availability, and we will promptly provide the necessary details of the research instrument for your review.

Please let us know what we can do to show our appreciation!

Thank you very much for considering our request. We eagerly await your response.

Warm regards,
Almario, Fiona M.
Balmes, Maria Ravelyn T.
De Leon, Joseph Gandrix D.
Dy Ning, Fiorella Carla A.
Feliciano Jewel Shein

Bachelor of Science in Nursing- III
Canossa College-San Pablo City Inc.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

APPENDIX H

Validation Tool Request

Validation tool request Inbox

me Nov 13, 2023
to rmoducado@wvsu.edu.ph

Dear Mr. Oducado,

Greetings of peace!

I am a third year student under the Bachelor of Science in Nursing program of Canossa College-San Pablo City Inc. We are currently working on our undergraduate research study, in fulfillment for our Nursing Research 1 course. In behalf of my research group, I am writing this email to ask for your permission to use and adopt your validation tool.

I attached in this email the validation tool that I was referring to.

We hope that you will allow us to use this tool. Your approval will be a great help in conducting our research.

Thank you and God Bless!

Sincerely,
Joseph Gandrix De Leon

https://cdn.fbsbx.com/v/t59.2708-21/327009597_561926808940541_4801954491474185777_n.pdf/Survey-Instrument-Validation-Rating-Scale.pdf?_nc_cat=110&ccb=1-7&_nc_sid=2b0e22&_nc_eui2=AeEbmV85i4cJqfDWeskdPFUCvQgSebU057e9CBJ5tTTnt9vU14Vom93CRejQxHv5R1JP0Ol9sPnYFehbGBL2DC_&_nc_ohc=yqKzCxeocN0AX9HC3TM&_nc_ht=cdn.fbsbx.com&oh=03_AdS6-nzSPs3bvsj15aLzHktMJVNOgC5pC82JJXdmv1saNA&oe=6553339E&dl=1

Ryan Michael Oducado Nov 13, 2023
to me

Your request is approved.

Good luck,
Dr. Oducado

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

VALIDATION TOOL

SURVEY INSTRUMENT VALIDATION RATING SCALE

Ryan Michael F. Oducado
West Visayas State University, College of Nursing
rmoducado@wvsu.edu.ph

Name of Validator:

Degree:

No. of years in service:

Signature:

SURVEY INSTRUMENT VALIDATION RATING SCALE

- **Instruction:** Please indicate your degree of agreement or disagreement on the statements provided below by **encircling** the number which corresponds to your best to your judgment.

1 – Strongly Disagree **2** – Disagree **3** – Undecided **4** – Agree **5** – Strongly Agree

Criteria

The items in the instrument are relevant to answer the objectives of the study.	1	2	3	4	5
The items in the instrument can obtain depth to constructs being measured.	1	2	3	4	5
The instrument has an appropriate sample of items for the construct being measured.	1	2	3	4	5
The items and their alternatives are neither too narrow nor limited in its content.	1	2	3	4	5
The items in the instrument are stated clearly.	1	2	3	4	5
The items on the instrument can elicit responses which are stable, definite, consistent and not conflicting.	1	2	3	4	5
The terms adapted in the scale are culturally appropriate.	1	2	3	4	5
The layout or format of the instrument is technically sound.	1	2	3	4	5
The responses on the scale show a reasonable range of variation.	1	2	3	4	5
The instrument is not too short or long enough that the participants will be able to answer it within a given time.	1	2	3	4	5
The instrument is interesting such that participants will be induced to respond to it and accomplish it fully.	1	2	3	4	5
The instrument as a whole could answer the basic purpose for which it is designed.	1	2	3	4	5
The instrument is culturally acceptable when administered in the local setting.	1	2	3	4	5

Comments and Suggestions:

Signature over printed name:

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

APPENDIX I

Test of Reliability and Validity of the Research Instrument

Reliability of Research Instrument Cronbach's Alpha Value

Subscales	Alpha	Interpretation
Knowledge on Breast Cancer	0.855	Good
Knowledge on Risk Population	0.877	Good
Knowledge on Signs and Symptom	0.785	Acceptable
Knowledge on Risk Factors	0.805	Good
Knowledge on Breast Cancer Screening	0.954	Excellent
Overall	0.977	Excellent

Reliability of Research Instrument using Kuder Richardson 20 (KR-20)

Subscales	Alpha	Interpretation
Knowledge on Breast Cancer	0.855	Good
Knowledge on Risk Population	0.877	Good
Knowledge on Signs and Symptom	0.785	Acceptable
Knowledge on Risk Factors	0.805	Good
Knowledge on Breast Cancer Screening	0.954	Excellent
Overall	0.977	Excellent

Paired sampled T-Test of the Pre-test and Post-test results

Knowledge	P-value	Interpretation
Knowledge on Breast Cancer	0.013	Significant
Knowledge on Risk population	0.017	Significant
Knowledge on Signs and Symptoms	0.888	Not Significant
Knowledge on the Risk Factors	0.029	Significant
Knowledge on the Breast Cancer Screening	0.038	Significant

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

APPENDIX J

Test of Normality

Pre-Test and Post-Test

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Knowledge on Breast Cancer_Pre	.192	6	.200*	.938	6	.639
Knowledge on Breast Cancer_Post	.184	6	.200*	.938	6	.642

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Knowledge on Risk population_Pre	.195	5	.200*	.966	5	.849
Knowledge on Risk population_Post	.200	5	.200*	.951	5	.744

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Knowledge on Signs and Symptoms_Pre	.376	4	.	.799	4	.101
Knowledge on Signs and Symptoms_Post	.278	4	.	.874	4	.313

a. Lilliefors Significance Correction

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Knowledge on the Risk Factors_Pre	.188	5	.200*	.941	5	.676
Knowledge on the Risk Factors_Post	.239	5	.200*	.866	5	.250

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24OCT399

APPENDIX K

Statistician Certification

CANOSSA COLLEGE OF SAN PABLO CITY - INC.
SAN PABLO CITY, LAGUNA

STATISTICIAN'S CERTIFICATION

To Whom It May Concern:

This certification asserts the statistical analysis and validation executed by the undersigned for the research study titled "**I PINK I Can: Breast Cancer Intervention in Raising Breast Cancer Awareness among Female High School Students,**" produced and submitted by Fiona M. Almario, Maria Ravelyn T. Balmes, Joseph Gandrix D. De Leon, Fiorella Carla A. Dy Ning, and Jewel Shein Feliciano, in partial fulfillment of the requirements for the Bachelor of Science in Nursing degree.

Warm regards,

Angela Jean C. Reyes, RPm
Research Statistician