LEVEL OF AWARENESS AND ATTITUDE ON CARDIOVASCULAR DISEASE RISK FACTORS AMONG MARITIME STUDENTS

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MISAMIS UNIVERSITY

June 2024

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An Undergraduate Research Output
Presented to the Faculty of the
College of Nursing, Midwifery, and Radiologic Technology
Misamis University, Ozamiz City

In Partial Fulfillment of the
Requirement for the Degree
Bachelor of Science in Nursing

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MISAMIS UNIVERSITY
Ozamiz City
College of Nursing, Midwifery, and Radiologic Technology
CERTIFIED: ISO 21001: 2018 Educational Organizations Management System by DNV
ACCREDITED: Philippine Association of Colleges and Universities Commission on Accreditation (PACUC(

CERTIFICATE OF PANEL APPROVAL

In partial fulfillment of the requirements for the degree of Bachelor of Science in Nursing, this research output entitled **"LEVEL OF AWARENESS AND ATTITUDE ON CARDIOVASCULAR DISEASE RISK FACTORS AMONG MARITIME STUDENTS"**, prepared and submitted by Aubrey Jane T. Salvador, Clydine Abigail C. Sapong, Louie Jay P. Singgit, Gwyneth E. Singuran, and Zyndee Bliss R. Suerte and is hereby recommended for acceptance and approval.

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ABSTRACT

Globally, cardiovascular diseases (CVDs) continue to be the primary cause of morbidity and death. This study explored the levels of awareness and attitudes towards cardiovascular disease risk factors among maritime students and the importance of health teaching interventions before exposure emphasized to the field. Four components of the Health Belief Model were used to measure the level of awareness and attitudes toward CVD. Descriptive correlational research methodology was used to collect correct data for extensive correlation analysis. The 170 respondents were 18-25 years old and chosen by Systematic Sampling. The study found a high mean score of 3.21 for CVD risk factor awareness and a mean score of 3.29 for attitude but no significant link (p-value of 0.84) between the two. This research indicated that marine students are aware of CVD risk factors and prevention measures due to excellent educational programs.

Results showed a 0.60 r-value and 0.84 p-values. The p-value over 0.05 supported the null hypothesis. The attitude towards CVD risk factors was classified as "High" based on the calculated overall weighted mean of 3.21 and a standard deviation of 0.63. A significant relationship between the variables resulted in a correlation coefficient of 0.60 and a significant level (p-value) of 0.84. The null hypothesis was accepted since the p-value was greater than 0.05. Therefore, respondents' attitudes towards cardiovascular illness were not influenced by their knowledge. The study suggests studying societal, individual, and psychological variables that affect CVD attitudes and behaviours.

Keywords: ***awareness, attitude, cardiovascular, maritime students, and risk factors***

This thesis is the result of many sacrifices and is wholeheartedly dedicated to those who have inspired and supported us along the way. To our beloved parents, whose unwavering support and encouragement have been invaluable, we are deeply grateful. To our friends and mentors, who offered guidance and encouragement through both challenges and triumphs, we extend our heartfelt thanks. Finally, we dedicate this work to Almighty God, whose strength, wisdom, guidance, and protection have been with us every step of the way.

The Researchers

ACKNOWLEDGEMENTS

The challenging process of working on this research taught valuable lessons in patience and determination. Through this experience, the researchers would like to extend their deepest gratitude to the following individuals who dedicated their time and effort to guide the researchers, making this paper possible. Without their support, this study would not have been completed.

To Dr. Jesus G. Ocapan Jr., the College Dean and research mentor, for his knowledge, commitment, unwavering support, and invaluable suggestions that significantly contributed to the progress of this study.

The researchers are deeply grateful to the panel members, Merasol, O. Duyag, PhD, RN, LPT, Ginalyn C. Elmedulan, MAN, RN, and Chona J. Robles, MAN, RN, for their explicit opinions and insightful criticisms, which have significantly contributed to the development of this paper.

To Capt. Arturo M. Genon, Department Dean of the College of Maritime Education, and to the third-year maritime students of Misamis University, for giving the researchers time and opportunity to conduct this study.

To Mr. Vince G. Cataraja, thank you for lending his expertise and assistance as a statistician in analyzing the researcher's data and interpreting the findings.

To the researcher's parents, whose unwavering support, encouragement, and love have been the cornerstone of their academic journey. This paper is a testament to their sacrifices and steadfast dedication to the researcher's education. Thank you for always being the greatest source of strength and inspiration. Finally, we are grateful to the All-Powerful God for providing protection, direction, and the power and knowledge needed to complete this research paper.

The Researchers

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

INTRODUCTION

Rationale/Background of the Study

In maritime studies, understanding the impact of cardiovascular diseases is crucial for the future occupation of maritime students' well-being. As individuals embark on maritime careers, the unique challenges of this profession, such as extended periods at sea and potential exposure to stressors, can significantly influence cardiovascular health. Cardiovascular disease (CVD) is any ailment affecting the heart or blood vessels. It is commonly connected with the formation of fat deposits within the arteries (atherosclerosis) and an increased risk of blood clots. The specific cause of CVD is unknown. However, numerous factors can increase the chance of developing it. These are referred to as "risk factors". The more risk factors a person has, the more likely they are to get CVD (National Health Services, 2022).

The impact of cardiovascular disease (CVD) is demonstrated by national data statistics since it is the leading cause of mortality in the United States. The world's biggest killer is ischemic heart disease, responsible for 16% of the world's total deaths. Since 2000, the largest increase in deaths has been for this disease, rising by more than 2 million to 8.9 million deaths in 2019. Furthermore, according to the Philippine Statistics Authority (2023), ischemic heart diseases, neoplasms, and cerebrovascular diseases are the leading causes of death in the nation. Also, PSA 2024 shows that 12 million Filipinos are living with CVD.

Sagaro et al. (2021) alluded that CVDs are one of the major causes of work-related mortality from diseases of the prospective career of maritime students. There are different reasons that they might have more modifiable CVD risk factors compared to the general population. Their work is both physically and psychologically stressful, working long hours and short average sleep time, prolonged time away from their family. It has also been demonstrated that work-related stress is a main contributor to CVD risk factors.

A study conducted on British merchant shipping reported that 4601 (19.8%) of 23,291 work-related deaths from 1919 to 2005 were due to CVD. Another study found that 147 (38.4%) out of the 38 documented deaths at sea were from CVDs. Various studies have reported that a high percentage of deaths in their occupation was due to CVDs in Polish vessels, 19% of 324 deaths; on Danish merchant ships, 66% of 53 deaths; on Singapore ships, 65% of 69 deaths; and on the Isle of Man shipping 80% of 20 death when it comes to morbidity, cardiovascular diseases (CVDs) rank among the top five leading causes of sickness among navigators of sea vessels amid illnesses at sea, along with gastrointestinal, musculoskeletal, dermatological, and respiratory problems.

Sustainable development goals (SDG) target chronic diseases, including cardiovascular disease, as one of the increasing causes of morbidity and mortality. Only 14 nations are on track to meet the SDG target of lowering premature mortality from Non-communicable Diseases (NCDs) by one-third by 2030. This goal cannot be met unless the burden of CVDs is reduced, as these are the leading causes of early death from NCDs (Mendis, 2022).

Analyzing how cardiovascular disease (CVD) risk factors relate to awareness and attitudes offers valuable insights. These findings can inform the development of personalized interventions targeting individual and societal variables contributing to CVD development. Understanding this relationship enhances the potential for more effective prevention strategies.

Maritime worker's knowledge and understanding of CVD have increased. Seafarers are more aware in CVD. However, the attitudes of seafarers, despite recognizing the disease, still need improvement. Seafarers are prone to stress, unhealthy diets, and sedentary lifestyles, which are the risk factors for CVD (Saguaro G. et al., 2023). Meanwhile, maritime students are knowledgeable in preventing CVD. However, behavioural risk factors such as smoking and physical inactivity are common among maritime workers and students. A bad lifestyle may have a variety of effects, including poor health, absenteeism, and decreased productivity. Seafarers and maritime students frequently reside aboard maritime

vessels for a while. A poor lifestyle combined with particular working circumstances can create an unhealthy atmosphere that affects not only the seafarer's physical and mental well-being but also the vessel's economy and security (Baygi F. et al., 2020). Thus, monitoring lifestyle habits and wellness is essential to maritime students and workers to reduce CVD.

In today's complex world, knowing is just as important as having a positive attitude and practicing good behaviours. For instance, knowing the benefits of healthy eating is only enough if an individual has a negative attitude towards healthy foods and practices good eating habits. Similarly, having a positive attitude about exercise is only enough if an individual has the knowledge and practice to engage in effective exercise routines. Therefore, to achieve optimal health and well-being, individuals must possess an adequate level of awareness and their attitude toward acquiring cardiovascular disease.

Theoretical Framework

In order to assess the level of awareness of cardiovascular disease among the target respondents, the study uses the Precede-Proceed theory. Since Lawrence Green created Precede in 1974 and Green and Kreuter added Proceed in 1991, this paradigm has offered ethical and practical direction for the sectors of health promotion and education. Benedict et al. (2019) used this model for a community-based health program based on the PRECEDE-PROCEED approach that was shown to be effective in improving the knowledge, adherence, and blood pressure control of adults with hypertension who live in their communities. This approach consists of two main components: the PRECEDE (Predisposing, Reinforcing, and Enabling Constructs in Educational Diagnosis and Evaluation) phase and the PROCEED (Policy, Regulatory, and Organizational Constructs in Educational and Environmental Development) phase.

According to the World Health Organization, tobacco use, hazardous alcohol consumption, poor diet, and physical inactivity are the main behavioural risk factors for heart disease and stroke. Individuals may experience elevated

blood pressure, elevated blood glucose, elevated blood lipids, and overweight and obesity as a result of behavioural risk factors. In primary care settings, these "intermediate risk factors" can be assessed to reveal an elevated risk of heart attack, stroke, heart failure, and other consequences, which are some of the cardiovascular diseases. Hazardous alcohol consumption is one of the behavioural risk factors that contribute to cardiovascular disease. According to the study by White (2020), though the differences are close, men still generally consume more alcohol than women do as well as suffer and cause more alcohol-related injuries and fatalities. The use of tobacco also contributes greatly to cardiovascular disease. Even with the use of any form of tobacco, the Centers for Disease Control and Prevention (2023) declared it to be unsafe, especially among the youth. Almost nine out of ten individuals who smoke every day tried it before turning eighteen. Forty percent of women and forty-nine point seven per cent of males started smoking before the age of sixteen. So, people are more prone to develop a nicotine addiction the younger the person starts smoking.

However, aside from smoking, other behavioural risk factors can contribute to acquiring a cardiovascular disease, which needs to be investigated. Among the maritime students, there is a need to conduct an assessment of their level of awareness of cardiovascular disease and their attitude towards its risk factors. Also, long physical work hours and shift work, along with the rigorous nature of busy schedules, can greatly disturb sleep patterns and increase stress levels, both of which are known risk factors for cardiovascular disease (CVD). As aforementioned, their lifestyle and behaviour reflect their insights into associated cardiovascular diseases. By applying the Precede-Proceed model, the study can systematically address the factors influencing awareness and attitude among maritime students, design targeted interventions, and evaluate the effectiveness of these interventions in promoting cardiovascular health.

The Health Belief Model (HBM) indicates the importance of ways to prevent CVD. There are four (4) components of HBM, which are: (1) Perceived susceptibility, (2) perceived severity, (3) Perceived Benefits, and (4) Perceived

barriers. These are the components that are also the factors that affect individuals having CVD. Thus, understanding the complications of CVD can address these perceptions and encourage individuals to engage in preventive measures to reduce the risk of CVD (Midjani et al., N. 2023).

The HBM serves as the cornerstone for the treatment of numerous chronic disorders, including CVD. It demonstrates how people see their ideas, issues, and beneficial activities. The idea, like CVD, emphasizes the importance of people understanding the condition. Individuals must understand the vulnerability, complications, and preventative actions. As a result, this approach will address the challenges to preventing CVD. However, the hypothesis is not limited to persons who already have diseases. This idea assisted the researchers in identifying the marine student's capacity to care for themselves, which is essential for treating cardiovascular disease (CVD). This involves acquiring new information and coping strategies in order to achieve healthy goals, improve adaptive behaviours, and increase self-efficacy (Champion, V. 2023).

The research revolves around two core concepts: awareness and attitude among maritime students. Cardiovascular diseases (CVDs) represent a significant global health challenge, contributing to a substantial burden of morbidity and mortality. Amidst this concern, it is crucial to investigate specific demographic groups, such as maritime students, to understand their awareness and attitudes towards CVD risk factors.

Conceptual Framework

This study's conceptual framework provides as an organized method for arranging and interpreting the connections between different concepts. The research aimed to analyze how CVD risk factors are related to the level of awareness and attitude of the maritime students. The framework guided the research design and data gathering process by helping to make clear the key concepts and variables. It acts as a basis for evaluating outcomes, which facilitates the process of relating

findings to accepted ideas and literature and adds to a comprehensive, reliable study.

For its fulfillment, the study utilized constructs that are derived from the Health Belief model. These constructs were used to measure the attitude of the respondents which include perceived susceptibility, perceived severity, perceived benefits for healthy behaviors, and barriers to healthy lifestyle. To evaluate the awareness of CVD among the respondents, the constructs have branched out into the knowledge, awareness on CVD risk factors, symptom recognition, and preventive measures that the respondents have.

Awareness of CVD. According to Santos (2020), students pursuing maritime jobs are aware that sailing is a very dangerous occupation. The sailing lifestyle has a significant impact on the health of workers, leading to a higher prevalence of cardiac risk factors among sailors compared to the general population, which adds complexity to our understanding of this issue. (Sagaro, G., et al., 2023). Over the years, significant advancements in specialist medical care have been provided at sea. Both professionals and students or young individuals who are exposed to their respective career sectors should possess an awareness of CVD. Multiple studies indicate that young person's possess little knowledge about cardiovascular disease (CVD) and its associated risk factors and often have a negative attitude towards it. For instance, a study by Aathira et al. (2019) found that while the majority of young adults had adequate knowledge of CVD and its effects, they lacked knowledge of the prevailing risk factors. Chukwuemeka (2023) found that young individuals know little about CVD and its risk factors and dislike them. Muhihi et al. (2020) observed that public awareness and CVD risk factors lowering improve cardiovascular health. The research examined rural youth and middle-aged CVD risk factors and warning sign knowledge. The data demonstrated poor CVD risk factor awareness. Cammalleri et al. (2023) observed that university students knew CVD risk factors but did not consider themselves in danger. Early screening is promoted; however, young individuals' understanding of risk factors is unknown (Güneş et al., 2019). Their research indicated that whereas cardiovascular risk

factors are common in young Americans, understanding among young adults (18–39) is relatively low. Access-focused interventions may promote awareness and assist young adults in achieving treatment goals. Thus, evaluating awareness is essential for personalized therapy, early detection, prevention, and treatment efficacy. CVD knowledge, risk factor awareness, symptom identification, and prevention are assessed. Recent research illuminates maritime students' CVD knowledge and conceptions.

Organizational Constructs. According to the World Health Organization (WHO), organizational constructs must have educational campaigns to support groups for patients with CVD, but with the help of programs and organizations such as NGOs that can engage individuals to promote lifestyle modifications, early detection, and treatments for CVD to decrease the prevalence rate of CVD.

Knowledge of CVD. It is well known that health management onboard is a major challenge for maritime authorities, shipping companies, and navigators (Zerva, 2022). Maritime students' knowledge of CVD is a crucial component in determining the prevention of CVD. A fully equipped student can discern the choices that may put them at risk for CVD. A study by Gregorio et al. (2016) states that almost all navigators at sea have claimed that they have heard of CVD risk factors, preventive measures, signs and symptoms, and sources of information. Therefore, measuring the level of knowledge, as well as awareness of risk factors, symptom recognition, and preventive measures of CVD, among maritime students shows how this affects their attitude in their perception of health.

Risk factor awareness. Awareness of these risk factors is crucial for individuals to make informed lifestyle choices and work with healthcare professionals to manage and mitigate their cardiovascular risk. Regular check-ups, screenings, and adopting a heart-healthy lifestyle can significantly reduce the likelihood of developing CVD. Recent studies, such as the study of Arnett et al. (2019), state that risk factors for CVD include heredity, male gender, advancing age, cigarette smoking, high blood pressure, diabetes, obesity, lack of physical activity, dyslipidemia, and homocysteine levels. The more risk factors a person has,

the higher the likelihood of developing heart disease. Thus, identifying modifiable risk factors in young patients is crucial as they yield better results than older patients.

Symptom recognition. Research shows that young adults have a limited understanding of CVD symptoms. The study of Zobo et al. (2023) revealed that almost all participants knew that hypertension was a disease involving high BP, chest pain, shortness of breath, slow or fast heartbeat, palpitation, lightheadedness, and fatigue. However, more than half were unable to specify the manifestations of hypertension. Implementing health education on the early symptoms and indicators of cardiovascular disease is crucial for timely detection and testing. Also, the study by Han et al. (2019) shows that the following were warning signs: pain in the neck, jaw, or back; feeling weak, light-headed, or dizzy; chest pain or discomfort; pain or discomfort in the arm or shoulder; and difficulty breathing.

Preventive measures. Recent trends in incident CVDs have either grown or stabilized, according to mounting data on young adults, such as maritime students. A study by Zobo et al. (2023) shows that the students' knowledge revealed that most of them had heard of hypertension from friends, family, and TV or radio. This emphasizes how crucial it is to increase advocacy for CVD and the integration of healthy lifestyle programs. While lifestyle modifications are foundational, a more holistic approach involves tailored interventions addressing psychological, social, and environmental factors. Stress management, social support networks, and community-based programs contribute significantly to cardiovascular health. The INTERHEART study emphasizes the importance of psychosocial factors in cardiovascular disease prevention, according to Yusuf S et al. (2020). Therefore, as we navigate the complexities of modern life, it becomes increasingly evident that a holistic approach, integrating various aspects of health and well-being, is essential for effectively combating the rising tide of CVDs.

Attitude on CVD. It is critical to comprehend young adults' attitudes towards cardiovascular disease (CVD) in order to develop effective preventative strategies. The attitudes of young adults on CVD are complex and shaped by a number of

different factors, including perceived susceptibility, perceived severity, perceived benefits for health behaviours, and barriers to a healthy lifestyle. Understanding these constructs is essential for tailoring effective prevention strategies and addressing respondent's unique challenges.

Perceived susceptibility. Embarking on a life of adventure, maritime students encounter a concealed health risk—cardiovascular disease (CVD). Despite their young age, their unique lifestyle and environment predispose them to a heightened perceived susceptibility to CVD. This perception, however, often clashes with the reality of their youth and perceived invincibility. Several factors contribute to this elevated perceived risk. The demanding academic schedule, coupled with long hours of physical labour and shift work, disrupts sleep patterns and increases stress levels, both known CVD risk factors Paul et al. (2021). Many factors, such as lifestyle, diet, smoking, and exercise, can influence susceptibility to CVD. Also, it can be influenced by hereditary and environmental factors. Thus, knowing these factors can prevent individuals from developing CVD and improve well-being.

Additionally, access to healthy food options can be limited aboard vessels or during shore leave, leading to unhealthy dietary choices high in saturated fat and sodium, further increasing CVD risk Neumann, F. (2019). Furthermore, transportation barriers are often cited as barriers to healthcare access. Transportation barriers lead to rescheduled or missed appointments, delayed care, and missed or delayed medication use. These consequences may lead to poorer management of chronic illness and, thus, poorer health outcomes. Therefore, maritime students, despite their youth, grapple with an elevated perceived susceptibility to cardiovascular disease fueled by the demanding nature of their academic and work schedules and dietary habits. They also experience high levels of stress, sleep deprivation, and transportation barriers, which can make maritime students more susceptible to CVD. Thus, it highlights the need for targeted interventions to bridge the gap between the perception and the reality of their cardiovascular health.

Perceived severity. While the vibrant years of student life hold immense potential, they can also harbor unhealthy habits that, if persistent, may contribute to increased risks of cardiovascular disease (CVD) in the long term. Among these "continuous vices," smoking stands out as a major culprit. A study by Parmar M. et al. (2023) reveals a strong association between smoking initiation during adolescence and early death from CVD later in life. Additionally, according to Algharably et al. (2024), excessive alcohol consumption is a concern, with research in the Polish Heart Journal showing a link between binge drinking in college students and higher blood pressure later on. Furthermore, sedentary lifestyles, often characterized by prolonged computer use and insufficient physical activity, can contribute to obesity and related CVD risk factors, as documented in a 2022 review in the journal Progress in Cardiovascular Diseases. Meanwhile, according to PSA, the severity of CVD depends on the complications and symptoms that the patient manifests. Thus, these vices, when persistent, can lead to unhealthy cholesterol levels, elevated blood pressure, and impaired blood vessel function, laying the groundwork for future CVD development.

Perceived benefits for health behaviours. Maritime students face demanding schedules, irregular sleep patterns, and limited access to healthy food, making it challenging to maintain healthy habits. However, prioritizing certain health behaviours can offer numerous benefits. Regular exercise, for example, boosts energy levels and strengthens the cardiovascular system, which is crucial for both physical tasks and mental stamina. Regular physical activity and exercise have also been found to result in lower vulnerability to psychological stressors during periods of increased workload and cognitive performance Herbert et al. (2020).

Similarly, healthy eating habits, rich in fruits, vegetables, and whole grains, provide essential nutrients for brain function and overall well-being. In addition, a study published by Carillo et al. (2019) found that students who consumed more fruits and vegetables had improved cognitive performance and memory. Thus, despite the challenging conditions faced by maritime students, prioritizing health behaviours such as regular exercise and healthy eating can significantly enhance

physical and mental well-being, ultimately contributing to improved focus, reduced absences, and enhanced cognitive performance.

Barriers to Healthy Lifestyle. Living a healthy lifestyle involves more than just avoiding disease and having a low death rate. It includes the body, the soul, and the mind. Eating a balanced diet, getting adequate sleep and exercise, managing stress well, interacting with others, and maintaining mental and emotional stability all have a role in how someone lives. As per Smith et al. (2019), the prevalence of unhealthy food options tends to overshadow the availability of healthier alternatives. College students aimed to maximize their food purchases, prioritizing quantity over nutritional quality. Time constraints pose a significant hurdle to adopting a healthy lifestyle, given the various responsibilities such as classes, coursework, and personal commitments that college students must manage. The convenience factor also hampers healthy behaviour engagement, as obtaining unhealthy food is often more convenient, impacting dietary habits due to its quicker preparation. A notable barrier to embracing a healthy lifestyle involves the reluctance to consider long-term behavioural consequences related to cardiovascular disease (CVD). If the threat to health is not immediate, individuals tend to avoid addressing it, influenced by the observation that similarly-aged peers have not experienced such events. Hence, to address these barriers, public health initiatives, community programs, and healthcare providers can play a vital role in promoting awareness, education, and accessibility to resources that support a heart-healthy lifestyle.

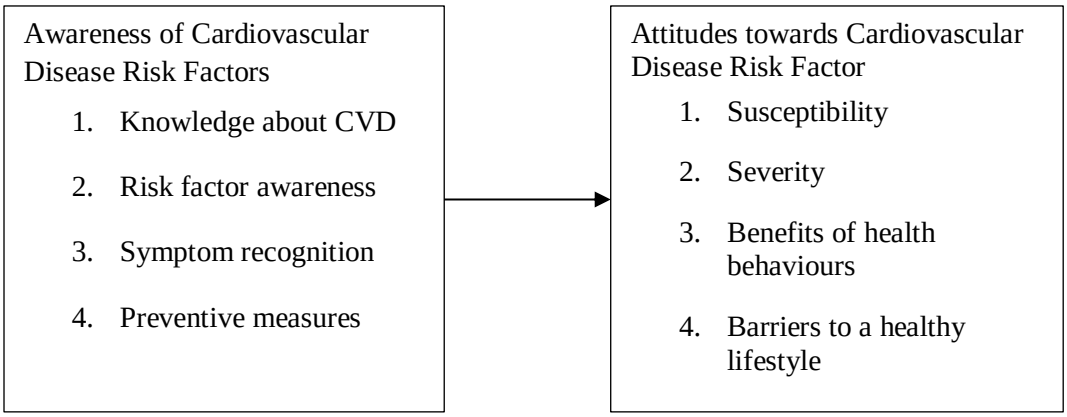

Figure 1. Schematic Diagram of the Study

The existing gap in the literature is notable, as a substantial portion of research has predominantly concentrated on maritime students' future occupations. However, a critical aspect that remains unexplored is the lack of studies specifically centered on maritime students. Addressing this gap is essential as it could contribute significantly to enhancing the awareness and attitude of cardiovascular disease (CVD) risk among maritime students. By extending the research focus beyond its borders to include maritime students, we can gain valuable insights into their unique challenges, lifestyle factors, and potential predispositions to CVD. This expanded perspective not only fills a void in the current body of knowledge but also holds the potential to inform targeted interventions and preventive measures for maritime students, ultimately fostering a healthier and more resilient maritime community.

Objectives of the Study

This study investigated the awareness and attitude toward cardiovascular disease risk among maritime students by assessing the respondent's level of awareness, determining the respondent's attitude towards CVD risk factor, and exploring the significant relationship between the respondent's level of awareness and their attitude to CVD.

The study's null hypothesis is that there is no significant relationship between the respondents' awareness and attitude toward cardiovascular disease risk factors.

Significance of the Study

Studying the awareness and attitude on cardiovascular risk factors among maritime students is important because it aims to explore the levels of awareness and attitudes towards cardiovascular disease risk factors among maritime students, with the ultimate goal of emphasizing the importance of health teaching interventions before their exposure to the maritime field. By investigating attitudes towards cardiovascular disease risk factors, the study seeks to identify potential barriers and misconceptions that maritime students may have. The results informed the development of targeted health teaching initiatives aimed at fostering a

proactive and positive attitude towards cardiovascular health. Interventions can be designed to empower students to adopt healthy lifestyle practices, both during their training and throughout their maritime careers.

The information presented here was useful for the use of other individuals:

This study highlights the vital role that nursing education plays in educating particular populations, such as maritime students, on the risk factors associated with cardiovascular disease. Nursing educators can create curricula that include comprehensive cardiovascular health education with an emphasis on prevention and early intervention by stressing the value of early health education programs. As a result, the incidence of CVD will be reduced, and nursing students will be better prepared to teach a variety of populations. For nursing professors, the study offers insightful information on how maritime students now perceive and feel about CVD risk factors. The creation of focused teaching methods and educational resources that address gaps and misconceptions can be guided by these insights. Nursing professors can improve their effectiveness as educators and help their students gain a greater understanding of cardiovascular health by implementing these tailored approaches. The study is particularly significant for maritime students since it emphasizes how important it is to recognize and reduce CVD risk factors before pursuing a career in the demanding maritime field. The study emphasizes the necessity for focused health education initiatives that encourage active and positive attitudes toward cardiovascular health by highlighting potential obstacles and misconceptions. By educating maritime students with this information, their long-term health outcomes will be improved as they embrace healthy lifestyle habits both throughout their training and during their careers. Lastly, this study provides future researchers interested in studying cardiovascular health awareness and attitudes in certain communities with a solid basis of reference information. The methodology and results can guide future research aiming at creating and assessing health education interventions. By investigating the long-term effects of focused health education programs on the cardiovascular health of maritime students and

comparable populations, future researchers can expand on this study and make a substantial contribution to the larger field of preventive healthcare research.

METHODOLOGY

This chapter deals with the vital elements of the research process. It presents the research design, research setting, research respondents, research instrument, and data-gathering procedure.

Research Design

The study utilized quantitative research, particularly descriptive-correlational research design, which describes the characteristics of a phenomenon or population and examines the relationships between variables' levels of awareness of CVD and their attitudes without manipulating them. It thoroughly analyzed the existing correlation to provide accurate data that reflects the awareness and attitudes of maritime students.

Research Environment

This study was conducted at one of the higher educational institutions in Misamis Occidental, specifically at the Maritime Academic Department. The Department of Maritime Education is known as a progressive and dynamic academic department promoted by the institution. This approach shows that the environment for determining the level of awareness and attitudes of maritime students to CVD is appropriate for the study.

Unit of Analysis, Respondents and Sampling Procedure

The respondents of the study are students who are currently enrolled in maritime education, particularly all third-year students, whose ages range from 18 to 25 years old, during the academic year 2023-2024. The entire population of third-year maritime students is 301, and the total number of respondents that are needed in the study is 170 utilizing the Raosoft method. They were selected through Systematic Sampling. This sampling is a method that involves selecting

every 10th student from the list of third-year maritime students after a random starting point.

Data Gathering, Instruments and Procedure

Before the actual fielding of the researcher-made questionnaire, the researcher secured permission from the Dean of the College of Maritime Education department to allow the researchers to conduct a study. The researcher secured a consent form for the classroom advisers of each section after explaining the study and its purpose.

Upon the approval of the request form, the researchers explained the questionnaire's contents, then distributed the questionnaires to the randomly selected respondents, and entertained clarifications from the participants.

Validity or Reliability of the Instruments

The necessary data and information were collected using researcher-made questionnaires that were run through pilot testing with 30 respondents, Cronbach, and a Likert scale. The questionnaire was meant to be representative of a target population. The questionnaire is divided into two parts. Part I identifies the respondent’s level of awareness of cardiovascular diseases. Part II identifies the respondent’s attitude as to their perception of cardiovascular disease.

The study tool that the researchers used was reviewed by a panel of experts in the field to determine content validity. Then, the questionnaire was distributed to the intended audience. Items that appear confusing and ambiguous to the respondents were improved and updated to ensure the data-gathering tool's validity. The final instrument was reproduced when it was presented to the adviser for corrections and comments that were integrated into the questionnaire. Upon approval of its validity and reliability, the researchers proceeded with a full-scale data-gathering implementation. The Cronbach's Alpha of the research tool tested should be more than 0.70 in order for the instrument to be dependable for usage by the target respondents. The following Likert scale was used to determine the level of attitude towards the learning environment.

Scoring Guidelines

Part I. Respondents' Level of Awareness on CVD questionnaire.

Scale	Responses	Range	Interpretation
4	Strongly Agree (SA)	3.25 - 4.00	Very High (VH)
3	Agree (A)	2.49 - 3.24	High (H)
2	Disagree (DA)	1.73 - 2.48	Low (L)
1	Strongly Disagree (SD)	1.97 - 1.72	Very Low (VL)

Part II. Respondents' Attitude on CVD questionnaire.

Scale	Responses	Range	Interpretation
4	Strongly Agree (SA)	3.25 - 4.00	Very Good (VG)
3	Agree (A)	2.49 - 3.24	Good (G)
2	Disagree (DA)	1.73 - 2.48	Poor (P)
1	Strongly Disagree (SD)	1.97 - 1.72	Very Poor (VP)

Mode of Analysis, Statistical Instrument/Procedure

This analysis offers a quick overview of the data's features by computing measures such as the mean scores of the respondents' data regarding their level of awareness and attitude towards CVD risk factors.

Regression analysis. These tools were used to determine the relationship between the three variables. This is an effective statistical tool for examining the relationship between two or more variables of interest.

Ethical Consideration

A copy of the research paper and other documents was sent to the panelist before the day of the research proposal. The researchers explained the study and its purpose to the respondents before responding to the questionnaires; this is their right to informed consent. The researchers ensured the confidentiality of their responses by discarding the data after data analysis and tabulation. Both internally and

externally, the respondents guaranteed non-malfeasance throughout the research investigation. The information provided by respondents was kept private and was not used against them. As the main contributors to the research project, the researchers shall respectfully and responsibly defend the respondent's right to privacy.

RESULTS AND DISCUSSIONS

This section presents the findings and discussions related to the two specific research questions in the introduction. The respondents' level of awareness and attitude were determined. The presentation of findings is arranged into the following topics:

Respondents' Level of Awareness

Respondents' Attitude

Significant Relationship between Level of Awareness and Attitude in CVD

Respondent's Level of Awareness

Table 1 presents the maritime students' level of awareness regarding cardiovascular disease (CVD) risk factors. According to the scale provided, the respondents show a very high level of awareness regarding CVD, risk factor awareness on CVD, and CVD preventive measures, with mean scores of 3.31 and a Standard deviation of 0.63, which is very high. This suggests that they are well informed about the nature, causes, and consequences of CVD, indicating that students have successful educational awareness about CVD. Additionally, this high level of awareness is critical for preventing CVD as it empowers maritime students to identify and mitigate risk factors such as hypertension, smoking, and poor diet. It also indicates that maritime students are knowledgeable about lifestyle and behavioural changes necessary to prevent CVD, such as regular exercise, healthy eating, and avoiding tobacco use. A study by Zhang et al. (2020) examined knowledge of CVD among college students. It was found that while most participants recognized major risk factors, identification of specific symptoms like shortness of breath was lower, which supports the idea that awareness of some common symptoms exists, but knowledge of diverse symptoms can be lacking.

Table 1: Respondent's Level of Awareness on CVD Risk Factor

AWARENESS	Mean	Standard Deviation	Interpretation
Knowledge about CVD	3.31	0.55	Very High
Risk factor awareness on CVD	3.31	0.63	Very High
CVD Symptom recognition	3.23	0.53	High
CVD Preventive measures	3.31	0.58	Very High
Total Mean	**3.29**	**0.58**	**Very High**

Scale: (3.26 – 4.00 – Very High), (2.51-3.25 – High), (1.76-2.50 – Low), (1.00 – 1.75Very Low)

Respondent's Attitude

The table presents the respondents' attitudes towards CVD risk factors among third-year maritime students. Based on the overall weighted mean of 3.21 and a standard deviation of 0.63, perceived benefits for health behaviours (3.93) are rated as "Very Good". The very high perceived severity suggests that as a result of effective health promotion, students are aware of the severe consequences of CVD. The respondents also strongly believe that getting exercise and eating a healthy diet can prevent cardiovascular disease, and learning about the symptoms and risks can help them prevent the risk of CVD. Kim & Kim's (2021) study emphasized the impact of health issues on attitudes and perceptions. Therefore, it is believed that there is a strong conviction that the benefits received by health-promoting activities are directly linked to the very high perceived benefits. According to Singh et al. (2024), The impact of thorough education on attitudes towards health behaviours emphasizes the importance of health education initiatives in shaping these perspectives.

Globally, cardiovascular disease (CVD) continues to be one of the main causes of death. Comprehensive treatment techniques are necessary for the effective management and decrease of death rates due to CVD, with lifestyle adjustments being a crucial component. Thus, individuals must be knowledgeable about the risk

factors of CVD. According to Rippe (2019), daily behaviours and activities have a significant impact on the likelihood of developing cardiovascular disease (CVD) overall and coronary heart disease, specifically. Engaging in regular physical exercise, maintaining a healthy diet, managing weight, and refraining from smoking cigarettes have all been shown to greatly decrease the likelihood of developing cardiovascular disease (CVD). Thus, health education is an instrument for encouraging these essential lifestyle adjustments. Health education programs encourage people to adopt healthy lifestyle changes by giving them the knowledge, tools, and support they need to make educated decisions about their health. Targeted education can help people better comprehend the significance of these changes and increase their likelihood of implementing them into their daily lives, which will ultimately lower the death rate from CVD.

Table 2: Respondent's Attitude

ATTITUDE	Mean	Standard Deviation	Interpretation
Perceived susceptibility	2.97	0.69	Good
Perceived severity	3.38	0.60	Very Good
Perceived benefits for health behaviours	3.93	0.57	Very Good
Barriers to a healthy lifestyle	3.06	0.67	Good
Total	**3.21**	**0.63**	**Good**

Scale: (3.26 – 4.00 – Very Good), (2.51-3.25 – Good), (1.76-2.50 – Poor), (1.00 – 1.75 Very Poor)

Significant Relationship between Level of Awareness and Attitude

The results show a correlation coefficient (r-value) of 0.60 and a p-value of 0.84. Since the p-value is greater than the 0.05 significance level, it supports and accepts the null hypothesis. Hence, the level of awareness presented no significant relationship with respondents' attitudes toward cardiovascular disease. This

coincides with the data in Table 2, which illustrates a high perceived susceptibility and severity among respondents, emphasizing the necessity for ongoing education on cardiovascular disease risks pertinent to their field.

The tabulated data revealed that there is no correlation between the variables, which means that the students' awareness does not significantly affect or impact their attitude toward CVD. This highlights the need for comprehensive health education for students and will address the need for change in their attitude to prevent CVD. Still, the research of Than, M., Htike, H., & Silverman, H. (2020) presents a contrary finding, indicating that positive attitude rose along with knowledge. Their findings show a strong positive link at a high correlation level between attitudes and awareness. However, the awareness of an individual does not solely affect the attitude. Cognitive dissonance can occur when people are aware of knowledge that contradicts their preconceived notions or views. Emotions and psychological aspects are frequently the deeper roots of attitudes than pure information. The results are anchored from the survey study of Boehm, J. (2021); awareness that a certain component increases the likelihood of healthy behaviour was positively associated with cardiovascular disease. In multivariable models, knowledge of modifiable risk factors, irregular sleep patterns, exercise, excessive alcohol intake, and stress—was positively connected with a healthy attitude. In addition, students are highly aware that smoking contributes greatly to acquiring CVD. The cross-sectional study of Verma et al. (2019) found that younger patients also had higher knowledge and attitudes, but no discernible correlation was seen, and there was a statistically significant difference in the knowledge and habits of the male and female participants.

Table 3. Significant Relationship between Level of Awareness and Attitude

Variables	r- value	p-value	Interpretation
Level of Awareness and Attitude on Cardiovascular Disease	0.60	0.84	Not Significant

Note: p<0.01 (Highly Significant; p<0.05 (Significant); p>0.05 (Not Significant)

This study explores the awareness and attitudes of maritime students regarding cardiovascular disease (CVD) risk factors. The results were assessed by assessing the respondents' level of awareness, determining their attitude towards CVD risk factors, and exploring the significant relationship between their level of awareness and their attitude toward CVD.

Furthermore, this is a quantitative research study that functioned as a descriptive correlational design that evaluates the relationship between the variables. It was conducted at a higher educational institution, a university in Misamis Occidental. They distributed 2 sets of questionnaires with 12 questions each. Given the unique lifestyle and occupational stressors faced by maritime professionals, understanding these factors is crucial for promoting heart health in this population. The research involved an investigation of the variables to assess students' knowledge of CVD risk factors and their attitudes toward these risks.

The following are the findings of the study:

1. Maritime students exhibit a very high overall level of awareness regarding cardiovascular disease (CVD) risk factors, with a mean score of 3.29.
2. Respondents' overall attitude towards CVD risk factors is high, with a mean score of 3.21.
3. There is no significant relationship between the level of awareness and attitude towards cardiovascular disease among maritime students ($r = 0.60$, $p = 0.84$).

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Based on the findings of the study, the conclusions are as follows:

1. Maritime students are highly aware of CVD risk factors. Thus, with their attitude and awareness of these risk factors, they can reduce the prevalence rate of CVD by modifying their lifestyles, changing their diets and physical activities, and lessening or quitting smoking.

2. Additionally, the findings suggest that while maritime students are well-informed about CVD risk factors, more than this knowledge is needed to influence their attitudes toward these risks. Despite having the attitude of learning about the risk of CVD, there will always be a gap between knowledge and behaviour. Thus, in the study, the respondents have always been under peer pressure from having an unhealthy lifestyle, beliefs, and perceptions of being susceptible to CVD, which highly influence their attitude towards preventing CVD. Therefore, addressing these factors can help students change their negative attitudes and prevent the influence that leads to unhealthy lifestyles.

3. Also, there is no significant relationship between the level of awareness and attitude towards cardiovascular disease, which does not necessarily translate into a corresponding attitude change towards the disease. Thus, the study showcases the attitude and awareness of maritime students towards CVD, and it shows that having an increased level of awareness of the risk factors of CVD does not change the attitudes of maritime students. Thus, future researchers should investigate other factors that influence attitudes and explore effective strategies to bridge the gap between awareness and attitude. By doing so, maritime institutions can better equip their students with the necessary tools and motivations to adopt healthier lifestyles and reduce their risk of cardiovascular diseases.

Recommendations

Based on the conclusions of the study, the recommendations are as follows:

1. Since marine students are highly aware of the risk factors for CVD, educational programs need to be improved and expanded upon in order to sustain and expand this understanding. To keep the content interesting and current, this can entail combining interactive workshops, lectures with medical experts, and the usage of multimedia tools.

2. Maritime programs should implement workable health promotion measures to ensure that a high level of awareness translates into beneficial attitudes and behaviours. These could include stress management seminars, consistent physical activity plans, and the provision of nutritious food options on campus. Promoting mentorship programs and peer support groups may also reinforce positive health practices.

3. Acknowledging that awareness on its own does not substantially impact attitudes, focused interventions need to be created to close this gap. Personalized health counselling and the use of behaviour change theories to the creation of successful interventions may be part of this.

4. Based on the findings of the study, future studies should concentrate on determining additional variables, such as cultural influences, individual experiences, and psychological variables, that affect attitudes and behaviours toward CVD. Effective and efficient methods to support cardiovascular health in maritime students can be developed by understanding these added variables. While one of the results of the current research shows that maritime students' level of awareness about CVD risk factors is high, there is still a gap between their knowledge and their behaviours. Thus, future research should tackle maritime students' behavioural attitudes more, such as their beliefs, the influence of peers, their perception of being susceptible to CVD, and how it influences maritime students' attitudes.

REFERENCES

Aathira, C. M.; Mohanraj, Karthik Ganesh. (n.d.). Awareness of the Risk Factors of Cardiovascular Disease among Young Adult Population – A Survey-Based Study. Retrieved on December 11, 2023, from https://tinyurl.com/y8bmjv3b.

Algharably, E. et al. (2024). Understanding the impact of alcohol on blood pressure and hypertension: From moderate to excessive drinking. Retrieved on July 22, 2024, from, https://doi.org/10.33963/v.kp.98704.

Arnett, D. K., et al. (2019). 2019 ACC/AHA Guideline on the Primary Prevention of Cardiovascular Disease: Executive Summary: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines. Circulation, 140(11), e563–e595. Retrieved on July 22, 2024, from https://doi.org/10.1161/CIR.0000000000000677.

Baygi, F., Djalalinia, S., Qorbani, M. et al. Lifestyle interventions in the maritime settings: a systematic review. Environ Health Prev Med 25, 10 (2020). Retrieved on July 22, 2024, from https://doi.org/10.1186/s12199-020-00848-7.

Boehm, J., (2021). Positive psychological well-being and cardiovascular disease: Exploring mechanistic and developmental pathways. Retrieved on July 21, 2024, from https://doi.org/10.1111/spc3.12599.

Cal, C. B., Calletor, K. P., Guce, F. I. C. C., Bongar, M. V. V., &Macindo, J. R. B. (2019, February 13). Effectiveness of a community-based health programme on the blood pressure control, adherence and knowledge of adults with hypertension: A PRECEDE-PROCEED model approach. Journal of Clinical Nursing. Retrieved on January 19, 2024, from https://doi.org/10.1111/jocn.14787.

Cammalleri, V., et al. Cardiovascular risk knowledge and related behaviours among youths: a cross-sectional study in a sample of Italian undergraduates. J Public Health (Berl.) (2023). Retrieved on July 23, 2024, from https://doi.org/10.1007/s10389-023-02133-7.

Carrillo, J. Á., Zafrilla, M. P., &Marhuenda, J. (2019). Cognitive Function and Consumption of Fruit and Vegetable Polyphenols in a Young Population: Is There a Relationship? Foods (Basel, Switzerland), 8(10), 507. Retrieved on July 22, 2024, from https://doi.org/10.3390/foods8100507.

Champion. V. (2019). Skinner CS The Health Belief Model, Health Behavior, Theory and Research. Retrieved on July 18, 2024, from https://www.researchgate.net/publication/332446988.

Chukwuemeka, U.M., Okoro, F.C., Okonkwo, U.P. et al. Knowledge, awareness, and presence of cardiovascular risk factors among college staff of a Nigerian University. Bulletin of Faculty of Physical Therapy, 28(1). Retrieved on July 20, 2024, from https://doi.org/10.1186/s43161-023-00119-w.

Gao, Z., Chen, Z., Sun, A., & Deng, X. (2019). Gender differences in cardiovascular disease. Medicine in Novel Technology and Devices, 4, 100025. Retrieved on May 31, 2024, from https://doi.org/10.1016/j.medntd.2019.100025.

Geving, I. H., Jorgensen, K. U., Le Thi, M. S., & Sandsund, M. (2007). Physical activity levels among offshore fleet seafarers. International maritime health, 58(1-4), 103 114. Retrieved on October 11, 2023, from https://tinyurl.com/33864vkb.

Gregorio Jr, E. R., Kobayashi, J., Medina, J. R. C., &Simbulan, N. P. (2016). Knowledge, attitudes, and related practices of Filipino seafarers regarding cardiovascular diseases. International Maritime Health, 67(4), 214-222. Retrieved on November 12, 2023, from https://doi.org/10.5603/imh.2016.0039.

Güneş FE, Bekiroglu N, Imeryuz N, Agirbasli M. Awareness of cardiovascular risk factors among university students in Turkey. Primary Health Care Research & Development, 20. Retrieved on May 31, 2024, from https://doi.org/10.1017/s146342361900063x.

Han, C. H., Kim, H., Lee, S., & Chung, J. H. (2019). Knowledge and Poor Understanding Factors of Stroke and Heart Attack Symptoms. International journal of environmental research and public health, 16(19), 3665. Retrieved on July 22, 2024, from https://doi.org/10.3390/ijerph16193665.

Herbert, C., Meixner, F., Wiebking, C., & Gilg, V. (2020a). Regular physical activity, short-term exercise, mental health, and well-being among university students: The results of an online and a laboratory study. Frontiers in Psychology, 11. Retrieved on January 18, 2024, from https://doi.org/10.3389/fpsyg.2020.00509.

Journal of Nutrition Education and Behavior | ScienceDirect.com by Elsevier. (n.d.). Retrieved on January 16, 2024, from https://tinyurl.com/4fk7czzj.

Kim, S., & Kim, S. (2020). Analysis of the Impact of Health Beliefs and Resource Factors on Preventive Behaviors against the COVID-19 Pandemic. International journal of environmental research and public health, 17(22), 8666. Retrieved on July 23, 2024 from https://doi.org/10.3390/ijerph17228666.

Mendis, S., Graham, I., &Narula, J. (2022). Addressing the global burden of cardiovascular diseases; need for scalable and sustainable frameworks. Global Heart, 17(1). Retrieved on October 11, 2023, from https://tinyurl.com/4vt3kyn9.

Midjani, N., Hossaini, F. A., & Sharifi, N. (2023). Promotion of nutritional behaviours in the prevention of cardiovascular diseases: application of the health belief model in primary health care centres. BMC Primary Care, 24(1), 278. Retrieved on July 17, 2024, from https://doi.org/10.1186/s12875-023-02248-6.

Muhihi, A., Anaeli, A., Mpembeni, R., Sunguya, B. F., Leyna, G., Kakoko, D., Kessy, A. T., Sando, M. M., Njelekela, M., &Urassa, D. P. (2020, November 30). Public knowledge of risk factors and warning signs for cardiovascular disease among young and middle-aged adults in rural Tanzania. BMC Public Health. Retrieved on January 18, 2024, from https://doi.org/10.1186/s12889-020-09956-z.

Neumann, F. (1970, January 1). Nutritional status, dietary intake and factors influencing the eating behaviour of seafarers working on merchant's vessels: Results from the "e-healthy ship" cross-sectional study. REPOSIT. Retrieved on January 18, 2024, from https://tinyurl.com/4b8p5b2p.

Parmar, M. P., Kaur, M., Bhavanam, S., Mulaka, G. S. R., Ishfaq, L., Vempati, R., C, M. F., Kandepi, H. V., Er, R., Sahu, S., &Davalgi, S. (2023). A Systematic Review of the Effects of Smoking on the Cardiovascular System and General Health. Cureus, 15(4), e38073. Retrieved on July 22, 2024, from https://doi.org/10.7759/cureus.38073.

Paul, E., Bu, F. & Fancourt, D. Loneliness and Risk for Cardiovascular Disease: Mechanisms and Future Directions. Curr Cardiol Rep 23, 68 (2021). Retrieved on July 22, 2024, from https://doi.org/10.1007/s11886-021-01495-2.

Philippine Statistics Authority: Republic of the Philippines. 2022 Causes of Deaths in the Philippines (Preliminary as of February 28 2023) | Philippine Statistics Authority | Republic of the Philippines. (n.d.). Retrieved on September 28, 2023, from https://tinyurl.com/ypshy9nf.

Rippe, J. M., & Angelopoulos, T. J. (2014). Lifestyle strategies for cardiovascular risk reduction. Current atherosclerosis reports, 16(10), 444. Retrieved on July 19, 2024, from https://doi.org/10.1007/s11883-014-0444-y.

Sagaro, G. G., Angeloni, U., Marotta, C., Nittari, G., Rezza, G., Silenzi, A., Battineni, G., & Amenta, F. (2023). The Magnitude of Cardiovascular Disease Risk Factors in Seafarers from 1994 to 2021: A Systematic Review and Meta-Analysis. Journal of personalized medicine, 13(5), 861. Retrieved on July 23, 2024, from https://doi.org/10.3390/jpm13050861.

Sagaro, G. G., Battineni, G., Di Canio, M., &Amenta, F. (2021, June 4). Self-reported modifiable Risk Factors of Cardiovascular Disease among Seafarers: A Cross-Sectional Study of Prevalence and Clustering. Journal of Personalized Medicine, 11(6), 512. Retrieved on November 18, 2023, from https://doi.org/10.3390/jpm11060512.

Sagaro, G. G., Dicanio, M., Battineni, G., Samad, M. A., &Amenta, F. (2021, March). Incidence of occupational injuries and diseases among seafarers: a descriptive epidemiological study based on contacts from onboard ships to the Italian Telemedical Maritime Assistance Service in Rome, Italy.BMJOpen,11(3), e044633. Retrieved on November 18, 2023, from https://doi.org/10.1136/bmjopen-2020-044633.

Sagaro, G.G.; Angeloni, U.; Marotta, C.; Nittari, G.; Rezza, G.; Silenzi, A.; Battineni, G.; Amenta, F. The Magnitude of Cardiovascular Disease Risk Factors in Seafarers from 1994 to 2021: A Systematic Review and Meta-Analysis. J. Pers. Med. 2023, 13, 861. Retrieved on July 19, 2024, from https://doi.org/10.3390/jpm13050861.

Sharifi-Rad, M., Anil Kumar, N. V., Zucca, P., Varoni, E. M., Dini, L., Panzarini, E. ...& Sharifi-Rad, J. (2020). Lifestyle, oxidative stress, and antioxidants: Back and forth in the pathophysiology of chronic diseases. Frontiers in physiology, 11, 694. Retrieved on December 14, 2023, from https://tinyurl.com/yr47p87w.

Singh, D., et al. (2024). Assessing the Impact of Health Education on Health Behavior Change. Retrieved on July 20, 2024, from https://tinyurl.com/3nnh4j23.

Smith, R., Kelly, B., Yeatman, H., & Boyland, E. (2019). Food Marketing Influences Children's Attitudes, Preferences and Consumption: A Systematic Critical Review. Nutrients, 11(4), 875. Retrieved on July 22, 2024, from https://doi.org/10.3390/nu11040875.

Szafran-Dobrowolska, J., Renke, M., & Jeżewska, M. (2019). Is it worth continuing to analyze the factors of cardiovascular risk among the sailors? Review of Literature. International Maritime Health, 70(1), 17–21. Retrieved on October 9, 2023, from https://doi.org/10.5603/imh.2019.0003.

Than, M. M., Htike, H., & Silverman, H. J. (2020). Knowledge, Awareness, Attitudes, and Practices towards Research Ethics and Research Ethics Committees among Myanmar Post-graduate Students. Asian bioethics review, 12(4), 379–398. Retrieved on July 22, 2024, from https://doi.org/10.1007/s41649-020-00148-w.

Verma, A., Mehta, S., Mehta, A., &Patyal, A. (2019). Knowledge, attitude and practices toward health behaviour and cardiovascular disease risk factors among the patients of metabolic syndrome in a teaching hospital in India. Journal of Family Medicine and Primary Care, 8(1), 178. Retrieved on July 24, 2024, from https://doi.org/10.4103/jfmpc.jfmpc_257_18.

White, A. (2020). Gender differences in the epidemiology of alcohol use and related harms in the United States. National Institute on Alcohol Abuse and Alcoholism. Retrieved on January 17, 2024, from https://tinyurl.com/y65hrcmj.

World Health Organization. (n.d.). Cardiovascular diseases. World Health Organization. Retrieved on September 28, 2023, from https://tinyurl.com/ne8zeb65.

World Health Organization. (2022). DOH, WHO, RTSL, and WHF commit to strengthening collaboration for cardiovascular disease prevention. Retrieved on July 22, 2024, from https://tinyurl.com/mr4x7sw3.

Youth and tobacco use. (2023, November 2). Centres for Disease Control and Prevention. Retrieved on January 19, 2024, from https://tinyurl.com/32ywxscm.

Yusuf, S., Hawken, S., Ôunpuu, S., Dans, T., Avezum, A., Lanas, F., McQueen, M., Budaj, A., Pais, P., Varigos, J., & Lisheng, L. (2020). Effect of potentially modifiable risk factors associated with myocardial infarction in 52 countries (the INTERHEART study): case-control study. The Lancet, 364(9438), 937–952. Retrieved on September 28, 2023, from https://doi.org/10.1016/s0140-6736(04)17018-9

Zerva, K., Drylli, A., Chrysovergis, A., Chrysovitsiotis, G., &Kyrodimos, E. (2022). An e-learning platform for managing seafarers' health issues on board: Pilot use on the Greek shipping industry. International Journal Of Community Medicine And Public Health, 9(5), 1939. Retrieved on October 11, 2023, from https://doi.org/10.18203/2394-6040.ijcmph20221003

Zhang, D. Rekar, S. L., Dean, C. A., & Radhakrishnan, S. (2020). Assessing the cardiovascular health status and knowledge level of college students. American Journal of Lifestyle Medicine, 16(4), 527–537. Retrieved on June 04, 2024, from https://doi.org/10.1177/1559827620935370.

Zobo, P. C., Touré, F. Y., Coulibaly, I., Bitty-Anderson, A. M., Boni, S. P., Niangoran, S., &Ekouevi, D. K. (2023). Prevalence of hypertension and other cardiovascular disease risk factors among university students from the National Polytechnic Institute of Côte d'Ivoire: A cross-sectional study. Plos one, 18(1), e0279452. Retrieved on October 11, 2023, from https://tinyurl.com/yf64dwea.

Appendix A

QUESTIONNAIRE ON

LEVEL OF AWARENESS AND ATTITUDE ON CARDIOVASCULAR DISEASE RISK FACTORS AMONG MARITIME STUDENTS

PART 1. Respondents' Level of Awareness on CVD

This section will identify the level of awareness among maritime students. This survey aims to gather valuable insights that involve the respondent's knowledge, risk factor awareness, symptom recognition, and preventive measures for CVD. Using a scale of 4-1, please check (√) the number corresponding to your level of agreement on the given statements using the following scale:

4 = Strongly Agree

3 = Agree

2 = Disagree

1 = Strongly Disagree

AWARENESS	**Strongly Agree**	**Agree**	**Disagree**	**Strongly Disagree**
	4	**3**	**2**	**1**
Knowledge about CVD				
I have heard about Cardiovascular Disease risk factors.				
I know what Cardiovascular Disease is.				
I understand the impact of Cardiovascular Disease on overall health.				
Risk factor awareness on CVD				
I am aware that too much sitting or lying down, with little to no exercise, increases my risk of getting				

cardiovascular disease.				
I am aware that men are at higher risk than women in acquiring Cardiovascular Disease.				
I am aware that smoking is a significant contributor to the risk of Cardiovascular Disease.				
CVD Symptom recognition				
I have a limited understanding of cardiovascular disease symptoms.				
Difficulty in shortness of breath and chest pain is one of the indications of cardiovascular disease.				
I am aware that irregular heartbeats and lightheadedness are potential signs of cardiovascular disease.				
CVD Preventive measures				
I eat a healthy diet and engage in regular physical activity to lower my risk of cardiovascular disease.				
I limit my alcohol intake and engage in physical activity such as hiking, biking, biking, and other physical activities				
I have heard from my family and friends advocating a healthy lifestyle related to CVD symptoms.				

PART 2. Respondents' Attitude on CVD

This section focused on assessing attitudes towards cardiovascular disease. This survey aims to gain valuable insights that are complex and shaped by a number of different factors, including the respondent's perceived susceptibility, perceived severity, perceived benefits for health behaviours, and barriers to a healthy lifestyle. Using a scale of 4-1, please check (√) the number corresponding to your level of agreement on the given statements using the following scale:

4 = Strongly Agree

3 = Agree

2 = Disagree

1 = Strongly Disagree

ATTITUDE	Strongly Agree	Agree	Disagree	Strongly Disagree
	4	3	2	1
Perceived susceptibility				
I am susceptible to acquiring Cardiovascular Disease.				
I believe my daily routine and activities increased my susceptibility to developing Cardiovascular Disease.				
I believe I am at risk of acquiring Cardiovascular Disease because of my hectic academic schedule.				
Perceived severity				
I am aware that smoking increases the risk of acquiring Cardiovascular Disease.				
I am aware that unhealthy habits like excessive drinking too much alcohol and consuming unhealthy foods increase the chance of acquiring cardiovascular disease.				

I am aware that being physically inactive can increase the risk of acquiring Cardiovascular Disease.				
Perceived benefits for health behaviours				
Getting exercise and eating a healthy diet can prevent Cardiovascular Disease.				
Changing unhealthy habits, such as my irregular sleeping patterns, can help me reduce the possibility of acquiring cardiovascular disease.				
I will take screenings and regular check-ups to detect potential health issues at an early stage.				
Barriers to a healthy lifestyle				
I am unable to do exercises because of my classes, coursework and personal commitments.				
I often stay up late completing schoolwork or browsing social media.				
I would rather eat less expensive, larger-serving items than pricey, healthy ones.				

Appendix B

SAMPLE FILLED OUT QUESTIONNAIRE

PART 1. Respondents' Level of Awareness on CVD

This section will identify the level of awareness among maritime students. This survey aims to gather valuable insights that involves the respondents knowledge, risk factor awareness, symptom recognition, and preventive measures on CVD. Using a scale of 4-1, please check (√) the number corresponding to your level of agreement on the given statements using the following scale:

4=Strongly Agree

3=Agree

2=Disagree

1=Strongly Disagree

AWARENESS	Strongly Agree	Agree	Disagree	Strongly Disagree
	4	3	2	1
Knowledge about CVD				
I have heard about Cardiovascular Disease risk factors.		✓		
I know what Cardiovascular Disease is.		✓		
I understand the impact of Cardiovascular Disease on overall health.	✓			
Risk factor awareness on CVD				
I am aware that too much sitting or lying down, with little to no exercise, increases my risk of getting cardiovascular disease.	✓			
I am aware that men are at higher risk than women in acquiring	✓			

Cardiovascular Disease.				
I am aware that smoking is a significant contributor to the risk of Cardiovascular Disease.		✓		
CVD Symptom recognition				
I have a limited understanding of cardiovascular disease symptoms.		✓		
Difficulty in shortness of breath and chest pain is one of the indications of cardiovascular disease.		✓		
I am aware that irregular heartbeats and lightheadedness are potential signs of cardiovascular disease.		✓		
CVD Preventive measures				
I eat a healthy diet and engage in regular physical activity to lower my risk of cardiovascular disease.	✓			
I limit my alcohol intake and engage in physical activity such as hiking, biking, biking, and other physical activities		✓		
I have heard from my family and friends advocating a healthy lifestyle related to CVD symptoms.		✓		

PART 2. Respondents' Attitude on CVD

This section focused on assessing attitudes towards cardiovascular disease. This survey aims to gain valuable insights that are complex and shaped by a number of different factors including the respondent's perceived susceptibility, perceived severity, perceived benefits for health behaviors, and barriers to healthy lifestyle. Using a scale of 4-1, please check (√) the number corresponding to your level of agreement on the given statements using the following scale:

4=Strongly Agree
3=Agree
2=Disagree
1=Strongly Disagree

ATTITUDE	Strongly Agree	Agree	Disagree	Strongly Disagree
	4	3	2	1
Perceived susceptibility				
I am susceptible to acquiring Cardiovascular Disease.		✓		
I believe my daily routine and activities increased my susceptibility to developing Cardiovascular Disease.	✓			
I believe I am at risk of acquiring Cardiovascular Disease because of my hectic academic schedule.	✓			
Perceived severity				
I am aware that smoking increases the risk of acquiring Cardiovascular Disease.		✓		
I am aware that unhealthy habits like excessive drinking too much alcohol and consuming unhealthy foods		✓		

increase the chance of acquiring cardiovascular disease.				
I am aware that being physically inactive can increase the risk of acquiring Cardiovascular Disease.		✓		
Perceived benefits for health behaviours				
Getting exercise and eating a healthy diet can prevent Cardiovascular Disease.		✓		
Changing unhealthy habits, such as my irregular sleeping patterns, can help me reduce the possibility of acquiring cardiovascular disease.		✓		
I will take screenings and regular check-ups to detect potential health issues at an early stage.		✓		
Barriers to a healthy lifestyle				
I am unable to do exercises because of my classes, coursework and personal commitments.		✓		
I often stay up late completing schoolwork or browsing social media.		✓		
I would rather eat less expensive, larger-serving items than pricey, healthy ones.		✓		

Appendix C

INFORMED CONSENT FORM

MISAMIS UNIVERSITY
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CERTIFIED: ISO 21001:2018 Educational Organizations Management System by DNV
ACCREDITED: Philippine Association of Colleges and Universities Commission on Accreditation (PACUCOA)
GRANTED: AUTONOMOUS STATUS by the Commission on Higher Education (CHED)

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RESEARCH INFORMED CONSENT FORM

Title
This study is titled "Level of Awareness and Attitude on Cardiovascular Disease Risk Factors among Maritime Students" in partial fulfillment of the requirements for the degree of Bachelor of Science in Nursing.

Researcher
This study is to be conducted by Aubrey Jane T. Salvador, Clydine Abigail C. Sapong, Louie Jay P. Singgit, Gwyneth E. Singuran, and Zyndee Bliss R. Suerte who is pursuing the degree in Bachelor of Science in Nursing at Misamis University College of Nursing, with Dr. Jesus G. Ocapan, Jr. as the adviser. The researcher can be contacted through this mobile number +639659469512 or email address aubreyjane16.salvador@gmail.com, clsapong0497@gmail.com, llowisinggit@gmail.com, gnethsing@gmail.com and zyndeesuerte@gmail.com.

Purpose of the Research
This study aims to explore the levels of awareness and attitudes among 3rd year maritime students towards cardiovascular disease risk factors, with the ultimate goal of emphasizing the importance of health teaching interventions before their exposure to the maritime field.

Description of the Research
This study is a descriptive– correlational type of research, and the data will be gathered through a researcher-made questionnaire within five (5) months.

Potential Benefits
The potential benefits of this research include guiding the development of health education programs tailored to maritime students, fostering proactive attitudes toward cardiovascular health, and reducing long-term CVD risks within this demographic. Insights gained may also enhance curriculum planning in maritime education by incorporating preventive health practices, ultimately supporting a healthier and more resilient future workforce.

Confidentiality
In the conducted of the study, full confidentiality will be assured. No information that discloses your identity will be released or published without your specific consent to the disclosure and only imperatively necessary. The materials that contained the raw information derived from you will be destroyed after data processing within a given period.

Publication
The results of this study may be published in any form for public and scholarly consumption or used in classrooms instruction to enrich learning and generate more knowledge for future research.

Participation
Your participation in this study must be voluntary and you have the right to withdraw if you feel uncomfortable in the process of gathering information from you.

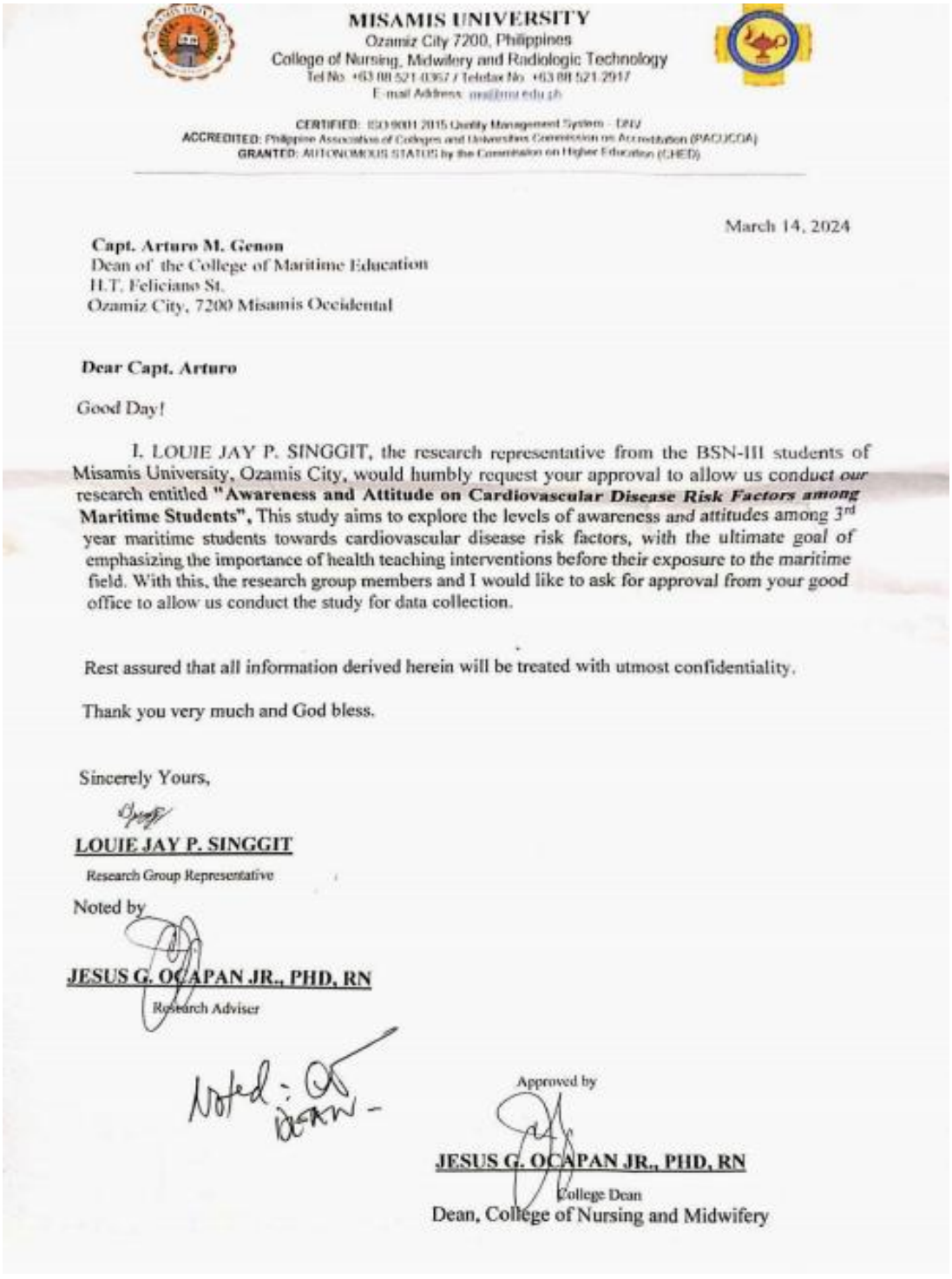
Informed Consent
Given the information above, I confirm that the potential harms, benefits, and alternatives have been explained to me. I have read and understood this consent form, and I understand that I am free to withdraw from my involvement in the study any time I deem it to be necessary or to seek clarifications for any unclear steps in the research process. My signature indicates my willingness to participate in the study.

Ed Marvin M. Buling
Printed Name and Signature of the Research Respondent

April 18, 2024
Date

Appendix D

APPROVED LETTER OF CONSENT



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March 14, 2024

Capt. Arturo M. Genon
Dean of the College of Maritime Education
H.T. Feliciano St.
Ozamiz City, 7200 Misamis Occidental

Dear Capt. Arturo

Good Day!

I, LOUIE JAY P. SINGGIT, the research representative from the BSN-III students of Misamis University, Ozamis City, would humbly request your approval to allow us conduct our research entitled **"Awareness and Attitude on Cardiovascular Disease Risk Factors among Maritime Students"**, This study aims to explore the levels of awareness and attitudes among 3rd year maritime students towards cardiovascular disease risk factors, with the ultimate goal of emphasizing the importance of health teaching interventions before their exposure to the maritime field. With this, the research group members and I would like to ask for approval from your good office to allow us conduct the study for data collection.

Rest assured that all information derived herein will be treated with utmost confidentiality.

Thank you very much and God bless.

Sincerely Yours,

LOUIE JAY P. SINGGIT
Research Group Representative

Noted by

JESUS G. OCAPAN JR., PHD, RN
Research Adviser

Noted - OK
DEAN -

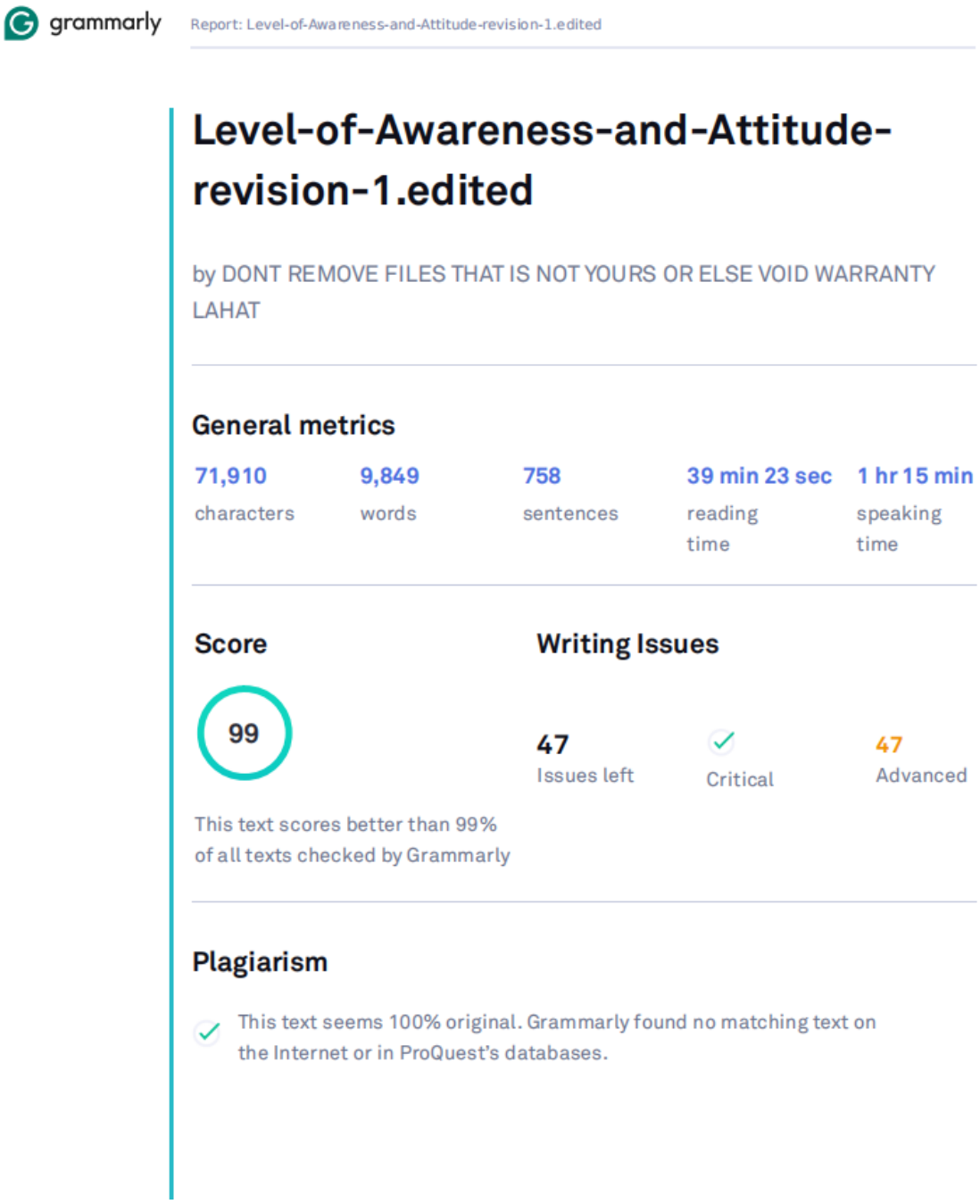
Approved by

JESUS G. OCAPAN JR., PHD, RN
College Dean
Dean, College of Nursing and Midwifery

Appendix E

DOCUMENTATION

GRAMMARLY RESULTS AND TURNITIN RESULTS



grammarly Report: Level-of-Awareness-and-Attitude-revision-1.edited

Level-of-Awareness-and-Attitude-revision-1.edited

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71,910	9,849	758	39 min 23 sec	1 hr 15 min
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47 Issues left

Critical

47 Advanced

Plagiarism

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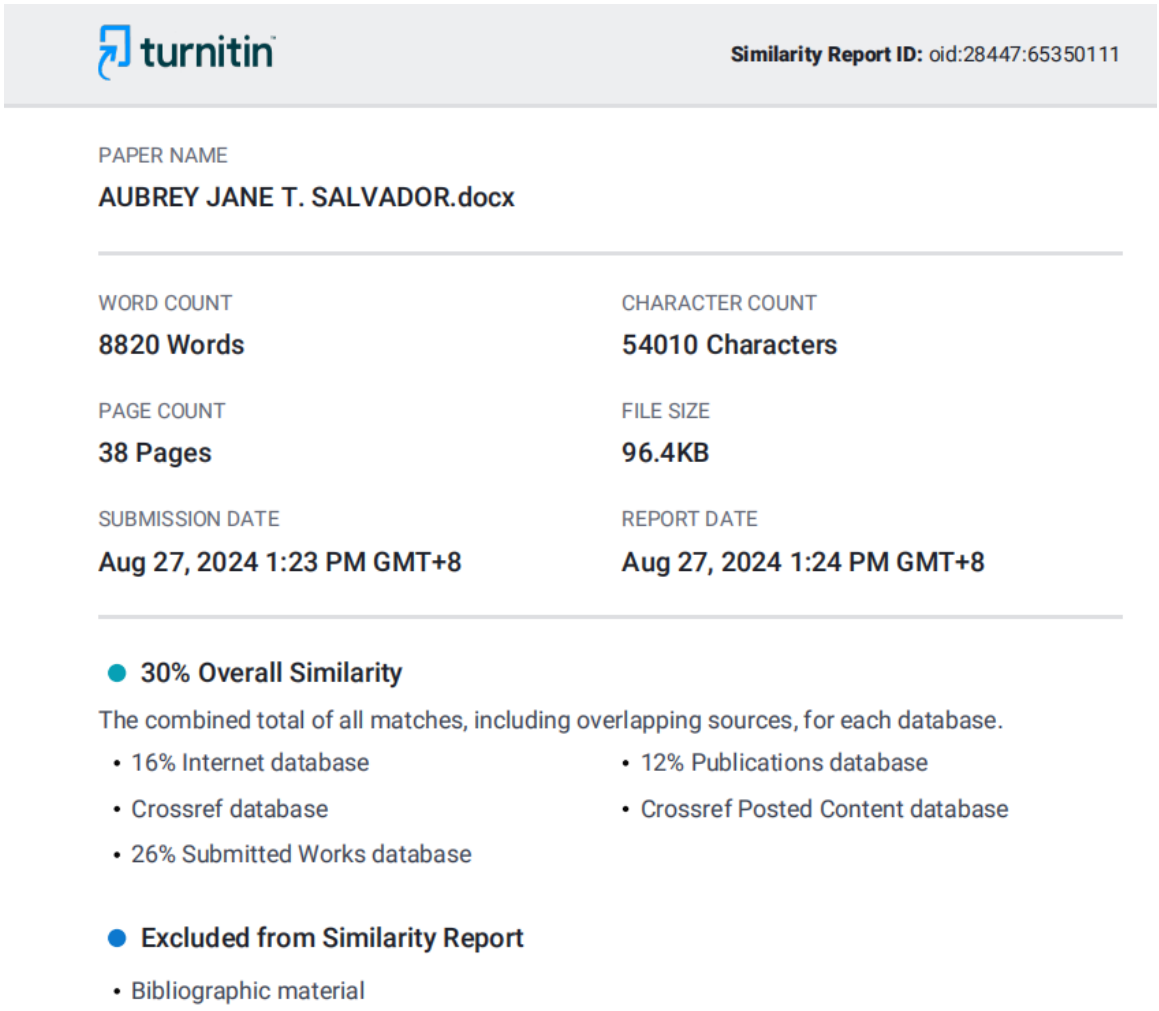
TURNITIN RESULTS



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CURRICULUM VITAE

PERSONAL DATA

Name: Aubrey Jane T. Salvador

Date of Birth: June 16, 2003

Place of Birth: Maranding, Lala, Lanao del Norte

Home Address: Villa Elena Subdivision, Poblacion, Kapatagan, Lanao del Norte

Gender: Female

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EDUCATIONAL BACKGROUND

Elementary: Kapatagan East Central School
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Junior High: Kapatagan National High School
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Senior High: La Salle University- Integrated School
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College: Misamis University
H.T. Feliciano St., Aguada, Ozamiz City

CURRICULUM VITAE

PERSONAL DATA

Name: Clydine Abigail C. Sapong

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EDUCATIONAL BACKGROUND

Elementary: Pagadian City Pilot School
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Junior High: Holy Child Academy
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College: Ateneo De Cagayan University
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Misamis University
H.T. Feliciano St., Aguada, Ozamiz City

CURRICULUM VITAE

PERSONAL DATA

Name: Louie Jay P. Singgit

Date of Birth: June 28, 2002

Place of Birth: Taguite, Tangub City, Misamis Occidental

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Gender: Male

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Contact Number: 09606849013

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EDUCATIONAL BACKGROUND

Elementary: Tangub City Central School
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Junior High: Tangub City National High School
Barangay Mantic, Tangub City, Misamis Occidental

Senior High: Northwestern Mindanao State College of Science and Technology
Labuyo, Tangub City, Misamis Occidental

College: Misamis University
H.T. Feliciano St., Aguada, Ozamiz City

CURRICULUM VITAE

PERSONAL DATA

Name: Gwyneth E. Singuran

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Civil Status: Single

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Email: gnethsing@gmail.com

EDUCATIONAL BACKGROUND

Elementary: Ozamiz City Central School
Vicente Ostia Avenue, Ozamiz City, Misamis Occidental

Junior High: Ozamiz City National High School
Mayor Fernando Bernad Ave, Ozamiz City, Misamis Occidental

Senior High: Misamis University
H. T. Feliciano St., Aguada, Ozamiz City

College: Misamis University
H.T. Feliciano St., Aguada, Ozamiz City

CURRICULUM VITAE

PERSONAL DATA

Name: Zyndee Bliss R. Suerte

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Civil Status: Single

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Email: zyndeesuerte@gmail.com

EDUCATIONAL BACKGROUND

Elementary: Caridad Elementary School
Dumingag, Zamboanga Del Sur

Junior High: Dumingag National High School
Dumingag, Zamboanga Del Sur

Senior High: Western Mindanao Adventist Academy
Dumingag, Zamboanga Del Sur

College: Misamis University
H.T. Feliciano St., Aguada, Ozamiz City