

**KNOWLEDGE, ATTITUDE, AND INTENTION
TOWARD RADIOLOGIC TECHNOLOGY
PROFESSION AMONG GRADE 12
STEM STUDENTS**

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TECHNOLOGY PROFESSION AMONG
GRADE 12 STEM STUDENTS**

An Undergraduate Thesis
Presented to
the Faculty of the College of Nursing, Midwifery, and Radiologic Technology
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In Partial Fulfillment
of the Requirements for the Degree
Bachelor of Science in Radiologic Technology

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CERTIFICATE OF PANEL APPROVAL

In partial fulfillment of the requirements for the degree of Bachelor of Science in Radiologic Technology, this research output entitled, “**Knowledge, Attitude and Intention Towards Radiologic Technology Profession Among Grade 12 Stem Students**” conducted by Dayne C. Cabahug, JB Audie C. Elcarte, Jahazel T. Huete, NJ L. Tecson and Jesail Miles P. Torres is hereby recommended for acceptance and approval.

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ABSTRACT

Radiologic Technology plays a crucial role in the healthcare system, particularly in diagnosing and treating a variety of medical conditions. As technology evolves, so do the demands and opportunities within the radiologic technology sector, making it essential to understand how prospective students perceive this profession. This study aimed to investigate the knowledge, attitudes, and intentions towards the radiologic technology profession among Grade 12 STEM students. A quantitative approach, specifically a descriptive-correlational design, was employed to gather relevant data. Purposive sampling was used, involving the entire population of 317 Grade 12 STEM students from a prestigious higher educational institution in Ozamiz City, Philippines. Data were collected using a four-part, researcher-made, and modified questionnaires designed to assess students' knowledge, attitudes, and intentions. For data analysis, various statistical methods were applied, including frequency, percentage, mean, standard deviation, independent sample t-test, and Pearson Product-Moment Correlation Coefficient. The findings revealed that students had a high level of knowledge about the radiologic technology profession, indicating effective educational efforts in this area. Their attitudes were generally positive, reflecting strong interest, comfort, and satisfaction with potential patient interactions. Furthermore, the respondents exhibited a high intention to pursue a career in radiologic technology. Significant differences in knowledge levels were found based on previous hospital admissions,

but no differences were observed by gender or exposure to radiographic procedures. Attitudes did not significantly differ among the various demographic groups. Additionally, while high knowledge and positive attitudes were noted, they did not significantly correlate with career intentions. Based on these findings, the study recommends enhanced career guidance, mentorship programs, curriculum development, and increased family and community engagement to support students' career aspirations and cultivate a motivated future workforce in radiologic technology.

Keywords: *attitude, Grade 12 STEM students, intention, knowledge, Radiologic Technology*

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The Researchers

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INTRODUCTION

Rationale of the Study

Radiologic Technology serves as a supplementary field within radiology, focusing on the practical utilization of various forms of radiation, including x-rays, beta rays, gamma rays, ultrasound, and radio frequency rays, providing a window to the human body and aiding in the diagnosis and treatment of various medical conditions (Radiologic Technology Act of 1992). Radiologic Technology encompasses a range of imaging procedures such as diagnostic radiography (X-ray), computed tomography (CTCT), mammography, magnetic resonance imaging (MRI), nuclear medicine, and ultrasound. Radiologic Technologists (R.T.s), the expert hands behind these imaging procedures, are responsible for accurately positioning patients, operating sophisticated equipment, and ensuring the production of high-quality diagnostic images (Adler et al., 2022).

Nevertheless, becoming a Radiologic Technologist entails more than just mastering the machines. It is about acquiring a deep understanding of the human body, how medical imaging works, and the delicate balance between technical expertise and patient care. Collaborating closely with radiologists, who interpret medical images to diagnose illness or injuries, R.T.s must conduct the imaging examination appropriately with accurate interpretation by radiologists (Shaterjalali et al., 2018).

In the Philippines, the Bachelor of Science in Radiologic Technology (BSRT) is a four-year degree program comprising general education and professional courses. In the final year, students participate in a Clinical Education Training Program at accredited centers. The curriculum covers special fields of radiology such as Ultrasound, Computed Tomography, Magnetic Resonance Imaging, Mammography, Nuclear Medicine, Radiotherapy, Interventional Radiology, and emerging fields (CMO No. 07, s. 2018).

According to Republic Act No. 7431, also known as the Radiologic Technology Act of 1992, Radiologic Technology requires all academic requirements for three (3) years, including radiological sciences courses and two programs that consist of a one-year hospital internship.

As technology evolves, so do the demands and opportunities within the radiologic technology sector. The Philippines, with its growing healthcare needs and aging population, is no exception, facing an increasing demand for qualified Radiologic Technologists (Lawal et al., 2021).

Predictions from the Bureau of Labor Statistics indicate a 6% growth in demand for Radiologic Technologists by 2031. Despite this typical growth rate, there may be a shortfall in the supply of professionals to meet market demand. In 2022, Radiology Business reported that 80% of healthcare providers faced shortages in allied professionals, with Radiologic Technologists being particularly in demand (Sinha, 2022).

However, the radiologic technology field is confronted with a looming challenge: a potential shortage of skilled workers. Many countries are

experiencing an increasing gap between the supply and demand of Radiologic Technologists. Improving retention rates is becoming increasingly important for policymakers and providers (Nightingale, 2023). The healthcare system requires more Radiologic Technologists to cope with the growing demand resulting from an aging population and longer life expectancy (Huffstetler, 2021). By 2050, the World Health Organization (WHO) projects that 22% of the global population will be over 60, significantly increasing the demand for medical imaging services as older individuals require more frequent screening exams.

Frost and Sullivan (2018) also explored this issue, analyzing the interplay between utilization controls for medical imaging and the growth of the Medicare population, which is known for its high imaging needs. They predicted a surge in demand, and their prediction proved accurate. The demand for imaging services continues to outpace available resources, straining the healthcare system (Fernandez, 2018). Furthermore, the study accurately predicted the surge in demand for Radiologic Technologists. However, despite this projected need, a critical workforce shortage persists. This gap is largely driven by a lack of knowledge, awareness, and negative perceptions surrounding the profession.

Radiologic technology struggles for recognition compared to established healthcare fields like medicine and physical therapy. Many remain unfamiliar with its diverse work areas and the extensive career opportunities it offers. Furthermore, even those with some awareness often misunderstand the nature of the job and the associated risks. It significantly hinders students' career

decision-making and discourages them from pursuing this rewarding path (Markovich, 2022).

Knowledge plays a pivotal role in shaping career decisions, especially during the transition from high school to higher education, as highlighted by Ouano et al. (2019). Understanding the realities of chosen professions is essential for informed decision-making, a sentiment echoed by Holmes (2018), who emphasizes the significance of prior knowledge in cultivating and maintaining interest in a chosen profession. This understanding can be acquired through various means, such as research, advice-seeking, and exposure, as noted by Bibi et al. (2022). However, insufficient and conflicting information often presents significant challenges, hindering individuals' ability to make informed choices, as discussed by Santos et al. (2018).

Fostering a positive attitude toward career journeys is equally crucial, as emphasized by Mirzanaveedshahzad and Ahmed (2018). Pshembayeva et al. (2022) elaborate on this notion, asserting that a positive mindset enables individuals to surmount obstacles and strive toward fulfilling their goals. Moreover, negative attitudes influenced by misconceptions and societal stereotypes can deter individuals from pursuing careers in fields like radiologic technology, as noted by Haynes (2020). Alobaid et al. (2020) and Podsiadlo and DeBenedictis (2022) demonstrate how prevalent prejudices regarding gender roles and the prestige of healthcare professions can influence career decisions.

Discrimination within educational and workplace environments further impacts career aspirations, as highlighted by Hussain and Jones (2021) and Toh et al. (2023). Addressing these factors through targeted interventions is crucial for attracting talented individuals to fields like radiologic technology and fostering inclusive and supportive environments. By investigating these factors, researchers can gain valuable insights and develop strategies to address misconceptions, increase awareness, and ultimately ensure a future workforce that can meet the growing demands of the healthcare industry.

Theoretical Framework

This study is anchored on Albert Bandura's Social Cognitive Theory (1986) and John Holland's Theory of Career Choice (1997).

Bandura's Social Cognitive Theory (1986) underscores the importance of observational learning, modeling, and self-efficacy in shaping individual behavior. In this study, these concepts help explain how students might develop an interest in the radiologic technology profession. Through observational learning, students acquire knowledge and skills by watching professionals in the field. This exposure helps them understand the tasks and responsibilities involved, shaping their perceptions of the profession.

Modeling goes a step further by suggesting that students are not just passive observers but also active imitators. When students observe successful radiologic technologists, they are likely to adopt similar behaviors and attitudes. This process of emulation is critical because it allows students to see real-world

applications of the skills they are learning and imagine themselves in the role. The presence of strong role models can thus positively influence their interest in their careers.

Self-efficacy, or the belief in one's ability to succeed, plays a significant role in determining whether students pursue a career in radiologic technology. When students observe professionals, who excel in the field, their confidence in their own ability to achieve similar success can increase. This belief is essential in motivating students to take the necessary steps toward entering the profession, such as pursuing further education and training.

Lastly, reinforcement strengthens students' interest and commitment to the field. Positive feedback, such as encouragement from mentors or recognition of their skills in STEM, can solidify their attitudes toward radiologic technology. Reinforcement serves as a motivational tool, making students more likely to pursue the profession with confidence. Together, these concepts from Bandura's Social Cognitive Theory offer a comprehensive framework for understanding how students can be encouraged to explore and commit to a career in radiologic technology.

John Holland's Theory of Career Choice (1997) asserts that individuals' career decisions are influenced by their personality types and how well these types align with the characteristics of various work environments. Holland's RIASEC model classifies personalities into six types: Realistic, Investigative, Artistic, Social, Enterprising, and Conventional. Each of these personality types reflects specific interests, values, and tendencies. For instance, individuals with Realistic

personalities may prefer hands-on, technical tasks, while those with Investigative personalities are drawn to problem-solving and research-oriented roles. According to Holland, individuals are more likely to find career satisfaction and success in professions that match their personality type, as this alignment fosters greater engagement and fulfillment (Zainudin et al., 2020).

In relation to this study, Holland's Theory of Career Choice helps explain how Grade 12 STEM students' personalities influence their career decisions, specifically their interest in radiologic technology. The theory suggests that students with personality traits that align with the demands of radiologic technology are more likely to develop positive attitudes toward the profession. For example, students with Realistic traits, who enjoy working with technology, or Investigative traits, who enjoy problem-solving and analytical thinking, may naturally be drawn to radiologic technology, which involves technical precision and scientific inquiry.

This theory also highlights the importance of personality compatibility in career decision-making. Students who are aware of their personality types based on the RIASEC model can make more informed choices about their career paths, selecting professions that align with their strengths and interests. In the case of radiologic technology, understanding the personality traits required for success in the field such as attention to detail, technical aptitude, and problem-solving skills- can help students assess whether the profession is a good fit for them. It can lead to better career satisfaction and long-term success.

By integrating Holland's theory into this study, the research aims to examine how personality compatibility, combined with students' knowledge and attitudes toward radiologic technology, influences their career intentions. Specifically, it seeks to understand how Grade 12 STEM students' personalities and their exposure to the field impact their interest in pursuing a career in radiologic technology. This approach offers valuable insights into how personality traits, along with educational and career guidance, can shape the future workforce in this profession, ensuring that students are well-matched to the careers they choose.

Conceptual Framework

The conceptual framework of this study examines the interaction between the independent and dependent variables. The independent variables include students' knowledge and attitudes toward the radiologic technology profession, while the dependent variable focuses on Grade 12 STEM students' intention to pursue a career in this field. Understanding the factors influencing these variables provides insight into how educational interventions and guidance can shape students' career decisions.

Knowledge about radiologic technology is a significant determinant in students' career choices. It involves the acquisition of information about the roles, educational pathways, job responsibilities, and advancements in this healthcare profession. According to Grusec (2022), informed career decision-making requires a thorough understanding of available career opportunities. In healthcare,

including radiologic technology, accurate and comprehensive information enables students to assess their fit within the profession. Lynch et al. (2021) found that exposure to educational programs that discuss radiologic technology increases awareness and interest among students, while Ingrassia (2020) emphasizes the value of structured career counseling in broadening students' perspectives.

The role of attitude toward radiologic technology is equally vital. Attitude refers to the positive or negative evaluation of a career path, which can significantly influence a student's interest and eventual decision to pursue it. The Theory of Reasoned Action, proposed by Fishbein and Ajzen (1975), highlights that a positive attitude toward a career often leads to stronger intentions to engage in related activities. Oliver et al. (2020) assert that fostering positive perceptions through exposure to the dynamic aspects of radiologic technology, such as the integration of advanced imaging technologies, plays a crucial role in shaping students' preferences. Additionally, Donald et al. (2018) advocate for addressing societal misconceptions about the field, which may discourage students from exploring it as a career option.

Career intention, the dependent variable, refers to the student's deliberate aim or plan to pursue a specific career. Kizilay and Yamak (2023) argue that career intention in STEM fields is influenced by a combination of personal interest, self-efficacy, exposure to role models, and perceived outcomes. Lent and Brown's (2019) Social Cognitive Career Theory (SCCT) further emphasizes the importance of self-efficacy and outcome expectations in predicting career decisions. Within healthcare, including radiologic technology, interactions with

professionals and participation in clinical experiences positively impact students' self-confidence and intentions (Brazal et al., 2019).

Lynch et al. (2022) highlight that healthcare career exploration programs effectively bridge knowledge gaps and demystify roles in radiologic technology, increasing students' motivation to pursue this field. Exposure to hands-on activities and mentorship opportunities helps students better understand the profession's challenges and rewards, fostering their intent to specialize in this area.

Understanding these influencing factors provides educators and career counselors with valuable insights for fostering student interest and commitment to radiologic technology. Accurate dissemination of information, positive reinforcement of attitudes, and exposure to role models are crucial strategies for cultivating interest in this profession. Structured mentorship programs, as recommended by Brazal et al. (2019), and engagement in healthcare career activities further contribute to students' positive career intentions.

By addressing these key factors, the field of radiologic technology can attract a well-prepared and motivated workforce ready to meet the evolving demands of the healthcare sector. Providing students with accurate information, career counseling, and practical exposure will empower them to make informed decisions and pursue fulfilling careers in radiologic technology (Ingrassia, 2020; Alsharif et al., 2022). This holistic approach ensures that the next generation of radiologic technologists is equipped with the knowledge, skills, and confidence to contribute meaningfully to healthcare advancements.

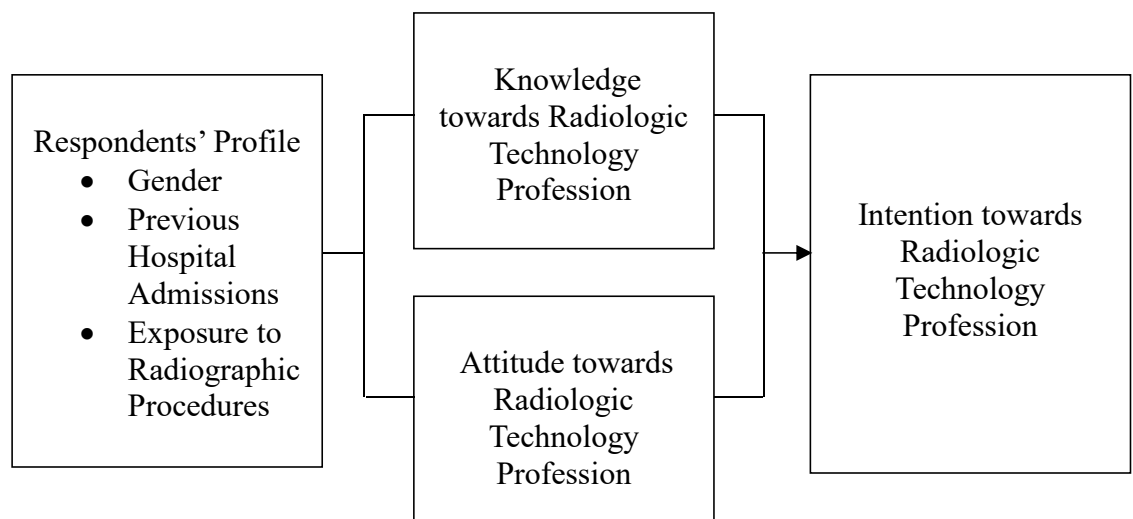


Figure 1. Schematic Diagram of the Study

Existing research on radiologic technology careers has not adequately explored the perspectives of Grade 12 STEM students, a group with strong foundation in science, technology, engineering, and mathematics that aligns closely with the demands of the field. Despite their academic backgrounds making them ideal candidates for radiologic technology, there is limited understanding of the factors that influence their interest in or aversion to this career path. This lack of targeted research hinders the development of effective career guidance, and recruitment strategies tailored to their specific needs and aspirations. By investigating Grade 12 STEM students directly, researchers gained valuable insights to improve career guidance and potentially influence the future radiologic technology workforce.

Objectives of the Study

This study aimed to investigate the knowledge, attitude, and intention towards the radiologic technology profession among Grade 12 STEM students. Specifically, the objectives were as follows: (1) assess the respondents' profile in terms of gender, previous hospital admission, and exposure to radiographic procedures; (2) assess the respondents' level of knowledge towards the radiologic technology profession; (3) determine the respondents' level of attitude towards the radiologic technology profession; (4) identify the respondents' intention towards the radiologic technology profession; (5) explore the significant difference in their level of knowledge towards the radiologic technology profession when grouped by profile; (6) explore the significant difference in their level of attitude towards

the radiologic technology profession when grouped by profile; (7) explore the significant relationship between the respondents' level of knowledge and their intention towards the radiologic technology profession; and (8) explore the significant relationship between the respondents' level of attitude and their intention towards the radiologic technology profession.

Significance of the Study

The outcomes of this study may be beneficial in addressing how Grade 12 STEM students perceive and approach the radiologic technology profession. By focusing on their knowledge, attitude, and intention, the study may contribute to progress within educational guidance, healthcare sector training, and policy development to promote careers in radiologic technology.

RESEARCH METHODOLOGY

Research Design

This study employed a descriptive-correlational research design to investigate the relationship between Grade 12 STEM students' knowledge, attitude, and intention towards the radiologic technology profession. Descriptive-correlational research is a type of non-experimental research that facilitates prediction and relationship among variables. It is often used to provide static pictures of situations and identify potential associations between variables (Seeram, 2019). This design allows researchers to describe the status of variables and examine the interrelationships between them without manipulating any variables. It helps in understanding how different factors may be associated with each other, providing insights that can guide further research or practical applications.

Research Environment

This study was conducted in one of the prestigious higher educational institutions situated in Ozamiz City, Philippines, which aimed to provide an exceptional education, solidifying its reputation as a beacon of academic excellence. The university was committed to fostering well-rounded individuals prepared for the global landscape and had received numerous recognitions for its academic excellence, including accreditation from the Philippine Association of Colleges and Universities Commission on Accreditation (PACUCOA) and

certification from the International Organization for Standardization (ISO), making it the first university in Mindanao to achieve this distinction. It offered a God-centered education, including a 4-year bachelor's degree in radiologic technology.

Respondents of the study/ Unit of Analysis, and Sampling Procedure

The respondents of this study were the total population of Grade 12 STEM students from a prestigious educational institution in Ozamiz City, Philippines. The total population consisted of 347 students. Initially, 30 respondents were selected for pilot testing to refine the research instruments and procedures. After this phase, the final group of respondents included 317 students.

Eligible respondents met two criteria: they were enrolled in the Science, Technology, Engineering, and Mathematics (STEM) strand for the school year 2023-2024, and they expressed a willingness to participate in the study.

In this study, purposive sampling is employed. As outlined by Mweshi & Sakyi (2020), purposive sampling is a non-probability sampling method where researchers make decisions regarding the individuals to be included in the sample.

Data Gathering Instruments

The study employed a researcher- made and modified questionnaires from the studies of Al-Omar (2004) and Ahmad et al. (2015) for gathering the necessary quantitative data. The questionnaire had four (4) parts:

A. **Respondents' Profile.** This was a researcher- made questionnaire that assessed the profile of Grade 12 STEM students in terms of gender, previous hospital admission, exposure to radiographic procedures, and sources of information about the Radiologic Technology profession.

B. **Respondents' Knowledge of Radiologic Technology Profession.** This was a modified questionnaire that assessed the level of knowledge about the radiologic technology profession among Grade 12 STEM students. The continuum presented below was used to interpret the data:

Continuum	Responses	Interpretation
3.26 – 4.00	Strongly Agree	Very High
2.51 – 3.25	Agree	High
1.76 – 2.50	Disagree	Low
1.00 – 1.75	Strongly Disagree	Very Low

C. **Respondents' Attitude towards Radiologic Technology Profession.** This is modified questionnaire from the study of Al-Omar (2004). This part contained questions designed to determine the Grade 12 STEM students' level of attitude towards radiologic technology profession.

The continuum presented below was used to interpret the data:

Continuum	Responses	Interpretation
3.26 – 4.00	Strongly Agree	Very Positive
2.51 – 3.25	Agree	Positive
1.76 – 2.50	Disagree	Negative
1.00 – 1.75	Strongly Disagree	Very Negative

D. Respondents' Intention towards Radiologic Technology Profession.

This is also modified questionnaire from the study of Al-Omar (2004) and Ahmad et al., (2015). This part contained questions to explore the Grade 12 STEM students to pursue a career in radiologic technology.

The continuum presented below was used to interpret the data:

Continuum	Responses	Interpretation
3.26 – 4.00	Strongly Agree	Very High
2.51 – 3.25	Agree	High
1.76 – 2.50	Disagree	Low
1.00 – 1.75	Strongly Disagree	Very Low

Data Gathering Procedure

The researchers commenced by seeking approval from the Dean of the College of Nursing, Midwifery, and Radiologic Technology to conduct the study. Additionally, they sought permission from the Principal of Basic Education to distribute the study's questionnaire among Grade 12 STEM students, who served as respondents. Once approvals and permissions were obtained, the researchers began distributing the questionnaires individually to the respondents. Each respondent was asked to sign an informed consent before answering the research instrument, and assistance was provided by the researchers if needed. After gathering all the data, it was tabulated and coded for analysis and interpretation.

Validity and Reliability of the Instrument

The instruments utilized in this study consisted of researcher-made items as well as previously validated items derived from the studies of Al-Omar (2004) and Ahmad et al. (2015).

To ensure the reliability and validity of the research instrument, a pilot study was carried out with 30 Grade 12 STEM students who were not part of the final respondent group. This preliminary test aimed to confirm the local validity of the modified questionnaire and evaluate its reliability using Cronbach's Alpha.

Mode of Analysis and Statistical Treatment

To derive comprehensive, valid, and reliable results of the study, the following statistical methods and techniques was utilized:

Frequency and Percentage were used to summarize the respondents' profile in terms of gender, previous hospital admission, and exposure to radiographic procedures.

Mean and Standard Deviation were used to assess the respondents' level of knowledge, attitude, and intention towards the radiologic technology profession.

Independent Sample t-test was utilized to explore significant differences in knowledge and attitude towards the radiologic technology profession based on demographic variables such as gender, previous hospital admission, and exposure to radiographic procedures

Pearson Product-Moment Correlation Coefficient was employed to examine the relationship between variables. In this study, it was used to explore

the significant relationship between the respondents' level of knowledge and their intention towards the radiologic technology profession, as well as between their level of attitude and their intention.

Ethical Considerations

The researchers employed all the ethical considerations in the conduct of the study. The following steps were strictly implemented: (1) A request letter was made addressed to the Dean of College of Nursing, Midwifery, and Radiologic Technology and to the Principal of Basic Education; (2) The respondents were fully informed about the purpose, benefits, and potential risks of the study; (3) The respondents were fully informed that they could withdraw anytime they wanted from participating in the study; (4) The respondents were asked to sign an informed consent before the actual distribution of the questionnaire; (5) The respondents were encouraged to contact the researchers in case of queries and concerns; and (6) It was a top priority that anonymity and confidentiality were maintained at all times during the conduct of the study. The data that was collected during the study was meticulously safeguarded to maintain utmost privacy and was destroyed after the completion of the study.

RESULTS AND DISCUSSIONS

This section of the study presents the findings and discussions related to the eight specific research objectives outlined in the Introduction. The respondents' levels of knowledge, attitude, and intention towards radiologic technology profession were determined. Furthermore, significant differences in respondents' knowledge and attitude towards radiologic technology profession were analyzed based on their profiles. Additionally, the relationships between respondents' knowledge and attitudes towards radiologic technology profession, as well as between their attitude and intention towards radiologic technology profession, were evaluated. The findings are presented under the following topics:

Respondents' Profiles in Terms of Gender, Previous Hospital Admissions,
and Exposure to Radiographic Procedures

Respondents' Knowledge towards Radiologic Technology Profession

Respondents' Attitude towards Radiologic Technology Profession

Respondents' Intention towards Radiologic Technology Profession

Significant Difference in Knowledge towards Radiologic Technology
Profession when Grouped by Profile

Significant Difference in Attitude towards Radiologic Technology
Profession when Grouped by Profile

Significant Relationship Between the Respondents' Level of Knowledge
and their Intention towards Radiologic Technology Profession

Significant Relationship Between the Respondents' Level of Attitude and their Intention towards Radiologic Technology Profession

Respondents' Profiles in Terms of Gender, Previous Hospital Admissions, and Exposure to Radiographic Procedures

Table 1 presents the respondents' profiles in terms of gender, previous hospital admissions, and having undergone radiographic procedures.

As shown in the table, the data indicates a higher proportion of female students, consisting of 189 individuals or 59.6%, compared to 128 male students or 40.4%. A significant majority of respondents, 247 individuals or 77.9%, reported having previous hospital admissions. Additionally, more than half of the respondents, 168 individuals or 53.0%, have undergone radiographic procedures.

Table 1
Respondent's Profile
n=317

Constructs	Frequency	Percentage
Gender		
Male	128	40.4
Female	189	59.6
Previous hospital admissions		
Yes	247	77.9
No	70	22.1
Undergone radiographic procedures		
Yes	168	53.0
No	149	47.0

Respondents' Knowledge towards Radiologic Technology Profession

Table 2 shows the respondents' level of knowledge about the radiologic technology profession. As presented in the table, the data obtained interpreted as "High" with a mean score of 2.72 and a standard deviation of 0.53. This suggests that most Grade 12 STEM students possess a good understanding of the profession.

The statement "I am familiar with the field of Radiologic Technology" received the highest average mean of 2.94 out of 10 items in the questionnaire, interpreted as "high." This indicates that many students already have a solid grasp of what the field entails. Individuals with a deep understanding of radiologic technology are better equipped to consider it as a career option. Their comprehensive knowledge of the field's complexities, responsibilities, and opportunities allows them to make informed decisions about whether it aligns with their interests, abilities, and career goals.

Understanding career realities is essential for making informed decisions about one's professional journey. Engaging in research, internships, mentorship, and networking allows individuals to gain insights into the practical aspects of various professions and the skills required to succeed. Rather than viewing the choice of a major as a one-time decision, it's important to recognize it as a step in a dynamic career path. Azhenov et al. (2023) emphasize that being aware of future opportunities and educational advancements is key to achieving long-term success.

Comprehensive career exploration empowers individuals with the knowledge and skills needed to navigate their careers confidently and effectively.

Nevertheless, the decision-making process can be hindered by a lack of self-awareness or information about occupations, which often leads to indecisiveness. Kidok and Harman (2018) highlight that internalizing and filtering relevant information can help reduce inconsistencies and ease decision-making difficulties. For high school students, insufficient or inconsistent information about career options and personal strengths exacerbates these challenges. Providing targeted information and skills training can help mitigate indecisiveness and support more effective career decision-making.

Table 2

Respondents' Knowledge towards Radiologic Technology Profession

n= 317

Variable	M	SD	Remarks
Knowledge	2.72	0.53	High

Scale: 3.26-4.0(Very High); 2.51-3.25(High); 1.76-2.50 (Low); 1.0-1.75 (Very Low)

Respondents' Attitude towards Radiologic Technology Profession

Table 3 shows the respondents' attitude towards the radiologic technology profession. As presented in the table, the data obtained interpreted as positive, with a mean score of 2.92 and a standard deviation of 0.49. This indicates that most senior high school respondents have a positive attitude towards the profession.

The statement “Radiologic Technology is a profession open to individuals of all gender” received the highest average mean of 3.35 out of 10 items in the questionnaire, interpreted as “positive.” This means respondents strongly agree that radiologic technology is not gender-specific but focuses on knowledge, technical expertise, and the ability to provide quality patient care.

Manik and Zadigh (2021) found that ensuring diversity and inclusivity in radiology requires involvement at all levels of the training process, including medical students, residents, and fellows. Inclusivity must also extend to practicing radiologists and the leadership of radiology organizations at regional and national levels. This highlights the importance of a positive and inclusive attitude towards the profession, which can attract a diverse range of individuals to the field.

Additional studies support these findings. Fang et al. (2022) found that students with positive attitude towards healthcare professions are more likely to pursue careers in these fields. This is consistent with the findings of this study, where a positive attitude towards radiologic technology is likely to influence students' career choices.

Moreover, Anderson and Wiggins (2020) noted that attitudes towards gender inclusivity in healthcare professions are improving, with increasing recognition of the importance of diversity in enhancing patient care and professional practice. Their study supports the view that radiologic technology is perceived as an inclusive profession, open to all genders.

Table 3*Respondents' Attitude towards Radiologic Technology Profession**n= 317*

Variable	M	SD	Remarks
Attitude	2.92	0.49	Positive

Scale: 3.26-4.0(Very Positive); 2.51-3.25(Positive); 1.76-2.50 (Negative); 1.0-1.75 (Very Negative)

Respondents' Intention towards Radiologic Technology Profession

Table 4 shows the respondents' intention towards the radiologic technology profession. As presented in the table, despite possessing high knowledge and a positive attitude, the intention to pursue a career in radiologic technology appears low, as indicated by a mean score of 2.40 and a standard deviation of 0.62.

The statement "My friends and peers recognize the importance of Radiologic Technology in healthcare" received the highest average among the 10 items of the questionnaire, with an average mean of 2.85, interpreted as "high." This suggests that respondents have friends and peers who contribute to increasing awareness about the essential role that radiologic technologists play in healthcare settings. Nightingale et al. (2022) found that students who had more knowledge about therapeutic radiography at the beginning of their studies benefited from having family and friends who are therapeutic radiographers or who have undergone radiotherapy.

In a study by Sargent et al. (2021), it was observed that students' career intentions were influenced by their perceptions of the profession's prestige,

income potential, work-life balance, and societal impact. This suggests that factors beyond mere interest and encouragement play a significant role in shaping career intentions among students.

On the other hand, the statement “My family encourages me to pursue Radiologic Technology.” got the lowest average mean of 2.11 and was interpreted as “low”. This suggests that the research-respondents have low support, guidance, and encouragement from their families in helping them explore and follow their interest towards radiologic technology.

A supporting study from Alsharif et al. (2022) highlighted that several students when choosing their career were not subject pressure from their parents or influenced by jealousy of friends or family who were in the medical field. Rather, the students' primary motivation was their ambition to become medical professionals. Additionally, the results imply that factors such as the profession's interest, family support, practicality, public confidence, educational background, and educational accomplishments encouraged students to choose radiography.

Table 4

Respondents' Intention towards Radiologic Technology Profession
n= 317

Variable	M	SD	Remarks
Intention	2.40	0.62	Low

Scale: 3.26-4.0(Very High); 2.51-3.25(High); 1.76-2.50 (Low); 1.0-1.75 (Very Low)

Significant Difference in Knowledge towards Radiologic Technology Profession when Grouped by Profile

Table 5 shows the significant difference in knowledge towards Radiologic Technology Profession when grouped by profile. The findings indicate no significant difference in knowledge based on gender, with a p-value of 0.60, which is greater than the significance threshold of 0.05. However, previous hospital admission has a significant impact on knowledge, as indicated by a p-value of 0.04, which is less than 0.05. Additionally, the experience of undergoing a radiographic procedure does not significantly affect knowledge, as shown by a p-value of 0.14, which is greater than 0.05.

The analysis reveals that there is no significant difference in knowledge based on respondents' gender, supported by a p-value of 0.60. This finding aligns with previous research by Ram et al. (2018), which similarly found no significant gender disparity among medical students interested in radiology specialization. It suggests that both male and female students receive comparable exposure to radiology education during their medical training. Moreover, similar findings were reported by Alchallah et. Al (2020) who found a comparable knowledge on considering Radiology as future career between males and females with no significant difference.

Furthermore, the impact of hospital admission experience on knowledge underscores the value of experiential learning, as posited by experiential learning theory discussed by Yardley et al. (2019). Individuals who have been hospitalized

tend to gain deeper insights into medical procedures, including radiologic technology, which enhances their understanding. This is supported by Hashemiparast, Negarandeh, & Theofanidis (2019), who found that hands-on clinical experience correlates with higher levels of knowledge and competence. Such experiential learning provides practical and contextual understanding crucial for mastering theoretical knowledge and applying radiologic technology effectively.

Regarding exposure to radiographic procedures, the analysis indicates no significant difference in knowledge based on personal experience as a patient, with a p-value of 0.14. This suggests that undergoing radiographic procedures as a patient may not significantly enhance one's understanding of the profession compared to more active learning experiences like clinical rotations or interactive simulations, as found by Heck et al. (2023). Active involvement appears to be more educational and immersive in fostering comprehensive knowledge of radiologic technology and its applications.

Table 5
Significant difference Knowledge towards Radiologic Technology Profession When Grouped by Profile
n= 317

Variables	t value	p value	Decision
Knowledge and Gender	.53	.60	Do not reject Ho
Hospital Admission	2.03	.04	Reject Ho
Undergone Radiographic Procedure	1.49	.14	Do not reject Ho

Ho: There is no significant difference in their level of Knowledge towards Radiologic Technology profession when grouped by profile.

*Note: Probability Value Scale: ** $p < 0.01$ (Highly Significant); * $p < 0.05$ (Significant); $p > 0.05$ (Not significant)*

Significant Difference in Attitude towards Radiologic Technology Profession when Grouped by Profile

Table 6 shows the differences in attitude towards the Radiologic Technology profession when grouped by profile. The results indicate no significant differences across all examined factors. The p-value for gender is 0.39, indicating no significant difference in attitude between male and female respondents. Similarly, hospital admission experience does not significantly influence attitude, as evidenced by a p-value of 0.90. Finally, the experience of undergoing a radiographic procedure also does not result in a significant difference in attitude, with a p-value of 0.86. All these p-values are greater than the 0.05 significance level, leading to the conclusion that attitude towards the profession is not significantly affected by these demographic and experiential factors.

Regarding gender, the non-significant p-value of 0.39 suggests that attitudes towards Radiologic Technology are equally unaffected by gender among respondents. This finding aligns with Mazaheri & Tahmasbi's (2024) research, emphasizing that attitudes are primarily shaped by educational and training experiences rather than demographic characteristics.

Similarly, hospital admission experience, with a p-value of 0.90, does not significantly impact attitudes towards the profession. This is consistent with

findings from Smith and Jones (2020), indicating that attitudes towards healthcare professions are more broadly influenced by educational curricula and professional development opportunities than by individual hospital experiences.

Furthermore, the experience of undergoing a radiographic procedure, reflected in a p-value of 0.86, does not significantly alter attitudes towards

Radiologic Technology. Williams et al. (2021) emphasize that structured educational experiences and mentorship programs play a more critical role in shaping positive attitudes towards healthcare professions than personal experiences alone.

Additional studies reinforce these findings. Taylor and Campbell (2020) demonstrated that professional attitudes in healthcare are significantly shaped by the quality and extent of professional education, while Chen et al. (2019) highlighted the importance of consistent exposure to comprehensive training programs and development opportunities in fostering positive career attitudes.

Moreover, Gomez et al. (2019) underscored the impact of mentorship and hands-on training in cultivating positive attitudes among healthcare students, irrespective of their demographic backgrounds or personal medical experiences. Together, these studies support the conclusion that structured educational initiatives and professional development are pivotal in shaping attitudes towards careers in Radiologic Technology, overshadowing the influence of individual demographic or experiential factors.

This implies that attitudes toward the profession are likely shaped more by educational experiences and professional development opportunities than by

personal demographic or medical experiences. The findings underscore the importance of structured educational initiatives, mentorship, and professional training programs in fostering positive attitudes towards Radiologic Technology, supporting broader literature on the subject.

Table 6

Significant difference in Attitude towards Radiologic Technology Profession When Grouped by Profile
n= 317

Variables	T value	<i>p</i> value	Decision
Attitude and			
Gender	.855	.393	Do not reject Ho
Hospital Admission	.120	.904	Do not reject Ho
Exposure to Radiographic Procedures	-.176	.860	Do not reject Ho

Ho: There is no significant difference in their level of Attitude towards Radiologic Technology profession when grouped by profile

*Note: Probability Value Scale: ** $p < 0.01$ (Highly Significant); * $p < 0.05$ (Significant); $p > 0.05$ (Not significant)*

Significant Relationship Between the Respondents' Level of Knowledge and their Intention towards Radiologic Technology Profession

Table 7 reveals that despite possessing knowledge about the Radiologic Technology profession, there is no significant relationship between respondents' level of knowledge and their intention to pursue a career in this field. The p-value of 0.48 indicates that the level of knowledge does not substantially influence the respondents' intention to enter the profession.

Additional studies support these findings. According to Ardies, De Maeyer, and Gijbels (2020), career aspirations and choices are significantly influenced by

social and environmental factors, including family expectations and educational opportunities. They noted that students with greater exposure to career information and professional role models are more likely to develop specific career interests and make informed career choices.

Furthermore, a study by Atkins et al. (2019) found that mentorship and access to professional networks play a critical role in shaping students' career decisions. They emphasized that mentorship provides students with guidance, support, and insight into professional fields, thereby enhancing their understanding and interest in specific careers.

This implies that possessing knowledge about the profession alone does not strongly influence career intentions. Instead, external factors such as mentorship, social influences, and exposure to professional role models may play a more critical role in shaping career decisions, emphasizing the importance of providing students with meaningful career guidance and support networks.

Table 7

Significant Relationship Between the Respondents' Level of Knowledge and their Intention towards Radiologic Technology Profession

n= 317

Variables	<i>r</i> value	<i>p</i> value	Decision
Knowledge and Intention	.00	.48	Do not reject Ho

Ho: There is no significant relationship between the respondents' level of knowledge and their intention towards Radiologic Technology profession.

*Note: Probability Value Scale: ** $p < 0.01$ (Highly Significant); * $p < 0.05$ (Significant); $p > 0.05$ (Not significant)*

Significant Relationship Between the Respondents' Level of Attitude and their Intention towards Radiologic Technology Profession

Table 8 shows that the analysis of the relationship between respondents' attitude and their intention to pursue a career in Radiologic Technology reveals no significant relationship. The p-value of 0.57, which is greater than the significance threshold of 0.05, suggests that respondents' attitudes towards the Radiologic Technology profession do not significantly impact their career intentions.

This finding is consistent with several studies indicating that while attitudes are important, they may not always be the determining factor in career intentions. For example, research by Mahlke et al. (2024) suggests that attitudes towards healthcare professions are often influenced by broader educational and training experiences rather than solely by individual attitudes. Their study found that comprehensive educational experiences and exposure to the healthcare field had a more substantial impact on career intentions than attitudes alone.

Similarly, Amparo et al. (2020) highlighted the critical role of educational curricula, professional development opportunities, and supportive networks family, educators, and peers in shaping career intentions within healthcare. They emphasized that while positive attitudes towards a profession are beneficial, practical experiences and the perceived value of the profession within the broader healthcare context play a more decisive role in guiding career decisions. Mann-Isah, N. A., Ameen, N., & Jassim, G. (2019) further supported these findings by

identifying personal interest in the field as pivotal factor influencing career choices among medical students. This research indicates that while a positive attitude towards a profession is important, the integration of personal experiences and external influences significantly informs career intentions and decisions.

This suggests that while positive attitudes towards the profession may be present, they do not necessarily translate into career decisions. Consistent with existing literature, factors such as educational exposure, practical experiences, supportive networks, and the perceived value of the profession in healthcare appear to play a more decisive role in shaping career intentions. This highlights the importance of integrating meaningful learning experiences and professional development opportunities to foster greater interest and commitment toward the Radiologic Technology field

Table 8

Significant Relationship Between the Respondents' Level of Attitude and their Intention towards Radiologic Technology Profession
n= 317

YVariables	<i>t</i> value	<i>p</i> value	Decision
Attitude and Intention	.00	.57	Do not reject Ho

Ho: There is no significant relationship between the respondents' level of attitude and their intention towards Radiologic Technology profession.

*Note: Probability Value Scale: ** $p < 0.01$ (Highly Significant); * $p < 0.05$ (Significant); $p > 0.05$ (Not significant)*

CONCLUSIONS AND RECOMMENDATIONS

This section wraps up the study by summarizing the findings and providing conclusions as well as offering recommendations for students, institutions, and proposing areas for future research.

Conclusions

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

1. The respondents consisted of Grade 12 STEM students, with a higher proportion of female students compared to male students. A significant majority of the respondents reported having previous hospital admissions, and more than half had undergone radiographic procedures.
2. Furthermore, the study found that the respondents had a high level of knowledge about the radiologic technology profession.
3. Additionally, the respondents exhibited a generally positive attitude towards the radiologic technology profession.
4. Consequently, the intention to pursue a career in radiologic technology among the respondents was low.
5. The study also explored significant differences in the level of knowledge towards the radiologic technology profession when grouped by profile variables. It was found that previous hospital admissions significantly influenced the level of knowledge, whereas

gender and exposure to radiographic procedures did not shows significant impact.

6. In terms of attitude, the investigation into differences in attitude towards the radiologic technology profession when grouped by profile variables revealed no significant differences. This indicates that the positive attitudes were consistent across different demographic and experiential backgrounds.
7. Moreover, the study explored the significant relationship between the respondents' level of knowledge and their intention towards the radiologic technology profession. The results indicated that while knowledge levels were high, they did not have a significant direct relationship with the intention to pursue a career in radiologic technology.
8. Finally, the exploration of the relationship between the respondents' level of attitude and their intention towards the radiologic technology profession showed that positive attitude was not significantly correlated with the intention to pursue the profession.

Recommendations

Based on the findings of this study, the following recommendations are proposed:

1. Schools should implement comprehensive career guidance programs that provide detailed information about radiologic technology. These programs should include presentations by professionals in the field, workshops, and hands-on experiences to give students a clearer understanding of the profession.
2. Integrating topics related to radiologic technology into the STEM curriculum can help students gain a better understanding of the field. This can include modules on medical imaging, the role of radiologic technologists in healthcare, and the technological advancements in this area.
3. Schools should establish partnerships with local healthcare institutions to facilitate internships, field trips, and guest lectures. This exposure will allow students to experience the radiologic technology environment firsthand and understand its practical applications.
4. Conduct awareness campaigns highlighting the significance and opportunities within the radiologic technology profession. These campaigns can be conducted through school events, social media platforms, and community outreach programs.

5. Further studies should be conducted to explore the long-term effects of educational interventions on students' career choices. Additionally, research should be extended to include students from different educational backgrounds and regions to gain a more comprehensive understanding of the factors influencing career intentions in radiologic technology.

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APPENDIX A Research Questionnaire

Respondents' Profile Questionnaire

Direction: Please indicate your choice for each question by placing a check mark (✓) in the box provided before the option.

1. Gender:

☐ Male ☐ Female

2. Have you ever been admitted to a hospital?

☐ Yes ☐ No

3. Have you ever undergone a radiographic procedure (e.g., X-ray, CT scan, MRI)?

☐ Yes ☐ No

APPENDIX A Cont'd

Respondents' Knowledge of Radiologic Technology Profession Questionnaire

Direction: Read each statement carefully. Place a check mark (✓) on the 4-point Likert scale provided to indicate your level of agreement or disagreement with each statement regarding Radiologic Technology. Be guided by the following scale:

4- Strongly Agree 3- Agree 2- Disagree 1-Strongly Disagree

STATEMENTS	Responses			
	4	3	2	1
1. I am familiar with the field of Radiologic Technology.				
2. I understand the educational requirements for pursuing a career in Radiologic Technology.				
3. I am aware of the job opportunities available in Radiologic Technology.				
4. I am aware of the different specialties within the field of Radiologic Technology.				
5. I know the roles of Radiologic Technologist in healthcare system.				
6. I know the potential risk and safety measures associated with diagnostic imaging procedures.				
7. I can accurately describe the key responsibilities of a Radiologic Technologist.				
8. I can identify the imaging techniques used in radiology department.				
9. I can distinguish Radiologic Technologists from other healthcare professionals.				
10. I can explain the significance of Radiologic Technology in the diagnosis and treatment of medical conditions.				

APPENDIX A Cont'd

Respondents' Attitude towards Radiologic Technology Profession

Questionnaire

Direction: Read each statement carefully. Place a check mark (✓) on the 4-point Likert scale provided to indicate your level of agreement or disagreement with each statement regarding Radiologic Technology. Be guided by the following scale:

4- Strongly Agree 3- Agree 2- Disagree 1-Strongly Disagree

STATEMENTS	Responses			
	4	3	2	1
1. I find Radiologic Technology to be an intriguing profession.				
2. I feel at ease with the prospect of becoming a Radiologic Technologist.				
3. I derive satisfaction from assisting and interacting with patients.				
4. Radiologic Technology presents significant challenges that I am prepared to tackle.				
5. The field of Radiologic Technology offers opportunities for international travel.				
6. I perceived Radiologic Technology as a stable and secure career choice.				
7. The salary prospects in Radiologic Technology are reasonable.				
8. Witnessing patients' recovery through radiologic intervention is deeply gratifying.				
9. I believe I can secure employment in Radiologic Technology regardless of my location.				
10. Radiologic Technology is a profession open to individuals of all gender.				

APPENDIX A Cont'd

Respondents' Intention towards Radiologic Technology Profession

Questionnaire

Direction: Reflect on your future career intention. Read each statement carefully.

Place a check mark (✓) on the 4-point Likert scale provided to indicate your level of agreement or disagreement with each statement regarding Radiologic Technology. Be guided by the following scale:

4- Strongly Agree 3- Agree 2- Disagree 1-Strongly Disagree

STATEMENTS	Responses			
	4	3	2	1
1. I am interested in pursuing a career in Radiologic Technology.				
2. I see myself specializing in a specific area within Radiologic Technology in the future.				
3. I enjoy studying courses related to Radiologic Technology.				
4. I am determined to contribute to advancements and innovations in Radiologic Technology throughout my career.				
5. I believe my character traits align well with the demands of a career in Radiologic Technology.				
6. My family encourages me to pursue Radiologic Technology.				
7. My friends and peers recognize the importance of Radiologic Technology in healthcare.				
8. My teachers and mentors encourage me to pursue Radiologic Technology.				
9. Societal trends or media portrayal about the profession influence me to pursue Radiologic Technology.				
10. Inspiring role models in Radiologic Technology have driven my attention to excel in the field.				

APPENDIX B Sample of Filled Out Questionnaire

KNOWLEDGE, ATTITUDE AND INTENTION TOWARDS RADIOLOGIC TECHNOLOGY PROFESSION AMONG GRADE 12 STEM STUDENTS

Part I. Respondents' Profile

Direction: Please indicate your choice for each question by placing a check mark (✓) in the box provided before the option.

1. Gender:

☐ Male ☒ Female

2. Have you ever been admitted to a hospital?

☒ Yes ☐ No

3. Have you ever undergone a radiographic procedure (e.g., X-ray, CT scan, MRI)?

☒ Yes ☐ No

APPENDIX B Cont'd

Part II. Respondents' Knowledge of Radiologic Technology Profession

Direction: Read each statement carefully. Place a check mark (✓) on the 4-point Likert scale provided to indicate your level of agreement or disagreement with each statement regarding Radiologic Technology. Be guided by the following scale:

4 - Strongly Agree

2 - Disagree

3 - Agree

1 - Strongly Disagree

STATEMENTS	Responses			
	4	3	2	1
1. I am familiar with the field of Radiologic Technology.		✓		
2. I understand the educational requirements for pursuing a career in Radiologic Technology.		✓		
3. I am aware of the job opportunities available in Radiologic Technology.		✓		
4. I am aware of the different specialties within the field of Radiologic Technology.		✓		
5. I know the roles of Radiologic Technologist in healthcare system.		✓		
6. I know the potential risk and safety measures associated with diagnostic imaging procedures.			✓	
7. I can accurately describe the key responsibilities of a Radiologic Technologist.			✓	
8. I can identify the imaging techniques used in radiology department.			✓	
9. I can distinguish Radiologic Technologists from other healthcare professionals.			✓	
10. I can explain the significance of Radiologic Technology in the diagnosis and treatment of medical conditions.		✓		

APPENDIX B Cont'd

Part III. Respondents' Attitude towards Radiologic Technology Profession

Direction: Read each statement carefully. Place a check mark (✓) on the 4-point Likert scale provided to indicate your level of agreement or disagreement with each statement regarding Radiologic Technology. Be guided by the following scale:

4 - Strongly Agree

2 - Disagree

3 - Agree

1 - Strongly Disagree

STATEMENTS	Responses			
	4	3	2	1
1. I find Radiologic Technology to be an intriguing profession.	✓			
2. I feel at ease with the prospect of becoming a Radiologic Technologist.			✓	
3. I derive satisfaction from assisting and interacting with patients.		✓		
4. Radiologic Technology presents significant challenges that I am prepared to tackle.			✓	
5. The field of Radiologic Technology offers opportunities for international travel.		✓		
6. I perceived Radiologic Technology as a stable and secure career choice.	✓			
7. The salary prospects in Radiologic Technology are reasonable.		✓		
8. Witnessing patients' recovery through radiologic intervention is deeply gratifying.		✓		
9. I believe I can secure employment in Radiologic Technology regardless of my location.	✓			
10. Radiologic Technology is a profession open to individuals of all gender.	✓			

APPENDIX B Cont'd

Part IV. Respondents' Intention towards Radiologic Technology Profession

Direction: Reflect on your future career intention. Read each statement carefully. Place a check mark (✓) on the 4-point Likert scale provided to indicate your level of agreement or disagreement with each statement regarding Radiologic Technology. Be guided by the following scale:

- 4 - Strongly Agree 2 - Disagree
3 - Agree 1 - Strongly Disagree

STATEMENTS	Responses			
	4	3	2	1
1. I am interested in pursuing a career in Radiologic Technology.		✓		
2. I see myself specializing in a specific area within Radiologic Technology in the future.			✓	
3. I enjoy studying courses related to Radiologic Technology.		✓		
4. I am determined to contribute to advancements and innovations in Radiologic Technology throughout my career.		✓		
5. I believe my character traits align well with the demands of a career in Radiologic Technology.		✓		
6. My family encourages me to pursue Radiologic Technology.			✓	
7. My friends and peers recognize the importance of Radiologic Technology in healthcare.	✓			
8. My teachers and mentors encourage me to pursue Radiologic Technology.			✓	
9. Societal trends or media portrayal about the profession influence me to pursue Radiologic Technology.		✓		
10. Inspiring role models in Radiologic Technology have driven my attention to excel in the field.		✓		

APPENDIX C Informed Consent Form



MISAMIS UNIVERSITY
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College of Nursing, Midwifery and Radiologic Technology
Tel No. +63 88 521-0367 / Telefax No. +63 88 521-2917
E-mail Address: mu@mu.edu.ph



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)

MISAMIS UNIVERSITY
Ozamiz City
College of Nursing, Midwifery and Radiologic Technology

RESEARCH INFORMED CONSENT FORM

Title

This study is titled “Knowledge, Attitude and Intention Towards Radiologic Technology Profession Among Grade 12 STEM Students” in partial fulfillment of the requirements for the degree of Bachelor of Science in Radiologic Technology.

Researchers

This study is to be conducted by Jahazel T. Huete, Dayne C. Cabahug, JB Audie C. Elcarte, NJ L. Tecson and Jesail Miles P. Torres who is pursuing the degree in Bachelor of Science in Radiologic Technology at Misamis University College of Nursing, Midwifery and Radiologic Technology with Dr. Sammy B. Taghoy as the adviser. The researcher can be contacted through this mobile number +639512665279 or email address jahazelhuete9@gmail.com, daynecabahug@gmail.com and jbaudie44@gmail.com.

Purpose of the Research

This study aims to investigate the knowledge, attitude, and intention towards radiologic technology profession among Grade 12 STEM students. Specifically, the objectives are as follows: (1) assess the respondent's profile in terms of gender, previous hospital admission, undergone radiographic procedure and sources of information about Radiologic Technology profession; (2) assess the level of knowledge of the respondents towards Radiologic Technology profession; (3) determine the respondents' level of attitude towards Radiologic Technology profession; (4) explore the significant relationship between the respondent's profile and their level of knowledge towards Radiologic Technology profession; (5) explore the significant relationship between the respondent's profile and their level of attitude towards Radiologic Technology profession; (6) identify the intention of respondents towards Radiologic Technology profession; (7) explore the significant relationship between the respondents' level of knowledge and their intention towards Radiologic Technology profession; and (8) explore the significant relationship between the respondents' level of attitude and their intention towards Radiologic Technology profession.

Description of the Research

This study will employ a descriptive-correlational research design to investigate the relationship between Grade 12 STEM students' knowledge, attitudes, and intentions towards the Radiologic Technology profession. Descriptive-correlational research is a type of non-experimental research

APPENDIX C Cont'



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ACCREDITED: Philippine Association of Colleges and Universities Commission on Accreditation (PACUCOA)
GRANTED: AUTONOMOUS STATUS by the Commission on Higher Education (CHED)

that facilitates prediction and relationship among variables and is often used to provide static pictures of situations and identify potential associations between variables (Seeram, 2019).

Potential Benefits

The future result of this study will be beneficial to the Grade 12 STEM Students, who can gain valuable insights into their interests and make informed choices about pursuing radiologic technology profession. Educators and Career Advisors can better understand students' needs and perspectives, enabling them to provide more effective guidance and develop tailored educational programs. Radiologic Technologists and Healthcare Professionals can identify strategies to attract and retain STEM graduates in the field, enhancing mentorship and training programs. Policymakers and Workforce Development Organizations can develop policies and initiatives to address workforce shortages, attract more STEM graduates to the field, and promote career pathways in radiologic technology.

Confidentiality

In the conduct 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.

Printed Name and Signature of the Research Respondent

Date

APPENDIX D Approved Letters of Consent



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May 2, 2024

DR. JESUS G. OCAPAN JR.

Dean, College of Nursing, Midwifery and Radiologic Technology
Misamis University

Dear Dr. Ocapan:

Good day!

The undersigned are 3rd year students of Misamis University, Ozamiz City taking up Bachelor of Science in Radiologic Technology and are currently working on a research study titled "KNOWLEDGE, ATTITUDE AND INTENTION TOWARDS RADIOLOGIC TECHNOLOGY PROFESSION AMONG GRADE 12 STEM STUDENTS." This study aims to determine the level of knowledge, attitude, and intention towards Radiologic Technology profession among Grade 12 STEM students. With this, they would like to ask for an approval from your good office to allow them to conduct the study. It will be conducted in Misamis University for the whole month of May 2024.

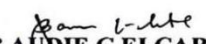
Rest assured that all information derived herein will be treated with utmost confidentiality.

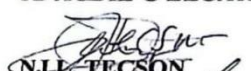
Thank you very much and God bless.

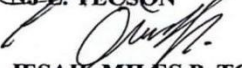
Sincerely yours,


JAHAZEL T. HUETE

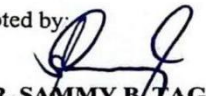

DAYNE C. CABAUG


JB AUDIE C. ELCARTE

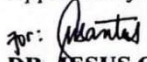

N.J.L. TECSON


JESAIL MILES P. TORRES
Researchers

Noted by:


DR. SAMMY B. TAGHOY
Research Adviser

Approved by:


DR. JESUS G. OCAPAN JR.
Dean, College of Nursing, Midwifery and Radiologic Technology

APPENDIX D Cont'd



MISAMIS UNIVERSITY
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E-mail Address: mu@mu.edu.ph



May 2, 2024

DR. ANALYN S. CLARIN
Principal, Basic Education Department
Misamis University

Dear Dr. Clarin:

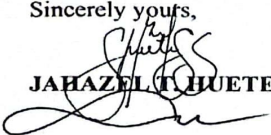
Good day!

The undersigned are 3rd year students of Misamis University, Ozamiz City taking up Bachelor of Science in Radiologic Technology and are currently working on a research study titled "KNOWLEDGE, ATTITUDE AND INTENTION TOWARDS RADIOLOGIC TECHNOLOGY PROFESSION AMONG GRADE 12 STEM STUDENTS." This study aims to determine the relationship between the level of knowledge, attitude, and intention towards Radiologic Technology profession among Grade 12 STEM students. With this, the researchers would like to ask for an approval from your good office to allow them to conduct the study in the basic education department. For the whole month of May 2024, a questionnaire will be given to the identified Grade 12 STEM students to gather the desired data.

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

Thank you very much and God bless.

Sincerely yours,


JAHAZEL T. HUETE

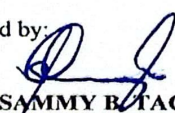
DAYNE C. CABAUG


JB AUDIE C. ELCARTE

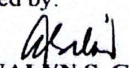

NJL. TECSON


JESAIL MILES P. TORRES
Researchers

Noted by:


DR. SAMMY B. TAGHOY
Research Adviser

Approved by:


DR. ANALYN S. CLARIN
Principal, Basic Education Department

APPENDIX E Statistical Computations

Frequency Table (Respondents' Profile)					
Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	189	59.6	59.6	59.6
	Male	128	40.4	40.4	100
	Total	317	100.0	100.0	
Previous Hospital Admissions					
Valid	No	70	22.1	22.1	22.1
	Yes	247	77.9	77.9	100
	Total	317	100.0	100.0	
Exposure to Radiographic Procedures					
Valid	No	149	47.0	47.0	47.0
	Yes	168	53.0	53.0	100
	Total	317	100.0	100.0	

Descriptive Statistics			
	N	Mean	Std. Deviation
Knowledge	317	2.7205	.52518
Attitude	317	2.9177	.48990
Intention	317	2.4000	.61972
Valid N (listwise)	317		

APPENDIX E Cont'

Correlations				
		Knowledge	Attitude	Intention
Knowledge	Pearson Correlation	1	.626**	.482**
	Sig. (2-tailed)		.000	.000
	N	317	317	317
Attitude	Pearson Correlation	.626**	1	.586**
	Sig. (2-tailed)	.000		.000
	N	317	317	317
Intention	Pearson Correlation	.482**	.586**	1
	Sig. (2-tailed)	.000	.000	
	N	317	317	317
**. Correlation is significant at the 0.01 level (2-tailed).				

Knowledge Descriptive Statistics			
	N	Mean	Std. Deviation
1.I am familiar with the field of Radiologic Technology.	317	2.9495	.73604
2.I understand the educational requirements for pursuing a career in Radiologic Technology.	317	2.7382	.71880
3.I am aware of the job opportunities available in Radiologic Technology.	317	2.8265	.73660
4.I am aware of the different specialties within the field of Radiologic Technology.	317	2.7192	.75476
5.I know the roles of Radiologic Technologist in healthcare system.	317	2.8360	.81417
6.I know the potential risk and safety measures associated with diagnostic imaging procedures.	317	2.8233	.79974

7.I can accurately describe the key responsibilities of a Radiologic Technologist.	317	2.5804	.76141
8.I can identify the imaging techniques used in radiology department.	317	2.4353	.79142
9.I can distinguish Radiologic Technologists from other healthcare professionals.	317	2.7224	.79868
10.I can explain the significance of Radiologic Technology in the diagnosis and treatment of medical conditions.	317	2.5741	.84101
Valid N (listwise)	317		

Attitude Descriptive Statistics			
	N	Mean	Std. Deviation
1.I find Radiologic Technology to be an intriguing profession.	317	3.1293	.68366
2.I feel at ease with the prospect of becoming a Radiologic Technologist.	317	2.5647	.73330
3.I derive satisfaction from assisting and interacting with patients.	317	2.7697	.70753
4.Radiologic Technology presents significant challenges that I am prepared to tackle.	317	2.7603	1.38228
5.The field of Radiologic Technology offers opportunities for international travel.	317	2.9274	.68282
6.I perceived Radiologic Technology as a stable and secure career choice.	317	2.9211	.74424
7.The salary prospects in Radiologic Technology are reasonable.	317	2.9937	.69807
8.Witnessing patients' recovery through radiologic intervention is deeply gratifying.	317	3.0379	.71500
9.I believe I can secure employment in Radiologic Technology regardless of my location.	317	2.7192	.75476
10.Radiologic Technology is a profession open to individuals of all gender.	317	3.3533	.71695
Valid N (listwise)	317		

Intention Descriptive Statistics			
	N	Mean	Std. Deviation
1.I am interested in pursuing a career in Radiologic Technology.	317	2.3691	.82642
2.I see myself specializing in a specific area within Radiologic Technology in the future.	317	2.2650	.77489
3.I enjoy studying courses related to Radiologic Technology.	317	2.3754	.82356
4.I am determined to contribute to advancements and innovations in Radiologic Technology throughout my career.	317	2.5174	1.34206
5.I believe my character traits align well with the demands of a career in Radiologic Technology.	317	2.4858	.81362
6.My family encourages me to pursue Radiologic Technology.	317	2.1136	.86036
7.My friends and peers recognize the importance of Radiologic Technology in healthcare.	317	2.8517	.78360
8.My teachers and mentors encourage me to pursue Radiologic Technology.	317	2.1924	.79806
9.Societal trends or media portrayal about the profession influence me to pursue Radiologic Technology.	317	2.4006	.80764
10.Inspiring role models in Radiologic Technology have driven my attention to excel in the field.	317	2.4290	.80279
Valid N (listwise)	317		

APPENDIX E Cont'd

Knowledge about Radiologic Technology Questionnaire

Reliability Statistics	
Cronbach's Alpha	N of Items
.896	10

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1	23.5667	38.254	.641	.885
2	23.9000	37.541	.699	.881
3	23.7333	35.168	.723	.880
4	24.0000	37.241	.775	.877
5	23.6000	37.007	.688	.882
6	23.5333	35.706	.796	.874
7	23.7333	40.409	.605	.889
8	23.8000	41.683	.363	.902
9	23.8000	36.924	.668	.883
10	23.6333	40.654	.455	.897

APPENDIX E Cont'd

Attitude towards Radiologic Technology Questionnaire

Reliability Statistics	
Cronbach's Alpha	N of Items
.929	10

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1	23.3103	35.365	.737	.921
2	23.6207	37.101	.750	.921
3	23.4828	38.044	.592	.928
4	23.5862	38.180	.670	.925
5	23.3103	37.222	.812	.919
6	23.4483	37.042	.701	.923
7	23.3448	37.091	.709	.923
8	23.2069	36.099	.815	.917
9	23.5172	35.830	.745	.921
10	23.1724	33.648	.774	.921

APPENDIX E Cont'd

Intention towards Radiologic Technology Questionnaire

Reliability Statistics

Cronbach's Alpha	N of Items
.932	10

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1	21.2000	36.855	.802	.921
2	21.4000	37.628	.867	.919
3	21.3000	36.769	.800	.921
4	21.1333	37.499	.719	.925
5	21.1000	38.990	.637	.929
6	21.2667	37.237	.665	.928
7	20.7667	38.047	.581	.933
8	21.2000	37.821	.698	.926
9	21.0667	36.478	.739	.924
10	21.0667	35.720	.856	.918

Appendix F Documentations



Appendix G: Grammarly Report, and Turnitin Results



Report: KNOWLEDGE, ATTITUDE, AND INTENTION TOWARD RADIOLOGIC TECHNOLOGY PROFESSION AMONG...

KNOWLEDGE, ATTITUDE, AND INTENTION
TOWARD RADIOLOGIC TECHNOLOGY PROFESSION
AMONG GRADE 12 STEM STUDENTS

by Misamis University

General metrics

52,563
characters

6,979
words

402
sentences

27 min 54 sec
reading
time

53 min 41 sec
speaking
time

Score

99

Writing Issues

1
Issues left

 Critical

1
Advanced

65

APPENDIX G Cont'd

 **turnitin**

Similarity Report ID: oid:28447:69250668

PAPER NAME
HUETE, JAHAZEL T_docx

WORD COUNT
8915 Words

PAGE COUNT
46 Pages

SUBMISSION DATE
Oct 24, 2024 9:15 AM GMT+8

CHARACTER COUNT
56728 Characters

FILE SIZE
69.4KB

REPORT DATE
Oct 24, 2024 9:17 AM GMT+8

● **30% Overall Similarity**

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- 16% Internet database
- Crossref database
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- 7% Publications database
- Crossref Posted Content database

● **Excluded from Similarity Report**

- Bibliographic material
- Manually excluded text blocks

66

CURRICULUM VITAE

PERSONAL DATA

Name	Cabahug, Dayne C.
Address	P-4, Dimaluna, Ozamiz City Misamis Occidental
Date of Birth	October 16, 2002
Father's Name	Deodie L. Cabahug
Mother's Name	Lyn C. Cabahug
Sex	Female
Civil Status	Single
Age	21



Educational Attainment

College:	Misamis University H.T. Feliciano St. Ozamiz City, Misamis Occidental Philippines
Senior High:	Misamis University H.T. Feliciano St, Ozamiz City, Misamis Occidental Philippines June 2021
Junior High:	Ozamiz City National High School Mayor Fernando Bernad Ave, Ozamiz City, Misamis Occidental Philippines March 2019
Intermediate:	Ozamiz City Central School Vicente Ostia Avenue, Ozamiz City, Misamis Occidental Philippines March 2015

PERSONAL DATA

Name	Elcarte, JB Audie C.
Address	4-41c, Pingol St., Tinago, Ozamiz City, Misamis Occidental
Date of Birth	November 25, 2002
Father's Name	Audie S. Elcarte
Mother's Name	Gloria Aurora C. Talatala
Sex	Male
Civil Status	Single
Age	21



Educational Attainment

College:	Misamis University H.T. Feliciano St. Ozamiz City Philippines
Senior High:	Ozamiz City National High School Ozamiz City, Misamis Occidental Philippines June 2021
Junior High:	Ozamiz City National High School Ozamiz City, Misamis Occidental Philippines March 2019
Intermediate:	Sancho V. Capa Elementary School Ozamiz City, Misamis Occidental Philippines March 2015

PERSONAL DATA

Name	Huete, Jahazel T.
Address	P-1, Barangay Sudlon, Molave Zamboanga del Sur
Date of Birth	December 9, 2002
Father's Name	Joey S. Huete
Mother's Name	Indayly T. Huete
Sex	Female
Civil Status	Single
Age	21



Educational Attainment

College:	Misamis University H.T. Feliciano St. Ozamiz City Philippines
Senior High:	Molave Vocational Technical School, Campus 2 Barangay Makuguihon, Molave, Zamboanga del Sur Philippines June 2021
Junior High:	Molave Vocational Technical School, Campus 1 Barangay Maloloy-on, Molave, Zamboanga del Sur Philippines March 2019
Intermediate:	Molave Regional Pilot School- Training Center Barangay Madasigon, Molave, Zamboanga del Sur Philippines March 2015

PERSONAL DATA

Name Torres, Jesail Miles P.
Address P-1 San Isidro, Jimenez
Misamis Occidental
Date of Birth January 26, 2002
Father's Name Jesus M. Torres Jr.
Mother's Name Aileen P. Torres
Sex Male
Civil Status Single
Age 22



Educational Attainment

College: Misamis University
H.T. Feliciano St. Ozamiz City, Misamis Occidental
Philippines
Senior High: La Salle University – Integrated School
Aguada, Ozamiz City, Misamis Occidental
Philippines
July 2021
Junior High: School of Saint John the Baptist
Nacional, Jimenez, Misamis Occidental
Philippines
March 2019
Intermediate: Jimenez Central School
Nacional, Jimenez, Misamis Occidental
Philippines
March 2015

PERSONAL DATA

Name	Tecson, NJ L.
Address	P-4 Aguada, Ozamiz City Misamis Occidental
Date of Birth	July 19, 2002
Father's Name	Joel B. Tecson
Mother's Name	Nylen L. Tecson
Sex	Male
Civil Status	Single
Age	21

**Educational Attainment**

College:	Misamis University H.T. Feliciano St. Ozamiz City, Misamis Occidental Philippines
Senior High:	Misamis University H.T. Feliciano St. Ozamiz City, Misamis Occidental Philippines July 2021
Junior High:	Sinonoc National High School Sinonoc, Sinacaban, Misamis Occidental Philippines March 2019
Intermediate:	Sinacaban Central School Sinonoc, Sinacaban, Misamis Occidental Philippines March 2015

