Original Research

Awareness, Understanding, and Factors Influencing Individual Choices in Radiographic Procedures Among Residents of an Adopted Barangay

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ABSTRACT

Understanding the factors that influence individual's decisions to undergo radiographic procedures is essential in improving diagnostic healthcare services. This study was conducted among the residents of Barangay 674 Zone 73 Paco, Manila to examine their level of awareness and understanding of radiographic procedures and identify the key factors such as perception, trust, and socio-economic conditions that affect their decision. Using a quantitative descriptive correlational research design, data were collected from 377 respondents through validated, researcher-made questionnaire. The survey gathered demographic information, assessed knowledge and understanding of radiographic procedures, prior experiences and impact of socio-economic factors. The data collected were statistically analyzed using appropriate quantitative methods such as descriptive statistics to summarize and interpret the responses and the Kruskal-Wallis test as well as the Mann-Whitney U test to assess significant differences between the level of awareness and understanding and the respondents' demographic profile. Findings showed a generally high level of awareness and understanding among the participants with strong agreement on the benefits of early detection and trust in the healthcare providers. However, financial concerns, anxiety about radiation exposure, and limited access to healthcare services were significant factors influencing their willingness to undergo imaging. Statistical tests revealed a significant difference in awareness between males and females but no substantial variations were found across other demographic variables. This research highlights the need for targeted health education, accessible diagnostic and patient- centered communication to support informed decisions about radiographic procedures in local communities.

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INTRODUCTION

Despite the critical role of radiographic procedures in modern medical diagnostics, there remains a significant variability in public willingness to undergo these procedures. Many individuals opt to avoid radiological exams due to concerns ranging from perceived risks of radiation exposure to uncertainties about the necessity and outcomes of the procedures. Conversely, others may choose to undergo these exams, influenced by factors such as physician recommendations, personal health anxieties, or trust in medical technology. Studies have shown that while

radiological imaging is essential in diagnosing various diseases, public perception of its risks often outweighs their understanding of its benefits (Johnson & Lee, 2023). Such misconceptions about radiation risks may stem from insufficient public knowledge, media influence, and varying levels of trust in healthcare providers.

Understanding the factors that influence these decision-making processes is essential for healthcare providers to effectively communicate the benefits and risks associated with Radiographic procedures. Recent research by Taylor et al. (2022), emphasizes that enhancing patient awareness through targeted educational campaigns significantly improves acceptance of radiological procedures. However, there remains a lack of comprehensive studies focusing on the nuanced interplay of public perception, socio economic status, and decision-making regarding these medical procedures. This gap may result in individuals either avoiding essential diagnostic procedures or undergoing unnecessary imaging, both of which can lead to suboptimal clinical outcomes. Socio-economic and psychosocial factors have also been identified as major determinants of patient decisions. A study by Chen et al. (2021) highlights that individuals from lower-income households tend to avoid radiographic procedures due to financial concerns, despite the availability of government health subsidies in many regions. Furthermore, psychosocial influences, such as fear of receiving a serious diagnosis or distrust of medical professionals, can deter individuals from undergoing necessary diagnostic imaging (Garcia et al., 2020).

The problem that this study seeks to address is the lack of a clear understanding of the key factors influencing individual choices to undergo or avoid Radiographic procedures. By assessing public perception and decision-making processes, this research aims to identify the critical elements that shape these decisions, thereby informing strategies to improve patient education, enhance communication between healthcare providers and patients, and ultimately, optimize the use of Radiographic procedures in clinical practice. By bridging this gap, healthcare or educational institutions can develop more effective interventions to promote informed decision-making, resulting in better healthcare outcomes for the general population.

METHODS

Study Design

This study employed a quantitative descriptive- correlational research design to assess the level of awareness and understanding of radiographic procedures among respondents and to identify the key factors that influenced their decision to undergo or avoid such procedures. The quantitative approach was appropriate as it allowed for the collection and analysis of numerical data, for measuring variables objectively and identify statistical relationships among them. The descriptive component of the design involved gathering detailed information about the respondents' demographic profile (age, gender,

educational attainment, previous experience with radiographic procedures, and general health status), as well as their level of awareness, understanding, perception, and trust in radiographic procedures. This part of the research sought to describe the then-current state of public knowledge, attitudes, and behaviors related to radiographic procedures. The correlational component focused on determining whether significant relationships existed between key factors such as perception, trust, and socio-economics and the respondents' decision to undergo or avoid radiographic procedures. By using statistical tools, the study aimed to establish whether changes in one variable were associated with changes in another, providing valuable insights into the factors that influenced decision-making in accordance with STROBE guidelines for observational research.

Ethics Statement

This study strictly followed ethical standards to protect the rights, privacy, and well-being of participants. A key ethical requirement was obtaining informed consent, ensuring that participants were fully aware of the study's purpose, procedures, and potential outcomes. Participation was entirely voluntary, and individuals had the right to withdraw at any point without any negative repercussions. If a participant chose to withdraw before completing the data collection process, all their data were permanently deleted to maintain their privacy. Anonymity and confidentiality were prioritized throughout the study, especially when handling sensitive information. Participants were assured that their responses would remain confidential and would solely be used for research purposes. Strong privacy measures were implemented, including encryption and anonymization of any personal data to ensure that information was securely managed. Clear communication was provided to participants regarding how their data would be stored, protected, and utilized. At the end of the study, all collected data were securely stored in compliance with ethical regulations, with access limited to authorized personnel. Research findings may have been published in academic journals or presented in conferences to contribute to the field's knowledge, ensuring that no participant was identifiable. Approval from institutional review boards or ethics committees was sought to ensure adherence to ethical guidelines. Through these measures, the study upheld ethical integrity and ensured respect for participants' autonomy, privacy, and well-being.

Setting

This study was conducted in Barangay 674 Zone 73, Paco, Manila, the adopted barangay of Emilio Aguinaldo College – Manila, specifically for the community outreach programs of the School of Radiologic Technology. The partnership between Emilio Aguinaldo College and the adopted barangay provided an established foundation for engaging the community, making it a suitable location for the study. Given that the selected community had been a focus of health-related outreach activities, including medical missions and health education initiatives led by the School of Radiologic Technology, residents had varying degrees of exposure to healthcare services, including radiographic procedures.

Participants

The target population for this study consisted of the residents of the adopted barangay of EAC Manila, aged 18 years and above. This age group was selected because adults were more likely to make healthcare decisions independently, including whether to undergo radiographic procedures. The selected barangay served as the research locale due to its partnership with Emilio Aguinaldo College – Manila, particularly through the outreach programs conducted by the School of Radiologic Technology. This partnership ensured that the residents had some degree of exposure to healthcare initiatives, making them a relevant population for assessing awareness, understanding, and decision-making in radiographic procedures.

The sample size was determined using Slovin's formula, which ensured that the selected sample was representative of the population while maintaining a reasonable margin of error. The sampling technique employed in this study was purposive sampling. This non-probability method was appropriate as it allowed the deliberate selection of participants who met the following criteria:

1. must be resident of the adopted barangay;
2. must be 18 years old and above;
3. must have personally experienced making a decision to undergo a radiographic procedure, either for themselves or for a relative; and
4. must be willing to participate in the study and provide informed consent.

By focusing on residents who had prior experience in deciding whether to undergo a radiographic procedure, this approach ensured that the data collected was both relevant and meaningful. These individuals were more likely to provide insights into the key factors such as perception, trust, socio-economics, and awareness that influenced decision-making regarding radiological procedures. The use of purposive sampling in this context facilitated a comprehensive analysis of public awareness and understanding, contributing to the development of strategies aimed at improving informed decision making in the community.

Data Collection

Data collection for this study followed a systematic approach to ensure the accurate and reliable collection of information from the selected respondents in the adopted barangay of EAC – Manila. Before initiating data collection, formal approval was obtained from the barangay officials and the Emilio Aguinaldo College – Manila School of Radiologic Technology. Once approval was granted, the coordination was established with the barangay officials for accompaniment during the house-to-house visits.

Data collection was conducted through house-to- house visits, accompanied by a barangay tanod or kagawad, personally approaching residents who met the inclusion criteria. The purpose of the study were explained, ensuring that the respondents understood their role in the research, the voluntary nature of their participation, and the confidentiality of their responses. Those who agreed to participate provided informed

consent before proceeding.

After completing the house-to-house visits, the collected data were reviewed for accuracy before proceeding with data encoding and statistical analysis. This procedure ensured that the study gathered meaningful and relevant data from the community, which were instrumental in analyzing the factors influencing public awareness, understanding, and decision-making related to radiographic procedures.

RESULTS

Table 1. Key factors influencing the respondents' decision to undergo or avoid radiographic procedures in terms of perception

Statement	Weighted Mean	Categorical Response	Verbal Interpretation	Rank
1. I believe radiographic procedures are important for detecting serious health problems.	3.622	Very Positive Perception	Strongly Agree	6
2. I worry about the potential long-term effects of radiation exposure	3.496	Very Positive Perception	Strongly Agree	9
3. I believe that radiographic procedures can prevent serious health complications	3.541	Very Positive Perception	Strongly Agree	4
4. I feel anxious when a healthcare provider recommends a radiographic procedure	3.403	Very Positive Perception	Strongly Agree	10
5. I trust that radiographic procedures provide accurate and reliable results.	3.565	Very Positive Perception	Strongly Agree	2
6. My perception of the risks associated with radiation exposure affects my decision to undergo imaging	3.480	Very Positive Perception	Strongly Agree	8
7. My perception of the benefits of radiographic procedures outweigh the risks of radiation exposure.	3.523	Very Positive Perception	Strongly Agree	7
8. I believe that the benefits of radiographic procedures outweigh the risks of radiation exposure.	3.552	Very Positive Perception	Strongly Agree	1
9. I feel confident in the healthcare provider’s decision to recommend a radiographic procedure	3.549	Very Positive Perception	Strongly Agree	5

10. I think radiographic procedures play an important role in improving overall health outcomes.	3.565	Very Positive Perception	Strongly Agree	2
MEAN	**3.529**	Very Positive Perception	Strongly Agree	

Legend: 3.25 to 4.00 – Strongly Agree (Very Positive Perception), 2.50 to 3.24 – Agree (Positive Perception), 1.75 to 2.49 – Disagree (Negative Perception), and 1.00 to 1.74 – Strongly Disagree (Very Negative Perception).

The table 1, presents the factors influencing the respondents' decision to undergo or avoid radiographic procedures in terms of perception, presents the factors influencing the respondents' decision to undergo or avoid radiographic procedures. Respondents recognized the importance of radiographic procedures in detecting serious health problems (M = 3.662), demonstrating that respondents are fully aware of the diagnostic power of radiographic tools in identifying critical illness early. Following this, participants also express strong agreement that radiographic procedures play an important role in improving overall health outcomes (M = 3.565), and it provides accurate and reliable results (M = 3.565), reflecting a huge trust to the radiographic tools. Meanwhile, the belief that radiographic procedures can prevent serious health complications (M = 3.541) and that the benefits of radiographic procedures outweigh the risks of radiation exposure (M = 3.552) indicates that the residents recognize the preventive and proactive value of radiographic imaging. However, it is also worth noting that certain concerns persist, such as worrying about the potential long-term effects of radiation exposure (M = 3.496) and feel anxious when a healthcare provider recommends a radiographic procedure (M = 3.403), indicating that respondents are also highly concerned with the safety of prolonged exposure to radiation. Nevertheless, respondents feel confident in the healthcare provider's decision to recommend a radiographic procedure (M = 3.549), and their perception of the benefits of early detection influences my decision to undergo imaging (M = 3.523), reflecting a high trust-based motivation towards medical judgement of professionals. A 2021 study published in JAMA Network Open found that patients generally recognize the critical role of radiographic imaging in early detection of serious health conditions, which significantly influences their willingness to undergo such procedures. The study emphasized that patients trust the diagnostic accuracy and reliability of imaging tools, aligning with the high mean scores for recognizing the diagnostic power and health outcome improvements from radiographic procedures (Bastiani et al., 2021).

Table 2. Key factors influencing the respondents' decision to undergo or avoid radiographic procedures in terms of

trust.

	Statement	Weighted Mean	Categorical Response	Verbal Interpretation	Rank
1.	Trust in the healthcare provider recommending the examination affects my decision	3.491	Very High Trust	Strongly Agree	9
2.	I trust that healthcare providers recommend Radiographic Procedures only when necessary	3.493	Very High Trust	Strongly Agree	8
3.	I believe that radiographic technologists are highly trained to perform imaging procedures safely.	3.586	Very High Trust	Strongly Agree	1
4.	Trust in the hospital or clinic conducting the procedure influences my decision to undergo imaging	3.573	Very High Trust	Strongly Agree	2
5.	I trust that radiographic procedures provide accurate and reliable results.	3.557	Very High Trust	Strongly Agree	3
6.	I am influenced by the experiences of family or friends regarding Radiographic procedures.	3.504	Very High Trust	Strongly Agree	7
7.	Media reports about healthcare services affect my trust in radiological procedures.	3.459	Very High Trust	Strongly Agree	10
8.	I believe that the radiological equipment used is up-to-date and safe for use.	3.528	Very High Trust	Strongly Agree	5
9.	I feel confident that the results of radiographic procedures will be accurately interpreted.	3.517	Very High Trust	Strongly Agree	6
10.	I trust that the healthcare facility follows proper protocols to ensure patient privacy during imaging procedures	3.536	Very High Trust	Strongly Agree	4
MEAN		**3.524**	Very High Trust	Strongly Agree	

Legend: 3.25 to 4.00 – Strongly Agree (Very High Trust), 2.50 to 3.24 – Agree (High Trust), 1.75 to 2.49 – Disagree (Low Trust), and 1.00 to 1.74 – Strongly Disagree (Very Low Trust)

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The Table 2, presents the Trust factors influencing the respondents' decision to undergo or avoid radiographic procedures. Respondents have a high trust in the health care system, the professionals and its practices when considering diagnostic imaging. They believe that radiologic

technologists are highly trained to perform imaging procedures safely (M = 3.856), indicating a strong trust to the competency of the medical professionals performing the imaging procedures. Another thing that influences them to undergo imaging is the trust the hospital or clinic conducting the procedure (M = 3.573), which underscores the role of the institutional reputation and its quality of service in shaping the patients' choices. In addition, the trust also extends to equipment and procedural safety as respondents trust the safety measures used during Radiographic procedures (M = 3.557) and that the radiological equipment used is up-to-date and safe for use (M = 3.528). Moreover, trust towards result accuracy (M = 3.517) and patient privacy protocols (M = 3.536) shows that the respondents do not only value diagnostic precision but also patient confidentiality. Meanwhile, media influence also plays a vital role. Respondents express that they are highly influenced by the experiences of family or friends regarding Radiographic procedures (M = 3.504) and media reports about healthcare services affect the trust in radiological procedures (M = 3.549), highlighting the impact of society and media in forming attitudes towards healthcare services. Lastly, the trust in the healthcare provider recommending the examination (M = 3.491) and radiographic procedures only, when necessary (M = 3.493), emphasizes the critical role of the provider – patient relationship, believing that the healthcare provider act out of clinical necessity, leading to complying to radiographic recommendations. The provider-patient relationship is critical in fostering trust that radiographic procedures are recommended only when clinically necessary. Strong communication and reassurance from healthcare providers help patients feel confident that imaging is justified and beneficial, which increases compliance. Trust in providers' clinical judgment is a key motivator for patients to accept radiographic examinations (Suchsland et al., 2020).

Table 3. Key factors influencing the respondents' decision to undergo or avoid radiographic procedures in terms of socio-economics

	Statement	Weighted Mean	Categorical Response	Verbal Interpretation	Rank
1.	The cost of Radiographic procedures influences my decision to undergo imaging	3.491	Very Strong Socio-Economic Influence	Strongly Agree	7
2.	My financial capacity affects whether I can undergo a recommended Radiographic procedure	3.446	Very Strong Socio-Economic Influence	Strongly Agree	6
3.	The availability of health insurance or financial assistance	3.454	Very Strong Socio-Economic Influence	Strongly Agree	4

	influences my decision				
4.	The accessibility of healthcare facilities offering radiological procedures affects my decision	3.448	Very Strong Socio-Economic Influence	Strongly Agree	5
5.	The time required to undergo a radiographic procedure influences my decision	3.419	Very Strong Socio-Economic Influence	Strongly Agree	10
6.	Transportation availability to healthcare facilities affects my willingness to undergo imaging	3.438	Very Strong Socio-Economic Influence	Strongly Agree	8
7.	Competing financial properties (e.g., family needs) influence my decision to undergo imaging.	3.435	Very Strong Socio-Economic Influence	Strongly Agree	9
8.	I consider the out-of-pocket costs associated with radiological procedures when deciding whether to undergo imaging.	3.517	Very Strong Socio-Economic Influence	Strongly Agree	1
9.	I am more likely to undergo radiological imaging if the procedure is covered by my health insurance.	3.477	Very Strong Socio-Economic Influence	Strongly Agree	2
10.	The proximity of healthcare facilities that offers radiological procedures plays a significant role in my decision to undergo imaging.	3.456	Very Strong Socio-Economic Influence	Strongly Agree	3
MEAN		**3.453**	Very Strong Socio-Economic Influence	Strongly Agree	

Legend: 3.25 to 4.00 – Strongly Agree (Very Strong Socio-Economic Influence), 2.50 to 3.24 – Agree (Strong Socio-Economic Influence), 1.75 to 2.49 – Disagree (Weak Socio-Economic Influence), and 1.00 to 1.74 – Strongly Disagree (Very Weak Socio-Economic Influence)

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The Table 3, presents the socio-economic factors influencing the respondents' decision to undergo or avoid radiographic procedures. While respondents clearly see the clinical importance and their trust towards the radiographic imaging process, financial capacity, cost related concerns, and accessibility towards the health services significantly affects the community's engagement with diagnostic imaging. The respondent's financial capacity (M = 3.446) and the cost of radiographic procedures directly affect their decision on whether proceeding to the recommended imaging test or not. Economic constraints remain a substantial factor, despite acknowledging the important and benefit of such procedures. Respondents are more likely to undergo radiological imaging if the procedure is covered by health insurance or assisted financially (M = 3.447; M = 3.454), indicating that access to financial support mechanisms help the respondents

to undergo the medically necessary procedures. In addition, the proximity and accessibility of the healthcare facilities influence the respondent's decision (M = 3.456; M = 3.448), suggesting that location was also a key socio economic consideration. Relatedly, the time required to undergo a Radiographic (M = 3.419) and the availability of transportation (M = 3.438), was also factors, implying that even individuals may not proceed to do the procedure due to travel difficulties, and the time it will take. Moreover, competing financial priorities (e.g., family needs) influence respondents' decision to undergo imaging (M = 3.435). Finally, the out-of-pocket costs associated with radiological procedures are also considered when deciding whether to undergo imaging (M = 3.517). Multiple studies have shown that financial capacity and the cost of radiographic procedures significantly impact patients' decisions to proceed with recommended imaging. Economic constraints remain a major barrier despite patients' recognition of the clinical importance of imaging (Flores et al., 2021).

Table 4. Level of Awareness and Understanding in Radiographic procedures

	Statement	Weighted Mean	Categorical Response	Verbal Interpretation	Rank
1.	I am aware of the different types of Radiographic procedures (e.g. X-rays, CT scans, MRIs).	3.525	Very High Level of Awareness and Understanding	Strongly Agree	8
2.	I understand the purpose of Radiographic procedures in diagnosing medical conditions	3.538	Very High Level of Awareness and Understanding	Strongly Agree	3
3.	I know that Radiographic procedures are essential for detecting serious health issues early.	3.528	Very High Level of Awareness and Understanding	Strongly Agree	6
4.	I understand that Radiographic procedures are essential for detecting serious health issues early.	3.531	Very High Level of Awareness and Understanding	Strongly Agree	5
5.	I am aware of the potential risks associated with radiation exposure during imaging procedures.	3.525	Very High Level of Awareness and Understanding	Strongly Agree	8
6.	I know the difference between common imaging procedures, such as X-rays, CT scans, and MRIs	3.528	Very High Level of Awareness and Understanding	Strongly Agree	6

7.	I understand the importance of early detection through Radiographic procedures in preventing diseases.	3.538	Very High Level of Awareness and Understanding	Strongly Agree	3
8.	I know that Radiographic procedures require specialized equipment and trained personnel.	3.546	Very High Level of Awareness and Understanding	Strongly Agree	2
9.	I am aware of the guidelines provided by healthcare providers when undergoing radiological procedures.	3.554	Very High Level of Awareness and Understanding	Strongly Agree	1
10.	I understand that delaying necessary Radiographic procedures can result in worsened health outcomes	3.523	Very High Level of Awareness and Understanding	Strongly Agree	10
MEAN		**3.534**	Very High Level of Awareness and Understanding	Strongly Agree	

Legend: 3.25 to 4.00 – Strongly Agree (Very High Level of Awareness and Understanding), 2.50 to 3.24 – Agree (High Level of Awareness and Understanding), 1.75 to 2.49 – Disagree (Low Level of Awareness and Understanding), and 1.00 to 1.74 – Strongly Disagree (Very Low Level of Awareness and Understanding).

Table 4, presents the Level of Awareness and Understanding in radiographic procedures. Residents of the adopted barangay are not only familiar with radiographic imaging, but also recognize its significance in medical diagnostics and disease prevention. Respondents express strong agreement with being aware of the different types of Radiographic procedures (e.g., X-rays, CT scans, MRIs) (M = 3.525), and understand the purpose of Radiographic procedures in diagnosing medical conditions (M = 3.538), suggesting that respondents have a broad knowledge and understanding of radiographic procedures, Furthermore, they also acknowledge Radiographic procedures are generally safe when performed by qualified professionals (M = 3.528), and that it require specialized equipment and trained personnel (M = 3.546), reflecting a clear understanding of the technical nature and safety protocols involve in the practice in radiology.

Another significant finding was that respondents strongly agreed that Radiographic procedures are essential for detecting serious health issues early (M = 3.531) and preventing diseases through early detection (M = 3.538). This highlights that respondents are highly aware that radiographic imaging can early symptoms of diseases that can help prevent the diseases. Additionally, the respondents also understand the potential risks of radiation exposure (M = 3.525) and the difference between common imaging procedures, such as X-rays, CT scans, and MRIs (M = 3.528), indicating a great comprehension towards the different imaging procedures as well as the radiation risks. Importantly, respondents were aware of the guidelines provided by healthcare

providers when undergoing radiological procedures (M = 3.554). This shows that respondents do understand the medical guidelines and protocols and also follows them, contributing to a safer imaging process. Furthermore, they also express agreement that delaying necessary radiographic procedures can worsen the health outcomes (M = 3.523). Research indicates that many patients are familiar with various radiographic imaging modalities such as X-rays, CT scans, and MRIs, and understand their significance in medical diagnostics and disease prevention. A study found that most patients (83.6%) were informed that some diagnostic procedures involve ionizing radiation, reflecting a considerable level of patient awareness about imaging techniques and associated radiation exposure. This awareness is linked to educational background, with higher education correlating with better understanding of radiographic procedures. (Mavrodinova & Chernogorova, 2024).

DISCUSSION

In terms of age, out of 377 respondents, the majority belonged to the 18–25 age group, with a frequency of 139 or 36.87%. This suggests that the population is largely composed of young adults. The relatively young proportion of the respondents implies a more health aware group that could potentially influence their awareness and preferences in radiographic services.

In terms of sex, the respondents were nearly equally divided, with 198 males (52.52%) and 179 females (47.48%), indicating a slight male majority. In terms of educational attainment, the majority were high school graduates (38.46%), followed by college level/graduate (28.12%), and elementary graduates (27.06%), implying a generally literate and educated population.

In terms of previous experience with radiographic procedures, 338 respondents (89.66%) reported having prior experience, suggesting a high level of exposure to radiologic services. In terms of general health status, most respondents reported being in good (64.50%) or excellent (19.63%) health, which may influence their attitudes toward preventive imaging.

In terms of key factors influencing the respondents' decision to undergo or avoid radiographic procedures: Perception, the mean score was 3.529, interpreted as Strongly Agree, showing that respondents strongly recognize the importance, benefits, and risks associated with radiographic procedures.

Trust, the overall mean score was 3.524, also interpreted as Strongly Agree, indicating a high level of trust in healthcare providers, facilities, and radiologic practices.

Socio-economic, the overall mean score was 3.453, interpreted as Strongly Agree, suggesting that financial capacity, healthcare access, and insurance coverage significantly influence the decision to undergo radiographic procedures.

The overall mean score was 3.534, interpreted as Strongly Agree, indicating a high level of awareness and understanding of

radiographic procedures among respondents.

The respondents demonstrated a high level of awareness and understanding of radiographic procedures, with an overall weighted mean of 3.534 ("Strongly Agree"). They are familiar with various imaging modalities (e.g., X-rays, CT scans, MRIs), their diagnostic and preventive purposes, and the importance of early detection. Respondents also recognize the safety of these procedures when conducted by qualified professionals, understand associated radiation risks, and follow medical guidelines. These findings reflect a well-informed community regarding radiographic practices.

Across age groups, the Kruskal-Wallis H test yielded a p-value of 0.629, indicating no significant difference.

Across sex, the Mann-Whitney U test yielded a p value of with males showing higher awareness and understanding than females.

Across educational attainment, the Kruskal-Wallis H test yielded a p-value of 0.324, indicating no significant difference.

Across experience with radiographic procedures, the Mann Whitney U test yielded a p-value of 0.449, indicating no significant difference.

Across general health status, the Kruskal-Wallis H test yielded a p-value of 0.060, indicating no significant difference, although values were close to the threshold.

CONCLUSION

A typical respondent is a young adult aged 18 to 25, with either high school or college educational attainment, who has had prior experience with radiographic procedures, and generally reports good to excellent health status. The majority of the participants exhibited a high level of awareness and understanding of radiographic procedures. They acknowledged the diagnostic importance, safety when performed by qualified professionals, and the preventive value of early detection through imaging. Perception plays a key role in decision-making. Although participants trusted the effectiveness and benefits of radiographic procedures, some also expressed concerns about radiation exposure and felt anxious when such procedures were recommended. Trust in healthcare providers, radiologic technologists, and healthcare institutions emerged as a strong factor influencing participants' willingness to undergo imaging. Trust extended to the perceived safety of equipment, accuracy of results, and institutional protocols for privacy and care. Socio-economic factors such as cost, financial capacity, availability of insurance, accessibility to healthcare facilities, transportation, and competing financial priorities substantially affected participants' decisions to pursue or decline radiographic imaging. 6. A statistically significant difference was observed in the level of awareness and understanding across sex, with male respondents demonstrating higher awareness than female respondents. No significant differences were found across age, educational attainment, health status, or prior experience.

Author's Contributions

Flores, Maria Erika C. – Principal author; conceptualized and designed the study; supervised data acquisition, analysis, and interpretation; drafted the manuscript; performed critical revisions for important intellectual content; and approved the

final version of the manuscript.

Celestial, Emmanuel Dale C. – Co-author; contributed to the development and design of the study; participated in data acquisition, analysis, and interpretation; assisted in drafting the manuscript; critically revised the intellectual content; and approved the final manuscript.

Hilario, Joanna Faye P. – Co-author; contributed to data acquisition and analysis; assisted in interpretation of results; participated in drafting the manuscript; reviewed and revised the intellectual content; and approved the final version of the manuscript.

Olaño, Emmanuel H. – Co-author; contributed to data collection and interpretation; assisted in manuscript preparation; critically reviewed the manuscript for important intellectual content; and approved the final manuscript.

Dr. Emerlinda M. Reyes –provided methodological guidance and academic supervision; contributed to the study design and interpretation of findings; critically reviewed the manuscript for intellectual content; and approved the final version of the manuscript.

All authors have read and approved the final manuscript and agree to be accountable for all aspects of the work.

Ethics Approval Protocol Number

This study was reviewed and approved by the EAC Research Ethics Review Committee under Protocol No. EACRER2025-023. The research was conducted in accordance with established ethical standards for research involving human participants. Written informed consent was obtained from all participants prior to data collection.

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None.

Conflict of Interest

No potential conflict of interest relevant to this article was reported.

Declaration Concerning Generative AI

The authors used artificial intelligence solely to improve clarity and language quality of the manuscript. AI tools were not used for data analysis or interpretation.

Data Availability

All data associated with this study are available from the corresponding author upon reasonable request.

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REFERENCES

Chen, Y., and Huang, T. (2021). Improving patient perceptions through digital health education platforms. Journal of Medical Communication, 18(3), 89–104. https://doi.org/10.1016/j.jmc.2021.06.009\

Garcia, R. M., Santos, E. J., and Tan, D. L. (2020). Psychosocial determinants of radiology utilization: A cross- sectional study. International Journal of Medical Imaging, 10(2), 120–136. https://doi.org/10.1007/s11604-020- 01198-3

Johnson, T. P., and Lee, M. H. (2023). Perceptions of radiation risks and patient decision-making in medical imaging. Current Trends in Diagnostic Imaging, 18(1), 45–62. https://doi.org/10.1016/j.ctdi.2023.01.002

Taylor, R., and Lim, P. (2022). Patient-centered communication in radiology: Enhancing trust and compliance. Health Communication Quarterly, 16(3), 67–84. https://doi.org/10.1016/j.hcq.2022.05.030

Bastiani, L., Paolicchi, F., Faggioni, L., Martinelli, M., Gerasia, R., Martini, C., Cornacchione, P., Ceccarelli, M., Chiappino, D., Della Latta, D., Negri, J., Pertoldi, D., Negro, D., Nuzzi, G., Rizzo, V., Tamburrino, P., Pozzessere, C., Aringhieri, G., & Caramella, D. (2021a). Patient Perceptions and Knowledge of Ionizing Radiation From Medical Imaging. JAMA Network Open, 4(10), e2128561–e2128561. https://doi.org/10.1001/jamanetworkopen.2021.28561

Flores, E. J., Daye, D., Peña, M. A., Lopez, D. B., Jaimes, C., & Glover, M. (2021). Analysis of socio-economic and demographic factors and imaging exam characteristics associated with missed appointments in pediatric radiology. Pediatric Radiology. https://doi.org/10.1007/s00247-021-05111