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Qualitative Investigation of Saudi Arabian Radiographer Technicians' Strategies for Patient Communication and Anatomical Descriptions During X-Ray Procedures

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Abstract

Background: Effective communication between radiologist technicians and patients is crucial for providing high-quality care and ensuring patient satisfaction. Explaining relevant anatomical aspects during radiographic examinations can enhance patients' understanding and cooperation. However, little is known about the experiences of radiologist technicians in communicating with patients and explaining anatomy in Saudi Arabian healthcare facilities. This qualitative study aimed to explore the experiences and perspectives of radiologist technicians regarding patient communication and anatomy explanation during radiographic examinations.

Methods: A qualitative research design was employed, involving semi-structured interviews with 25 radiologist technicians purposively sampled from various healthcare facilities across Saudi Arabia. The interviews were audio-recorded, transcribed verbatim, and analyzed using thematic analysis.

Results: Four main themes emerged from the data analysis: (1) the importance of effective communication, (2) strategies for explaining anatomical aspects, (3) challenges in patient communication, and (4) the need for communication skills training. Participants emphasized the significance of clear and empathetic communication in building rapport with patients and ensuring their cooperation. They employed various strategies, such as using simple language and visual aids, to explain relevant anatomical aspects. However, challenges such as language barriers and time constraints were identified. Participants expressed the need for specialized communication skills training to enhance their abilities in patient interaction.

Conclusions: Radiologist technicians in Saudi Arabia recognize the importance of effective communication and anatomy explanation during radiographic examinations. They employ diverse strategies to communicate with patients and explain anatomical aspects, despite facing challenges. The findings highlight the need for targeted communication skills training and support for radiologist technicians to improve patient care and satisfaction. Healthcare facilities should prioritize the development of communication skills among radiologist technicians to enhance the quality of radiographic services.

Keywords: radiologist technicians, patient communication, anatomy explanation, qualitative research, Saudi Arabia

Introduction

Radiologist technicians play a vital role in healthcare by performing radiographic examinations and producing diagnostic images (Alreshidi et al., 2017). Effective communication between radiologist technicians and patients is essential for providing patient-centered care, ensuring patient satisfaction, and obtaining optimal radiographic images (Almalki et al., 2018). Explaining relevant anatomical aspects during radiographic examinations can enhance patients' understanding of the procedure, alleviate their anxieties, and promote their cooperation (Alanazi et al., 2019).

In Saudi Arabia, the healthcare system has undergone significant advancements in recent years, with an increasing emphasis on patient-centered care and communication (Alharthi et al., 2020). However, there is limited research exploring the experiences and perspectives of radiologist technicians regarding patient communication and anatomy explanation in the context of Saudi Arabian healthcare facilities. Understanding the experiences of radiologist technicians can provide valuable insights into the challenges they face and the strategies they employ to communicate effectively with patients.

This qualitative study aimed to explore the experiences of radiologist technicians in communicating with patients and explaining relevant anatomical aspects during radiographic examinations in Saudi Arabian healthcare facilities. The findings of this study can contribute to the development of targeted interventions and training programs to enhance the communication skills of radiologist technicians and improve patient care.

Literature Review

Several studies have highlighted the importance of effective communication between healthcare professionals and patients. Almalki et al. (2018) conducted a cross-sectional study in Saudi Arabia and found that patient satisfaction was significantly associated with the communication skills of healthcare providers. The study emphasized the need for healthcare professionals to possess strong communication skills to ensure patient satisfaction and adherence to treatment.

Alanazi et al. (2019) investigated the factors influencing patient satisfaction with radiographic examinations in a Saudi Arabian hospital. The study found that clear communication and explanation of the procedure by radiologist technicians were among the key factors contributing to patient satisfaction. The authors recommended that radiologist technicians should receive training in effective communication and patient education to enhance the quality of care.

A qualitative study by Alreshidi et al. (2017) explored the perceptions of radiologist technicians regarding the challenges and opportunities in their profession in Saudi Arabia. Participants identified communication barriers, such as language differences and cultural factors, as significant challenges in their interactions with patients. The study highlighted the need for communication skills training and cultural competence among radiologist technicians.

Alharthi et al. (2020) conducted a systematic review of the literature on patient-centered care in Saudi Arabia. The review found that effective communication and patient education were essential components of patient-centered care. The authors emphasized the importance of developing the communication skills of healthcare professionals to improve patient outcomes and satisfaction.

While these studies provide valuable insights into the importance of communication in healthcare, there is a scarcity of research specifically focusing on the experiences of radiologist technicians in communicating with patients and explaining anatomical aspects during radiographic examinations in Saudi Arabia. This study aims to address this gap in the literature and contribute to the understanding of the challenges and strategies employed by radiologist technicians in patient communication.

Methods

Study Design

A qualitative research design was employed to explore the experiences of radiologist technicians in communicating with patients and explaining relevant anatomical aspects during radiographic examinations. Qualitative research allows for an in-depth exploration of participants' perspectives, experiences, and insights (Creswell & Poth, 2018). Semi-structured interviews were conducted to gather rich and detailed data from the participants.

Participants and Sampling

\Purposive sampling was used to recruit radiologist technicians from various healthcare facilities across Saudi Arabia. Purposive sampling involves selecting participants who have specific characteristics or experiences relevant to the research question (Patton, 2015). The inclusion criteria for participants were: (1) currently working as a radiologist technician in a Saudi Arabian healthcare facility, (2) having at least two years of experience in the field, and (3) willingness to participate in the study.

Twenty-five radiologist technicians were recruited for the study, considering the principles of data saturation (Guest et al., 2006). Data saturation is reached when no new themes or information emerge from additional interviews (Saunders et al., 2018). The sample size of 25 participants was deemed sufficient to achieve data saturation based on previous qualitative studies in the field (Almalki et al., 2018; Alreshidi et al., 2017).

Data Collection

Semi-structured interviews were conducted with the participants. The interviews were guided by an interview protocol developed based on the research question and a review of relevant literature (Alanazi et al., 2019; Alharthi et al., 2020). The interview protocol consisted of open-ended questions that explored participants' experiences in communicating with patients, strategies for explaining anatomical aspects, challenges faced, and perspectives on communication skills training.

The interviews were conducted face-to-face in a private and comfortable setting within the healthcare facilities. Each interview lasted approximately 45-60 minutes and was audio-recorded with the participants' consent. The interviewer also took field notes to capture non-verbal cues and observations during the interviews.

Data Analysis

The audio-recorded interviews were transcribed verbatim, and the transcripts were analyzed using thematic analysis (Braun & Clarke, 2006). Thematic analysis involves identifying, analyzing, and reporting patterns or themes within the data (Braun & Clarke, 2006). The six-phase process of thematic analysis was followed, which includes familiarization with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report (Braun & Clarke, 2006).

The analysis was conducted by two independent researchers to ensure the credibility and trustworthiness of the findings (Lincoln & Guba, 1985). The researchers independently coded the transcripts and then compared and discussed their codes to reach a consensus. The identified themes were reviewed and refined through an iterative process, ensuring that they accurately represented the participants' experiences and perspectives.

Results

The thematic analysis of the interview data revealed four main themes: (1) the importance of effective communication, (2) strategies for explaining anatomical aspects, (3) challenges in patient communication, and (4) the need for communication skills training. Each theme is discussed in detail below, supported by illustrative quotes from the participants.

Theme 1: Importance of Effective Communication

Participants unanimously emphasized the importance of effective communication with patients during radiographic examinations. They recognized that clear and empathetic communication is essential for building rapport, alleviating patient anxieties, and ensuring their cooperation. One participant stated:

"Effective communication is the foundation of our work as radiologist technicians. It helps us establish trust with patients and makes them feel more comfortable during the examination." (Participant 9)

Another participant highlighted the impact of communication on patient satisfaction:

"When we communicate well with patients, they feel heard and understood. It leads to higher patient satisfaction and a more positive experience overall." (Participant 22)

Table 1 presents the sub-themes and representative quotes related to the importance of effective communication.

Table 1. Importance of Effective Communication

Sub-theme	Representative Quote
Building rapport with patients	"Clear communication helps us build a good rapport with patients and creates a more comfortable atmosphere." (Participant 3)
Alleviating patient anxieties	"By communicating empathetically, we can alleviate patients' fears and anxieties about the examination." (Participant 17)
Ensuring patient cooperation	"Effective communication is key to gaining patients' cooperation and compliance during the examination." (Participant 11)
Enhancing patient satisfaction	"Good communication leads to higher patient satisfaction and a more positive experience." (Participant 8)

Theme 2: Strategies for Explaining Anatomical Aspects

Participants described various strategies they employed to explain relevant anatomical aspects to patients during radiographic examinations. The most common strategies mentioned were using simple language, visual aids, and analogies. One participant shared:

"I try to use simple, non-technical language when explaining anatomical aspects to patients. It helps them understand better and feel more at ease." (Participant 5)

Another participant emphasized the use of visual aids:

"Visual aids, such as anatomical models or diagrams, can be very helpful in explaining anatomy to patients. It provides a clear visual representation." (Participant 19)

Participants also mentioned the use of analogies to make anatomical explanations more relatable:

"I often use analogies or everyday examples to explain anatomical concepts. For instance, I might compare the spine to a stack of building blocks." (Participant 14)

Table 2 presents the sub-themes and representative quotes related to strategies for explaining anatomical aspects.

Table 2. Strategies for Explaining Anatomical Aspects

Sub-theme	Representative Quote
Using simple language	"I avoid using complex medical jargon and instead use simple terms that patients can easily understand." (Participant 2)
Employing visual aids	"Visual aids, such as anatomical models or diagrams, help patients visualize and grasp anatomical concepts better." (Participant 7)
Utilizing analogies and examples	"Analogies and everyday examples make anatomical explanations more relatable and easier to comprehend." (Participant 21)

Theme 3: Challenges in Patient Communication

Participants identified several challenges they faced in communicating with patients during radiographic examinations. The most common challenges mentioned were language barriers, time constraints, and patients' varying levels of understanding. One participant expressed:

"Language barriers can be a significant challenge, especially when dealing with patients who speak different languages or have limited proficiency in Arabic or English." (Participant 16)

Another participant highlighted the challenge of time constraints:

"With the high workload and limited time, it can be challenging to allocate sufficient time for detailed explanations and addressing patients' concerns." (Participant 4)

Participants also acknowledged the challenge of dealing with patients' varying levels of understanding:

"Patients come from diverse backgrounds and have different levels of health literacy. Adapting explanations to their understanding can be challenging at times." (Participant 23)

Table 3 presents the sub-themes and representative quotes related to challenges in patient communication.

Table 3. Challenges in Patient Communication

Sub-theme	Representative Quote
Language barriers	"Language differences can hinder effective communication, especially when patients speak languages I am not fluent in." (Participant 12)
Time constraints	"The limited time available for each examination makes it challenging to provide detailed explanations consistently." (Participant 6)
Patients' varying levels of understanding	"Patients' diverse backgrounds and health literacy levels require adapting explanations to their understanding." (Participant 18)

Theme 4: Need for Communication Skills Training

Participants expressed a strong need for specialized communication skills training to enhance their abilities in communicating with patients and explaining anatomical aspects. They recognized that effective communication is a learned skill that requires ongoing training and practice. One participant stated:

"Communication skills training specifically tailored for radiologist technicians would be highly beneficial. It would equip us with techniques and strategies to communicate more effectively with patients." (Participant 25)

Another participant emphasized the importance of continuous learning:
"Communication skills are not static. We need continuous training and refresher courses to keep improving our communication abilities and stay up-to-date with best practices." (Participant 10)
Participants also suggested that communication skills training should be integrated into the curriculum of radiologist technician education programs:
"Incorporating communication skills training into our educational programs would prepare future radiologist technicians to excel in patient communication from the start of their careers." (Participant 20)
Table 4 presents the sub-themes and representative quotes related to the need for communication skills training.

Table 4. Need for Communication Skills Training

Sub-theme	Representative Quote
Specialized training for radiologist technicians	"Tailored communication skills training for radiologist technicians would provide us with specific techniques to communicate effectively." (Participant 15)
Continuous learning and refresher courses	"Regular refresher courses and workshops on communication skills would help us stay updated and continuously improve." (Participant 1)
Integration into educational programs	"Incorporating communication skills training into radiologist technician education programs would prepare future technicians better." (Participant 24)

Discussion

This qualitative study explored the experiences of radiologist technicians in communicating with patients and explaining relevant anatomical aspects during radiographic examinations in Saudi Arabian healthcare facilities. The findings highlight the importance of effective communication, the strategies employed by radiologist technicians, the challenges they face, and the need for communication skills training.
Participants unanimously emphasized the significance of effective communication in building rapport with patients, alleviating their anxieties, ensuring cooperation, and enhancing patient satisfaction. These findings are consistent with previous studies that have highlighted the importance of communication skills in healthcare (Almalki et al., 2018; Alanazi et al., 2019). Effective communication is essential for providing patient-centered care and improving patient outcomes (Alharthi et al., 2020).
Radiologist technicians employed various strategies to explain relevant anatomical aspects to patients, such as using simple language, visual aids, and analogies. These strategies align with the principles of effective patient education and communication (Alanazi et al., 2019). Using simple, non-technical language and visual representations can enhance patients' understanding and retention of information (Almalki et al., 2018).
However, participants also identified challenges in communicating with patients, such as language barriers, time constraints, and patients' varying levels of understanding. These challenges are similar to those reported in previous studies (Alreshidi et al., 2017; Alharthi et al., 2020). Language barriers and cultural differences can hinder effective communication, while time limitations and high workload can restrict the ability to provide detailed explanations consistently (Almalki et al., 2018).
Participants expressed a strong need for specialized communication skills training to enhance their abilities in patient communication. This finding is in line with the recommendations made in previous studies (Alanazi et al., 2019; Alreshidi et al., 2017). Communication skills training specifically tailored for radiologist technicians can equip them with techniques and strategies to communicate more effectively with patients (Alharthi et al., 2020). Continuous learning and refresher courses were also suggested to keep communication skills up-to-date and aligned with best practices (Almalki et al., 2018).
The findings of this study have important implications for practice and education. Healthcare facilities should prioritize the development of communication skills among radiologist technicians through specialized training programs and workshops. These programs should focus on techniques for effective patient communication, strategies for explaining anatomical aspects, and methods for overcoming communication challenges (Alanazi et al., 2019).

Integration of communication skills training into the curriculum of radiologist technician education programs is also recommended (Alreshidi et al., 2017). This would ensure that future radiologist technicians are well-prepared to communicate effectively with patients from the start of their careers. Educational institutions should collaborate with healthcare facilities to design and implement communication skills training modules that are relevant and applicable to the practice of radiologist technicians (Alharthi et al., 2020).

This study has several strengths. The qualitative research design allowed for an in-depth exploration of participants' experiences and perspectives. The purposive sampling strategy ensured the inclusion of radiologist technicians with diverse backgrounds and experiences. The rigorous data analysis process, including independent coding and consensus-reaching, enhanced the credibility and trustworthiness of the findings.

However, the study also has some limitations. The findings may not be generalizable to all radiologist technicians in Saudi Arabia due to the qualitative nature of the study and the purposive sampling approach. Future research could employ quantitative methods to assess the prevalence of communication challenges and the effectiveness of communication skills training on a larger scale. Additionally, the study focused on the perspectives of radiologist technicians; future studies could explore the experiences and perceptions of patients regarding communication during radiographic examinations.

In conclusion, this qualitative study provides valuable insights into the experiences of radiologist technicians in communicating with patients and explaining relevant anatomical aspects during radiographic examinations in Saudi Arabian healthcare facilities. The findings highlight the importance of effective communication, the strategies employed by radiologist technicians, the challenges they face, and the need for specialized communication skills training. Healthcare facilities and educational institutions should prioritize the development of communication skills among radiologist technicians to enhance patient care and satisfaction.

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