

السنة الأولى - العدد (ديسمبر ٢٠٢٣)

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للبحوث والدراسات

السنة الأولى؛ العدد: (ديسمبر، ٢٠٢٣)

Awareness of radiologic technologists in Najran hospitals about the patient's phobia during medical imaging procedure and how to handle it

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مستخلص

مقدمة: الرهاب خوف مبالغ فيه وغير عقلائي ، وقد يواجه تقني الأشعة مرضى الرهاب أثناء إجراء التصوير الطبي. الرهاب له أنواع مختلفة مثل رهاب الأماكن الضيقة ، رهاب المثقبات (رهاب الإبرة) ، رهاب الخوف ، ورهاب الإشعاع.

الهدف: قياس مستوى معرفة تقني الأشعة حول رهاب المريض أثناء التصوير الطبي وكيفية التعامل معه.

المنهجية: أجريت هذه الدراسة المقطعية المستعرضة القائمة على الاستبيان بين تقني الأشعة في مستشفيات نجران. وزعت الدراسة استبياناً إلكترونياً على تقني الأشعة في مستشفيات نجران لجمع المعلومات حول معرفة المشاركين وتصوراتهم بشأن رهاب المريض أثناء إجراء التصوير

الطبي وكيفية التعامل معه. شارك في هذه الدراسة ٨٢ تقني إشعاعي يعملون في مستشفيات مختلفة بنجران.

النتيجة: من بين ٨٢ تقني إشعاعي استجاب لهذه الدراسة، كان هناك ٥٤,٩% ذكور و ٤٥,١% إناث ومؤهلات تعليمية لمعظمهم كانت درجة البكالوريوس (٦٤,٦%). وجدت هذه الدراسة أن قلة من التقنيين الإشعاعيين (١٨,٣%) يعرفون كل الرهاب الذي تم تقديمه لهم مما يعني أن الغالبية العظمى لديهم نقص في المعرفة في أنواع الرهاب المختلفة والتي لها تأثير مباشر في كيفية تعامل تقني الأشعة مع المرضى الذين يعانون من الرهاب أثناء إجراء الصورة الطبية.

الكلمات المفتاحية: الرهاب - التصوير الطبي

ABSTRACT

Introduction: phobia is an exaggerated and irrational fear, and the radiological technologist may encounter patients with phobia during medical imaging procedure. Phobia has different types such as Claustrophobia, Trypanophobia (Needle phobia), Phonophobia, and Radiophobia .

Aim: to measure the level of knowledge of the radiological technologists about the patient phobia during medical imaging and how to handle it.

Methodology: this questionnaire based cross-sectional study was conducted among radiologic technologists in Najran hospitals. The study distributed an electronic questionnaire to radiologic technologists in Najran hospitals to collect information about the participants' knowledge and perceptions regarding the patient's phobia during the medical imaging procedure and how

to handle it. Total of 82 radiological technologists who work in various hospitals in Najran were participated in this study.

Result: Among 82 radiological technologist responded to this study, there were 54.9% male and 45.1% female and education qualification for most of them were Bachelor's degree (64.6%) level. This study find that the a few of radiological technologists (15.9%) knew all the phobia that were presented to them which mean the vast majority have a lack in knowledge in the different type of phobia and that have a direct effect in how the radiological technologists deal with patients with phobia.

Keywords: phobia - medical imaging.

Medical Imaging:

Medical imaging plays an important role in the patient's journey through illness and disease. For many conditions and ailments, medical imaging, whether it is a simple chest X-ray or a complex scan, plays a pivotal role in the diagnosis and therapeutic management of illness. Diagnostic imaging may refer to a range of medical procedures, including radiographic and nuclear medicine procedures, Magnetic Resonance Imaging (MRI), Computed Tomography (CT), Nuclear medicine (NM), Ultrasound (US). (1)

The amount of imaging it have been rising rapidly, leading to a larger percentage of people being exposed to these different imaging modalities. (2)

Due to this, the patient and patient care can often be ignored or overlooked, as the focus of the imaging technician is directed largely towards the technology and not the patient . (3)

In recent times it has been identified that there is a role for qualitative research in medical imaging, as the paradigm shifts from technology focused to patient focused research . Equally important is the need to identify issues relating to the patient in medical imaging. (4).

Medical imaging generates a unique interface between high-level technology and the patient, and has been described as a human-technical science (5).

This is a meeting of two worlds, with technology and machines used to improve patient outcomes on the one side, and the social encounter with the patient and provision of holistic care on the other, and can both be considered important and complimentary to each other .

Phobia:

As reported (6), A phobia is an exaggerated and irrational fear, here are three types of phobia recognized by the American Psychiatric Association (APA) .

These include:

A-Specific phobia,

B-Social phobia, or social anxiety

C-Agoraphobia.

Specific phobias:

are extreme and persistent fears of certain objects, situations, or activities, or persons (7). with specific phobia do not present for treatment, it is a remarkably impairing condition (8). According to (9), The following subcategories can be used to classify specific phobias:

- Situational type such as enclosed spaces
- Blood injection injury type such as needles
- Natural environment type like heights
- Animals like the fear of spiders.

Aim and Objective:

Aim:

Measuring the level of knowledge of the radiological technologists about the patient phobia during medical imaging and how to handle it.

Objectives:

- Measure the awareness of the radiological technologists about patient's phobia.
- Assessment how well the radiological technologists handle patient phobia.
- Raise the intellectual level of radiological technologists about patient's phobia and how to handle it.

Hypothesis

The radiological technologists are aware of the different types of phobias that is coming from the patient, and they know how to handle it.

Research Questions

- RQ1 : Does the radiologic technologists have awareness about the patient's phobia during medical imaging ?
- RQ2 : Does the radiological technologists know how to deal with a patient who has a phobia during medical imaging?
- RQ3 : Does the radiological technologists knowledge about the types of phobias?

Background:

Frequently radiologic technologists see patient with concerns and opposition to receiving radiography. (10.11.12). The use of diagnostic radiation leads to definitive and timely Diagnosis, guides particular healthful interventions, is cost effective, leads to more efficient medical treatment, and reduces unnecessary hospital admissions and surgeries(13). patients waiting to undergo diagnostic radiological procedures may feel a high emotional experience, characterized by a degree of anxiety that is different for each patient, and can be responsible for a strong psychophysical stress and impairment during the examination.(14)

Claustrophobia:

is a specific phobia where one fears closed spaces.(15). Whilst this anxiety and phobia may result from the physical nature of the scanner design,

Claustrophobic patients may feel feelings of suffocation and confinement in relatively tight spaces like the bore of an MRI scanner, for these patients to complete an MRI, it can also be due to the noise related to the imaging process, having to lie flat for extended periods of time, or simply the fear of the unknown or what the results may show. Despite the technological advances, there are many ways a patient can be supported to manage their anxiety and phobia related to undergoing a scan

Trypanophobia (Needle phobia)

Is the overwhelming, extreme fear of medical procedures that involve needles(16). That affects at least 10% of the population, Because persons with needle phobia typically avoid medical care, this condition is a significant impediment in the healthcare system, Needle phobia is a condition that has become an increasingly important issue in medicine because of the modern reliance on injections and blood testing ,People with trypanophobia have intense anxiety at the sight or thought of a procedure involving a needle.

Phonophobia:

A persistent, abnormal, and unjustified fear of sound is called phonophobia. Phonophobia may likewise be connected with, brought about by, or mistook for hyperacusis, which is a strangely solid response to sound, hyperacusis can be

caused by lesions in the peripheral or central auditory system. Some kinds of sounds can invoke fear in most people like sound of the machine of MRI

Radiophobia:

has become shorthand for a sentiment that regards any fear of ionizing radiation as an emotional gut reaction largely disconnected from scientific facts.(17)

In the last decades, there has been an increasing request of radiological examinations , Due to the increase in life expectancy of the general population, spreading and increasing adherence to screening programs, and the effectiveness of medical and surgical therapies that increased the prevalence of oncological diseases, there has been an exponential increase in the number of radiological examinations performed for screening, diagnosis, and follow-up of diseases However, these procedures may often lead to emotional impairment of patients, as anxiety that appears to a common feeling , Therefore, patients waiting to undergo diagnostic radiological procedures may feel a high emotional experience, characterized by a degree of anxiety that is different for each patient, and can be responsible for a strong psychophysical stress and impairment during the examination. (18)

Study Design:

This questionnaire-based cross-sectional study was conducted among radiologic technologists in Najran hospitals.

The study distributed an electronic questionnaire to gather information on the participants knowledge and perceptions concerning patient's phobia during medical imaging procedure.

Area of Study:

The field of study is increase the awareness radiologic technologists about the phobia , with focus how to handle the patient during medical imaging.

Study Population and Sampling:

- **The Population:**

The target population for this study consisted of radiological technologists in Najran hospitals.

- **Inclusion Criteria:**

A sample of radiological technologists in Najran hospitals was selected to participants in the study.

- **Exclusion Criteria:**

Other medical staff .

- **Data Collection and Instrumentation:**

Data Collection was carried out using an electronic questionnaire, which was distributed to the study participants. The questionnaire was gathering information on the following:

- Gender
- Educational Qualification
- working experience
- Hospital working
- department working

Questionnaire :

The questionnaire was included a mix of closed question, multiple choice questions, and scale questions to assess participants awareness the patient phobia during medical imaging and how to handle it.

The questionnaire consisted of two sections:

- **The first section:**

required participants to provide the following demographic information: gender, educational qualification (diploma, bachelor's , master or doctoral degrees) , work experience (years), department, workplace.

- **The second section:**

which consists of questions about phobias and its types, assessed awareness about phobias during medical imaging and how to handle it.

- **The link was distributed to radiological technologists in Najran hospitals by social media**

<https://forms.gle/PYm5r1fUiytb8pYU6>

Result:

The most of the participants were male (54.9%) and the female were (45.1%), (Figure1) . The most of participants were bachelor's degree (64.6%) then diploma degree (25.6%) finally master or doctoral degree (9.8%), (Figure2). a lot of the participants work at x-ray (47.6%) followed by, computed tomography (22%) then, the magnetic resonance imaging (17.1%) afterwards, the nuclear medicine (7.3%) finally, the ultrasound was (6.1%), (Figure3).

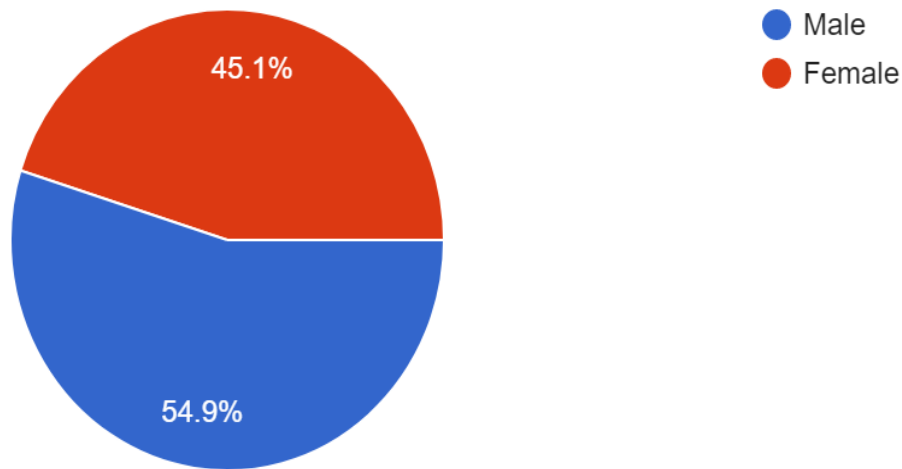


Figure 1

Explained the gender of participants.

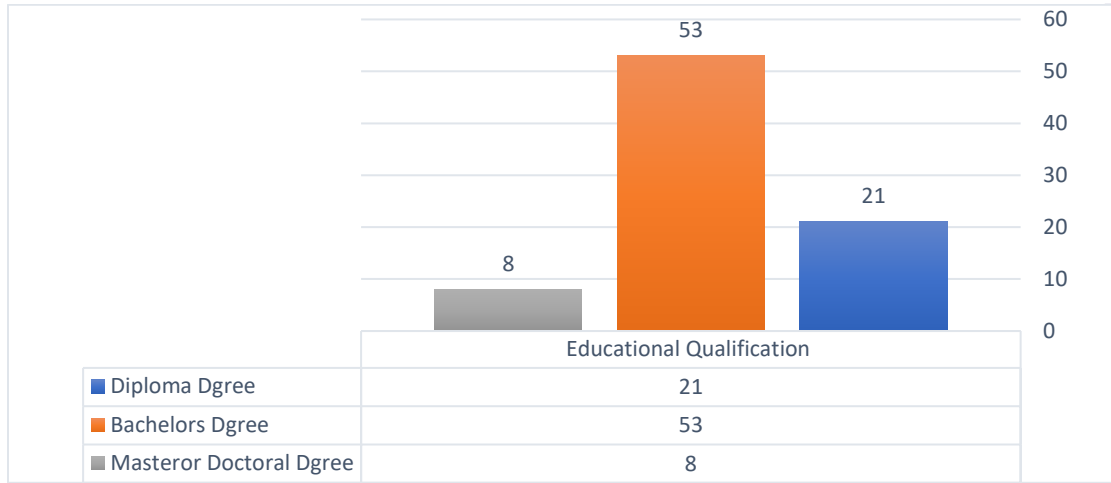


Figure 2

The educational qualification

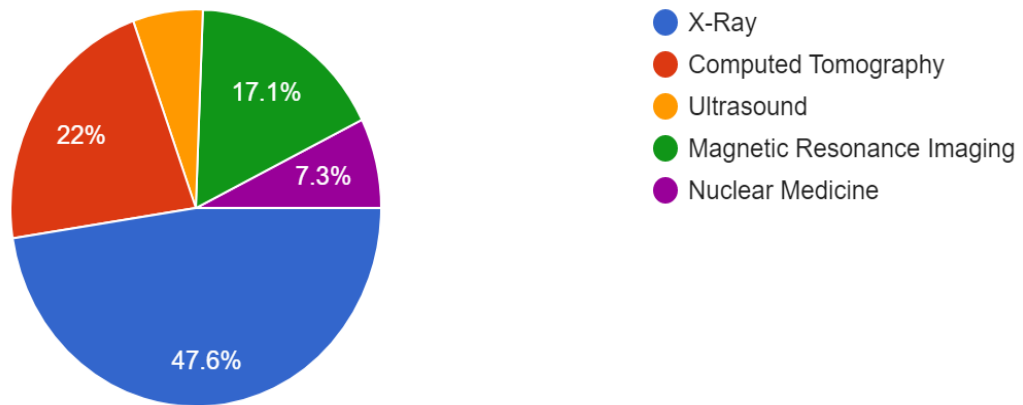


Figure 3

type of department

the working experience of participants the most of them have working experience more than 5 years (65.9%) followed by, those who worked from 3 to 5 years (20.7%) after them, who has experience from 1 to 3 years (11%) finally, those who have experience less than a year (2.6%), (Figure4) . .

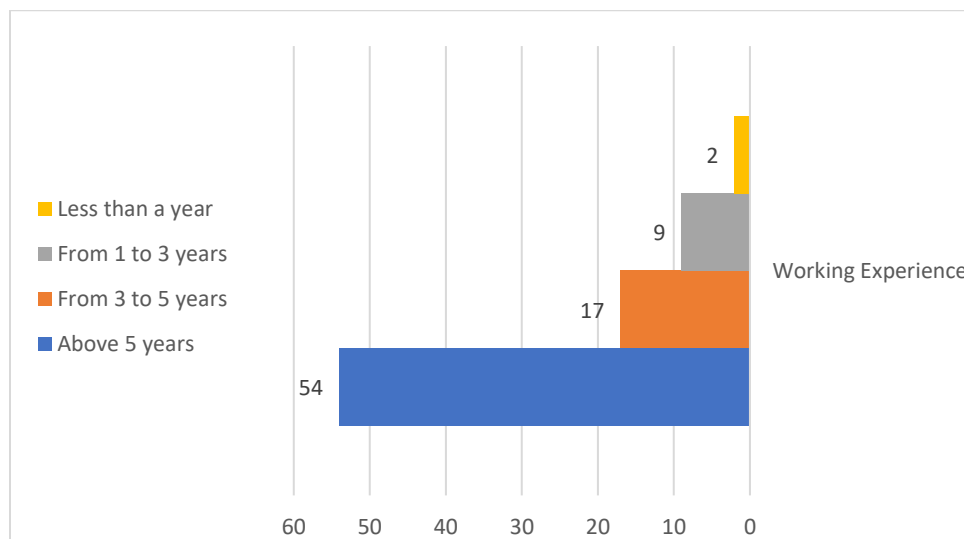


Figure 4

Working Experience

The hospital where they work at, most of them work in Najran General Hospital (28%) next those, who work at King Khalid Hospital (24.4%) followed by, Armed Forces Hospitals (17.1%) then, Maternity and Pediatric Hospital (13.4%) after them, Najran University Hospital (8.5%) Finally, private hospitals (8.5%), (Figure 5).

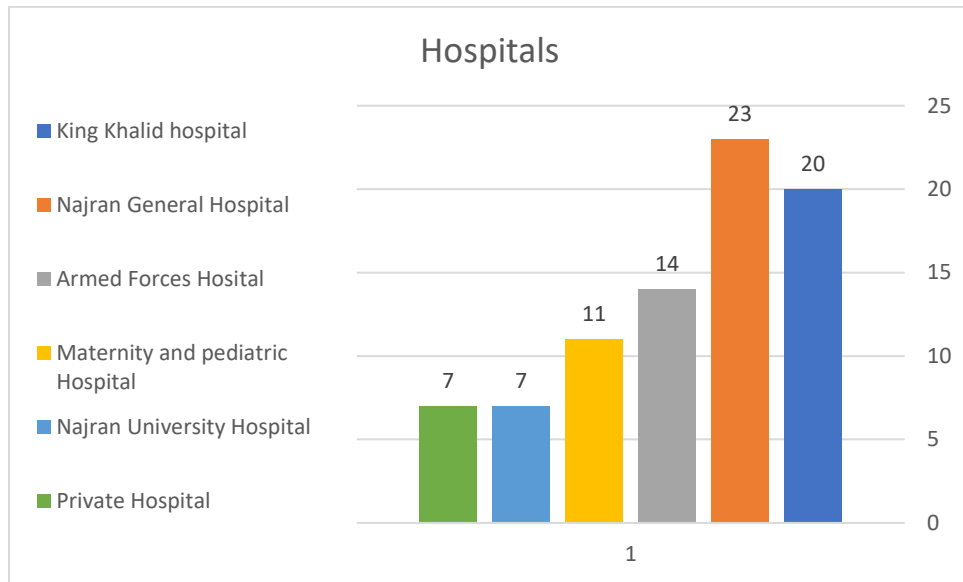


Figure 5

Hospital where they work at

The most of the radiological technologists know the meaning of a phobia (97.6%) and a few of them did not know about it (2.4%). (92.7%) of radiological technologists have encountered patient with phobia and (7.3%) of them did not faced patient with phobia, (Figure 7).

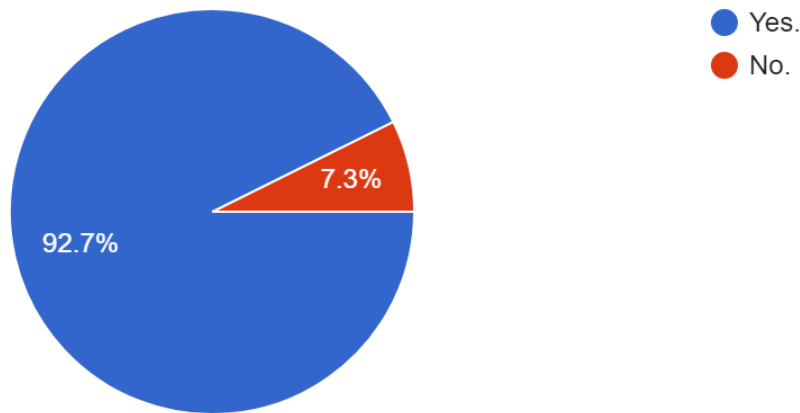


Figure 7

Have encountered patient with phobia?

Most of the participants with a percentage of (64.6%) have not received any training on how to manage patient phobia during medical imaging procedure , and the other of participants (35%) have received training on how to manage patient phobia during medical imaging procedure. most of the participants 62 of the total 82 of percentage (75.6%) think awareness helps overcome phobias. A minority of participants (8.5%) think the noise of MRI machine effect patient's phobia.

Regarding dealing with patient with phobia rate yourself from 1 to 5, were 5 mean you know how to deal the patient who has phobia, the most of radiological technologists rate themselves 4 from 5 (34.1%) and (4.9%) rate themselves the lowest 1 from 5.

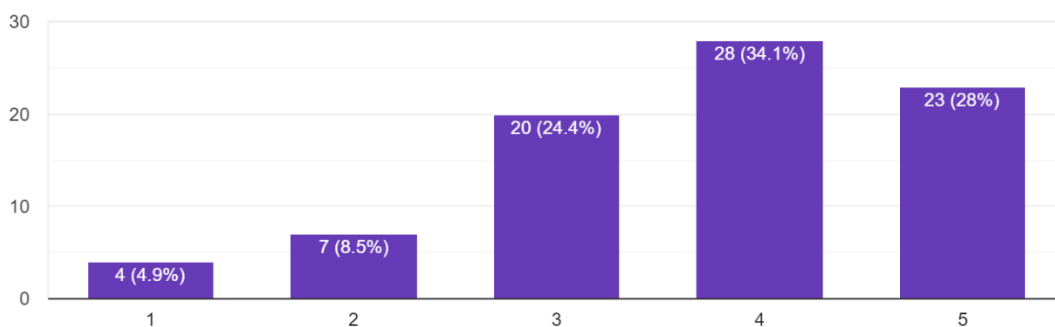


Figure 9

How do you rate your dealing with a patient who has a phobia?

Most of the participants know about claustrophobia (45.1%). (15.9%) of participants know all type of phobias that were mention in the questionnaire. (9.8%) know claustrophobia and trypanophobia. (8.5%) know radiophobia and claustrophobia. (7.3%) know claustrophobia and radiophobia and trypanophobia. (3.7%) know only radiophobia. (3.7%) known claustrophobia, trypanophobia and nosocomophobia. (2.4%) know nosocomophobia ,(1.2%) know only about trypanophobia.

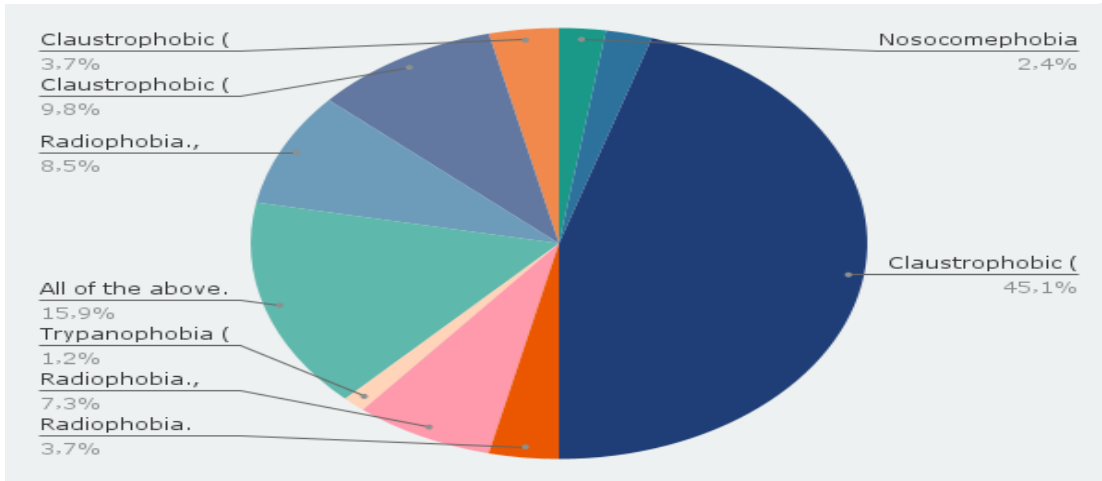


Figure 12

Which of the following phobia do you know?

Most of the participants encountered patients with phobia a few times a week (36.6%), were the least of them encountered patient with phobia almost everyday (14.6%).

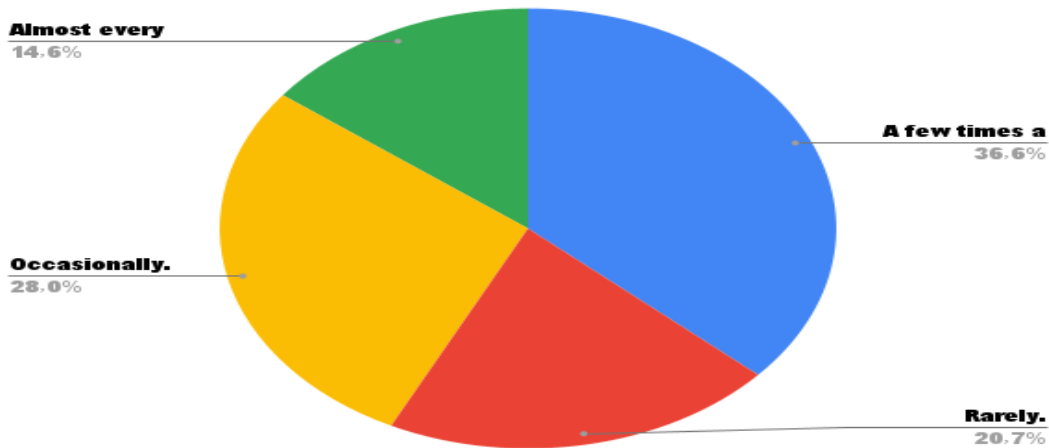


Figure 13

How often do you encounter patient with phobia during medical imaging procedure?

43 of the participant feel the phobia is a significant problem that impact medical imaging procedures, were 34 of them feel it is a minor inconvenience that does not affect the overall outcome, the rest feel it is not considered problem, (Figure 14).

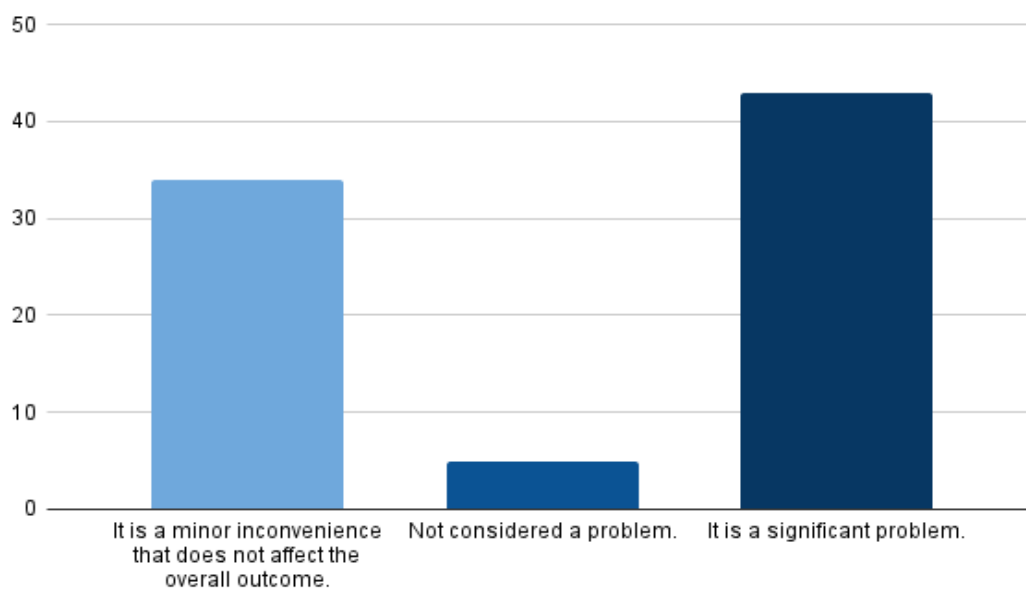


Figure 14

How do you feel about the impact of patient phobia on medical imaging procedure?

The most of the participants see it is very important to address patient phobia during medical imaging 50 count, just one of them see it not important to address patient phobia during medical imaging were the rest see it is important.

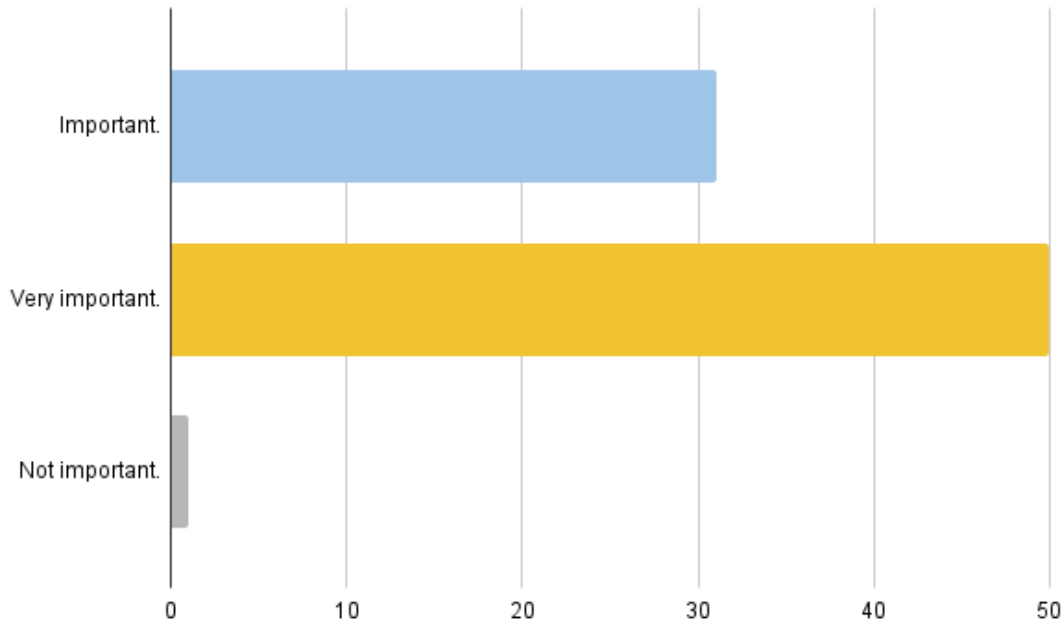


Figure 15

How important do you think it is to address patient phobia during medical imaging?

54 of the participants think the patient who more than 22 years develops more phobia during medical imaging, 12 of them think patient who between 18 and 22 develops more phobia, 10 think patients between 12 and 15, the lowest of the participants think the patient between 15 and 18 develops more phobia during medical imaging, (Figure 16).

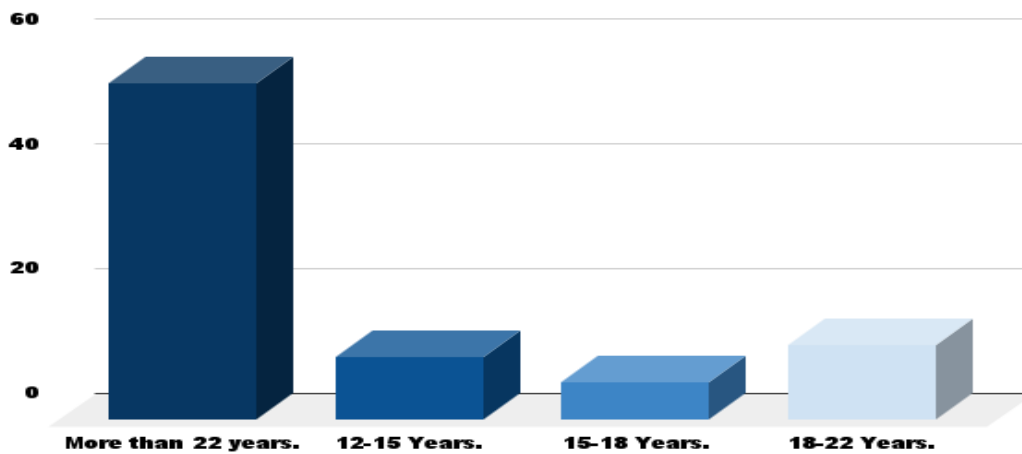


Figure 16

Which age develops more phobia?

Almost three-quarters of the participants find most patient phobia in MRI, were one quarter find patient phobia in other medical imaging procedure.

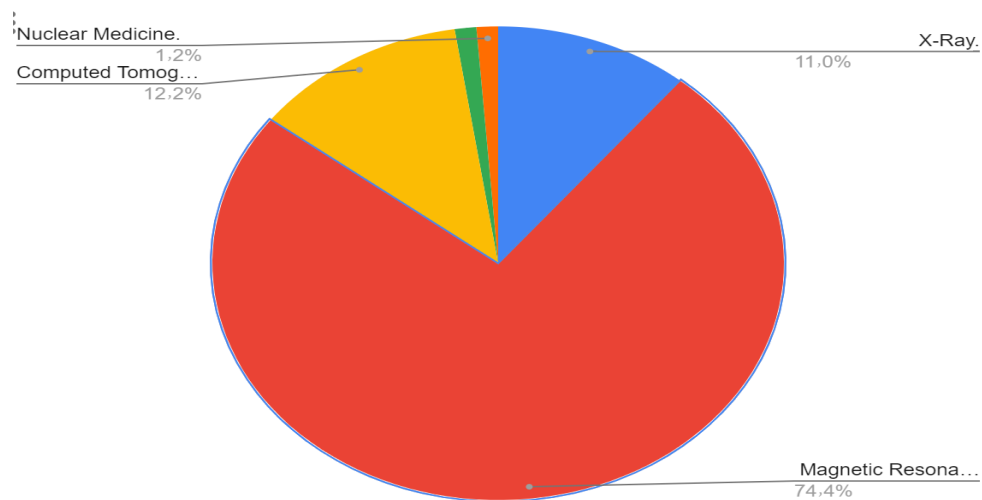


Figure 17

Through your experience, which of the following type of medical imaging do you find that patient has most phobia of them ?

Discussion:

In this preliminary descriptive study awareness was assessed by measure knowledge of radiologic technologists towards patient phobia during medical imaging procedure and how to handle it in Najran hospitals, Saudi Arabia. A total of 82 radiologic technologists responded to this study from them there were male (54.9%) and the female were (45.1%). Most of them are bachelor's degree holders (64.6%) in education.

Radiographers consider themselves to be well attuned at recognising the social signs of possible anxiety in patients (19). The rate of claustrophobic reactions was significantly lower with the recent MR scanner which has low noise (20). The result we have shows that the radiological technologists have awareness about patient phobia. The most of radiological technologist think the age that develop phobia more is a patients more than 22 years old, but there are number of answer which tend to think otherwise which is concern because according to this previous study, those undergoing head-first examinations, female and middle-aged patients were significantly more likely to develop.(20)

The vast majority of the participants knew claustrophobia without other types of phobia, and encounter patients with phobia a few times a week

but their lack of knowledge in the types of phobias that were presented to them this may affect their dealings with the patient.

Negative thoughts play a major role in maintaining fears because the perception of threat, even when no threat really exists, naturally generates fear. Therefore, learning to correct misperception of threat in very helpful for overcoming excessive fears(21).so in our result most pf participant answer correctly to the related question according to this previous study

The participants think it is very important to address patient phobia during medical imaging assuming that the patient phobia cause a significant problem on the medical imaging procedure. The following study indicate it is possible to conclude that patient anxiety can pose problems that may impede the process of the MRI examination Anxiety may cause the patient to move during the examination, which may affect the acquired image quality and the diagnostic accuracy (22).

Conclusion:

Medical imaging plays an important role in the patient's journey and they including radiographic and nuclear medicine procedures, Magnetic Resonance Imaging (MRI), Computed Tomography (CT), Nuclear medicine (NM), Ultrasound (US). Frequently radiologic technologists see patient with concerns and opposition to receiving radiography. A phobia is an exaggerated and irrational fear and one of the phobia categories is specific phobia which has many types such as claustrophobia which can be identify as the fear of close spaces, trypanophobia that means extreme fear of medical procedures that involve needles, Phonophobia can be known as a persistent, abnormal, and unjustified fear of sound, and finally radiophobia may know as any fear of ionizing radiation. According to the result it is possible to conclude that the awareness of radiological technologist decent, but there is a lack of knowledge in different types of phobia that may encounter the radiological technologists, so there is should be more attention to this.

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