

Assessment of the Level of Satisfaction of Radiological Sciences Students with their Clinical Training at Taif Hospitals

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Keywords

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Abstract

Background: In the system connected to the healthcare industry, radiological technology frequently plays a crucial function. The clinical and practical training sessions are deemed to be crucial for helping students build their interpersonal or soft skills in addition to helping them improve their knowledge and abilities related to medical imaging and radiological technology, so this study aims to determine the satisfaction level of Radiological Sciences Department students with clinical training sessions inside Radiology departments at Taif hospitals. **Material and method:** A questionnaire designed specifically for this study based upon review of the literature to determine the student's satisfaction level during their clinical practice sessions using google form and distributed electronically to all 3rd and 4th years and internship students and distributed in different WhatsApp groups via the internet to collect data for this study. **Result:** The study was conducted amongst 101 students who were pursuing undergraduate (3rd and 4th academic year) & postgraduate (internship year) from radiological sciences department, college of applied medical sciences at Taif university. **Results:** Majority of the participants (77%) were from 20 to 23 years age group. (64.4%) were females. The mean age of the sample was 21 years. (93.1%) of the students were satisfied and felt that clinical practice met requirements and was effective. **Conclusion:** The individual level wise comparison of satisfaction for clinical practice at Radiology departments in Taif hospitals accounted to be satisfied to some extent for majority of the students.

1. INTRODUCTION:

One of the learning possibilities that gives students in-person encounters with patients and peers is clinical education. Additionally, it promotes professional networking and offers students learning opportunities other than those found in traditional colleges. [1]

The application of radiological technologies and medical imaging is crucial to the health care system. A medical imaging professional needs a variety of degrees, from a certificate to a doctorate. [2] The most crucial component of paramedical education is clinical practice, especially in

radiology, where students basically learn all scientific concepts while working with actual patients in a real-world setting. This helps them develop their practical skills and treat patients according to scientific principles. [3]

Determining the clinical abilities and effectiveness of students is one of the most difficult tasks for professors and trainers in internship programs. It is crucial to make an effort to reduce the gap between theoretical and clinical knowledge in educational and clinical settings [3], in order to improve the training of skilled medical students [4].

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Al-Mahmoud et al.^[5] made a similar argument, asserting that while the internship process might be exciting for students, it can also bring substantial problems for students at various levels. One of these difficulties is the requirement to develop and display clinical and communication abilities.

To improve the training of professional nurses, efforts must be made to reduce the theoretical gap between academic and practical information settings.^[4] Efforts to reduce the gap between theory and practice can also serve to enhance professionalism training in an environment that emphasizes action.^[4]

From the third year forward, radiography students at their university will be required to participate in practical sessions using comparable equipment under the supervision of teaching faculties and staff in order to receive hands-on training. The proficiency level that qualified radiography students would exhibit depends on how well clinical training was implemented.^[6]

Clinical education activities in the field of radiography are typically included in undergraduate or graduate degree programs. With the educational support of a qualified practitioner who works for the service or agency, it typically entails students leaving the walls of the institution and engaging in real-world patient or client activities in a health or welfare and educational context.^[7]

Unsatisfaction can result in the unhappiness of students. Change their places of learning and even their interest in education, which in general can have a poor effect on education. This, of course, would have a poor influence on the potential standard of clinicians.^[8]

Usually, the studies related to the attitude of students towards their overall education^[9] or attitude towards a particular topic^[10] are popular, but in relation to radiology students practical and clinical practice experience specially in Taif region is rarely examined. Since this study is probably the first of its kind applied to Taif radiology students, so this study aims to determine the satisfaction level of Radiological Sciences Department students

with clinical training sessions inside Radiology departments at Taif hospitals, and to evaluate the degree to which academic support influences their clinical practice at Taif hospitals.

2. Material and methods: Study type, sample and duration:

This was a cross sectional study, conducted electronically for all students at third, fourth and internship year of radiological sciences department, college of applied medical sciences, Taif university in the duration from Sep 2022 till Oct 2022. The survey was organized using a google form and circulated online through various WhatsApp groups.

Well-structured questionnaire was designed specifically for this study based up on review of literature, to determine the student's satisfaction degree during their clinical practice sessions using google form and distributed electronically to all 3rd and 4th years and internship students and distributed in different WhatsApp groups via the internet to collect data for this study. The questionnaire consists of three parts with Likert response scale ranging from one (strongly dissatisfied) to five (strongly satisfied), the 5-point scale was later transformed during data analysis to 2-point response scale first one from (1 to 2) represent (Dissatisfied), and from (3 to 5) represent (Satisfied), then overall satisfaction of male and female students with the four studied domains is presented.

First part contains; Socio-demographic data of the study sample (age, gender, academic level and clinical training site).

Second part contains; Divided into 3 categories contain satisfaction level of the students towards hospital regulations and efficacy of clinical practice inside Radiology departments, satisfaction with clinical practice duration and time schedule of training, and satisfaction regarding assistant offered for students by staff inside Radiology departments at hospitals in Taif city.

Statistical analysis: SPSS version 23 was used to code, enter, and analyze the data. Descriptive

statistical analysis was used to determine frequency distribution to obtained demographic variables in tables and graphs with cut point of p value (0.05).

3. Ethical consideration:

Research proposal was approved from Ethical Committee of Radiological sciences department, Taif University. No personal data of any participants will be published.

4. Result:

This study was aim to evaluate how satisfied and happy Radiological Sciences department student of

Taif university were with their clinical practice at Taif hospitals. For each question, one was the lowest and five was the highest possible score of their satisfaction.

A total of 101 students were agree to participate in this study, their ages ranged from 17 years old to 25 years with mean age of 21 year. 65 (64.4%) were female and 36 (35.6%) were male. The female: male ratio was 1.8:1. (41.6%) of them in the fourth academic year, (35.6%) in the third year, while (22.8%) in the internship year, as in fig (1).

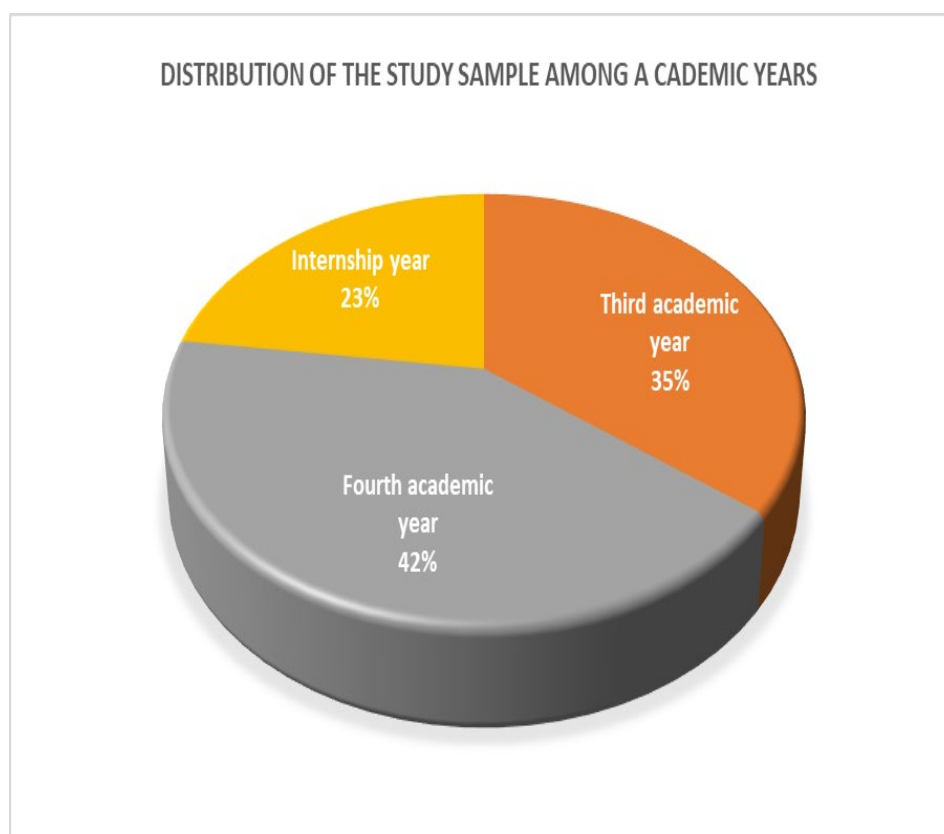


Fig (1): Distribution of the study sample among academic years. (n=101)

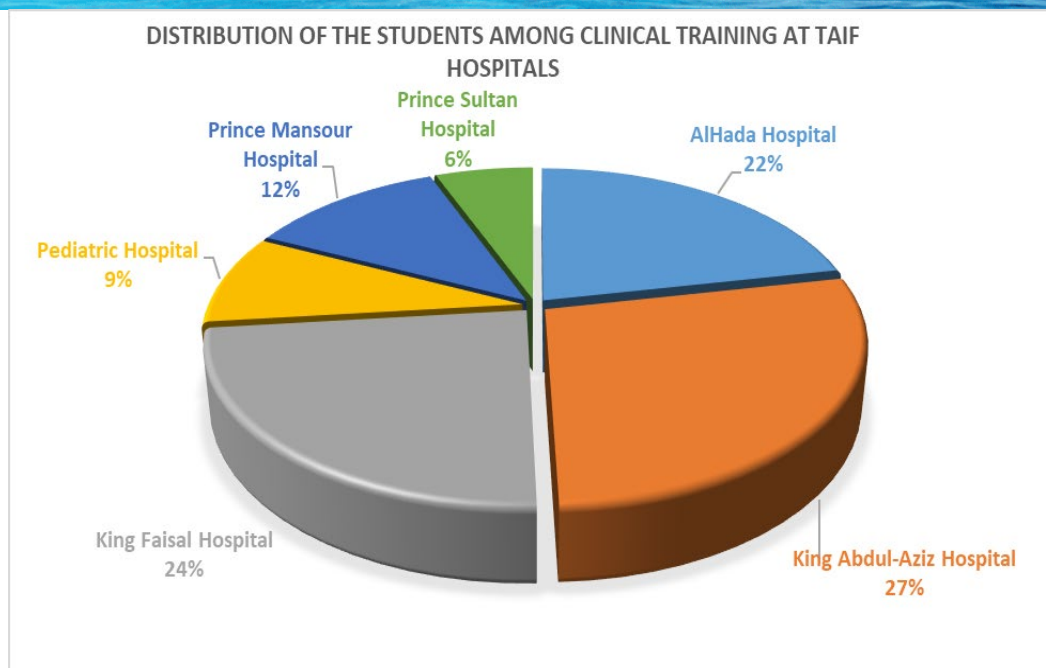


Fig (2): Distribution of the study sample among the clinical training hospitals.(n=101)

Table (1): Satisfaction of the study sample towards regulations and efficacy of clinical practice inside Radiology departments.

Item	Satisfied	Dissatisfied
1. Satisfaction about the way radiology department policies are put into clinical practice in the hospital	94 (93.1%)	7 (6.9%)
2. The availability and accessibility of services for adequate support during practical training from the radiology staff in hospital	93 (92.1%)	8 (7.9%)
3. Satisfaction with the number of members of faculty staff according to the number of students during their clinical practice in the hospital	94 (93.1%)	7 (6.9%)
4. Assistance to students for clinical practice from Radiology Departments staff	95 (94.1%)	6 (5.9%)
Overall score	94 (93.1%)	7 (6.9%)

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Table (2): Satisfaction of the study sample with the given chances of clinical practice training inside Radiology departments at hospitals.

Item	Satisfied	Dissatisfied
1. The given chance to make a decision regarding imaging technique procedures correctly during clinical practice in hospital:	87 (86.1%)	14 (13.9%)
2. The given chance to work alone and confidently under supervision in hospital		
3. The given chance to communicate with clinical practice workmate	87 (86.1%)	14 (13.7%)
4. The methods of practical evaluation at the end of the clinical training easily in hospital	94 (93.1%) 82 (81.2%)	7 (6.9%) 19 (18.8%)
Overall score	87.5 (86.6%)	13.5 (13.4%)

Table (3): Satisfaction of the study sample with the clinical practice duration and time schedule of training in the Radiology departments.

Item	Satisfied	Dissatisfied
1. The number of weeks scheduled for clinical practice at each section in the hospital (US, CT, MRI...etc.)	75(74.3%)	26 (25.7%)
2. Satisfied with number of hospitals and practice duration in relation to number of students	85 (84.2%)	16 (15.8%)
3. Satisfaction with the clinical practice training duration	83 (82.2%)	18 (17.8%)
4. The overall satisfaction regarding clinical practice at different sections at radiology department	93 (92.1%)	8 (7.9%)
Overall score	84 (83.2%)	17 (16.8%)

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Table (4): Shows a significant correlation between study sample gender* Satisfaction about the way radiology departments policies are put into clinical practice in the hospital

Gender	Satisfaction about the way radiology departments policies are put into clinical practice in the hospital					Total	Asymp. Sig. (2-sided)
	1	2	3	4	5		
Male	0	1	3	9	23	36	.010 ^c
Female	2	4	13	21	25	65	.008 ^c
Total	2	5	16	30	48	101	

Table (5): Shows a significant correlation between study sample gender * Adequate staff support to the students during practical training inside Radiology departments.

Gender	Adequate staff support to the students during practical training inside Radiology departments.					Total	Asymp. Sig. (2-sided)
	1	2	3	4	5		
Male	0	0	1	13	22	36	.002 ^c
Female	1	7	12	18	27	65	.006 ^c
Total	1	7	13	31	49	101	

Table (6): Shows crosstab between radiological modality* Assistance to students during clinical practice from Radiology department staff.

Radiological modality	Assistance to students during clinical practice from radiology department staff					Total	Asymp. Sig. (2-sided)
	1	2	3	4	5		
Computed Tomography	0	1	9	13	15	38	.06 ^c
Emergency radiology unit	0	0	0	0	1	1	
General Radiography	0	0	5	16	20	41	
MRI	0	0	0	1	4	5	
Nuclear Medicine	0	0	0	0	1	1	

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Ultrasound	1	4	2	5	3	15	
Total	1	5	16	35	44	101	

4. Discussion:

The degree to which trainees are satisfied is a key indicator of the quality of medical education, although few studies have measured this variable [15,16].

A total number of 101 student were included in this study, their ages ranged from 17 years old to 25 years with mean age of 21 year. 65 (64.4%) were female and 36 (35.6%) were male. The female: male ratio was 1.8:1. (41.6%) of them in the fourth academic year, (35.6%) in the third year, while (22.8%) in the internship year, distributed to perform their clinical training in Radiology departments at six teaching hospitals at Taif city, KSA, as in figs (1&2). The importance of clinical practice highlighted by Boggis et al [17], who stated that 'To practice radiography, students must take part in a variety of clinical situations'.

Regarding overall satisfaction level of the students towards regulations and efficacy of clinical practice inside Radiology departments, 94 (93.1) of the students were highly satisfied, as in table (1) , while overall satisfaction with the clinical practice duration and time schedule of training in the Radiology departments was 87.5(86.6%), while 13.5 (13.4%) were not satisfied, and the satisfaction from the clinical practice duration inside Radiology departments was 84 (83.2%) and dissatisfied students were 17 (16.8%) from the study sample, as in tables (2&3) and this in concordance with previous study [18] reported that (61.7%) respondents agreed to the fact that they felt as though the time spent in the clinical room was sufficient and satisfying. This proposed that the time allotted for student clinical placements should be extended in order to give them more time to familiarize themselves with the clinical setting and obtain the necessary skills. Nevertheless, Penman and Oliver [19] point out that there is ongoing disagreement regarding the number of hours required for clinical.

Also, this study revealed that most of the students were highly satisfied and enjoyed the given chance to make a decision regarding imaging technique procedures and communication with their clinical practice workmate during clinical practice sessions, as in table (2). These findings supported by one study [20] reported that ' The students successfully completed their placement while also having fun and working as a team with very helpful and available personnel who supported their learning despite the few hurdles. As a result, the students had a positive learning experience during the placement. However, studies have shown that not all practice locations can give students a comfortable environment in which to learn.

Regarding gender satisfaction, this study reported that male students were slightly more satisfied than female students with (97.2% and 91%), with significant correlations of p value (0.001 & .008) respectively, as in table (4). This was supported by another study by Almohiy et al [2] revealed that radiography students at our university and hospital were performing at very good, satisfactory levels.

Overall, nearly all male and female responders (97.9%) shown a high degree of comprehension regarding the significance and importance of clinical placement. Students recognize the value of clinical experience as a necessary tool for acquiring the skills and knowledge necessary to enhance the accuracy of all diagnostic procedures [18]. This leads to the conclusion that improving clinical skills depends on having access to the right practice opportunities and supervision.

Regarding correlation between gender and satisfaction regarding staff supporting to the students during practical training inside radiology departments, current study showed that overall satisfaction levels between male and female was (92.1%) with significant correlation of (.002&.006), respectively, as in table (5).

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Regarding distribution of the students to the radiological modalities (General radiography, US, CT, MRI, NM...etc.) and their satisfaction level from the assistance offered for them from the working staff, this study showed that general radiography students 41 (40.6%) were highly satisfied during clinical practice from assistance, collaboration and support offered for them by the Radiology departments staff, with significant correlation value of p (.006), as in table (6). This can be justified as a result of the students' new enrollment in the clinical training and they need continuous support, while one study done at Taif by Serwah et al ^[21] reported that 'The area of helping students and learning settings had the lowest satisfaction rates (51.4%)'. Also, they agree with our study regarding; Both male and female students in the current study were essentially equally happy with the scope of help and appropriateness of learning environments, and about 56.2% of their students were satisfied with the present work's program domain and training schedule, with male students being slightly more satisfied than female students.

Another study done at King Saud – Riyadh agree with our findings and revealed that highest satisfaction was related to adequacy and accessibility of learning resources at hospital . These findings reflect students' demand to learn and to take challenging tasks and also their readiness to go for different hospitals during their training " ^[22]. Also, she highlighted that 'It is vital to go to other hospitals for training to have different clinical experiences' received the highest mean satisfaction score among the various clinical posting factors'.

However, according to Steves ^[23], the primary cause of student technicians' discontent with their clinical training is the absence of monitoring and assessment while in the hospital training, as well as not enough training time and the absence of ongoing student input and working together with the teachers.

Studies about students' attitudes toward their education in general ^[9] or toward a particular subject ^[10] are frequently conducted, while studies

about students' attitudes toward their practical and clinical experiences are uncommon, so finding students satisfaction in clinical training sessions is a unique expertise of our study.

5. Conclusion:

This study revealed that; majority of the students were satisfied with the individual level-by-level comparison of their satisfaction with clinical training inside Radiology departments at different hospitals at Taif city, with most of their satisfaction mean scores being above 3. By examining the students' happiness with their radiography training sessions, our study performs a crucial function in the field of radiological technology, as first study performed at Taif city. It might be possible to employ a realistic assessment of the prospective arguments for developing a systematized preceptorship training program. So, feedback should be given to them frequently to give students the best chance to get better during the clinical experience.

6. Acknowledgement:

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7. Informed consent

All participants in the study provided their written, informed permission voluntarily to participate.

8. Conflicts of interest

There is no conflict of interest.

9. Funding

This study has not received any external funding.

10. Data and materials availability

All data associated with this study are present in the paper.

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