ISSN: 0975-1556

Available online on www.ijpcr.com

International Journal of Pharmaceutical and Clinical Research 2021; 13(1); 51-58

Original Research Article

Survey About Student's Satisfaction During Training Sessions in Radiography at Teerthanker Mahaveer University Moradabad

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Received: 05-01-2021 / Revised: 09-02-2021 / Accepted: 20-02-2021
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Conflict of interest: Nil

Abstract

Background: Radiological Technology tends to play an integral role in the system associated with the healthcare industry. The practical and clinical training sessions contributing to the professional learning in medical education is also regarded as an essential pedagogical approach that covers the students into healthcare professionals. Apart from assisting the students in enhancing their knowledge and skills pertaining to radiological technology and medical imaging, the clinical and practical training sessions are found to serve as essential means for developing the interpersonal or soft skills in them. **Aim:** This study aims at determining the satisfaction of students during Practical and Clinical training sessions in Radiography. **Material and methods:** A questionnaire based cross sectional study was carried out in college of paramedical sciences at Teerthanker Mahaveer University, Moradabad. The study was conducted amongst 112 students who were pursuing undergraduate & postgraduate from radiological imaging techniques department of paramedical sciences. **Results:** Majority of the participants (70.5%) were from 21 to 24 age groups. (61.6%) were males and (38.4%) were female participants. The mean of Age of the study subjects was 22.49 years. Overall, 80.4% internship students were satisfied, 5.6% posting students were satisfied and 33.7% overall students were satisfied with the practical and clinical satisfaction in this study. **Conclusion:** The individual level wise comparison of satisfaction for Clinical training accounted to be satisfied to some extent for maximum of the students. Whereas the majority of them were not satisfied with their hands on experience and thought that it won't be able to help them in their future.

Key Words: Satisfaction, Training sessions, Radiological technology.

Introduction

Radiological Technology tends to play an integral role in the system associated with the healthcare industry. It is found that if an individual wishes to become a professional in the field of radiological technology or medical imaging, it becomes necessary for him or her to attain a number of degrees. These may vary from the diploma to the doctoral level. However, the most common and necessary degree that the individual needs to attain is the Bachelor's degree, comprising a total of four years of program. In the course of this program, the student not only experiences teaching in the classrooms but is also made to undergo internship in healthcare institutions. In this regard, it can be said that the hands-on experience provided to the students through the internship programs are beneficial as well as crucial since this assists in increasing the confidence in the students, thereby enhancing their skills and knowledge pertinent to the radiological technology and medical imaging[1]. The practical and clinical training sessions contributing to the professional learning in medical education is also regarded as an essential pedagogical approach that covers the students into healthcare professionals. The sessions are effective in enriching the quality of care provided to the patients by the students in future. The clinical and training sessions are also helpful since these help in reducing the number of medical errors[3]. By determining the satisfaction levels of students, it becomes easier for the educational institutions to gain an insight to the requirements of the students. It further assists the educational institutions in bringing the necessary improvements and innovations in the practical and clinical training sessions associated with radiological technology. Apart from assisting the students in enhancing their knowledge and skills pertaining to radiological technology and medical imaging, the clinical and practical training sessions are found to serve as essential means for developing the interpersonal or soft skills in them. In other words, besides making the students aware of the methods or ways of using the radiological technology or radiography, the clinical training sessions help them in achieving a better coordination and cooperation with others, thereby improving their team-working skills and capabilities[4]. The sessions help them in improving their time management skills and their abilities to provide better care to patients as well since the students are able to become acquainted with the clinical environments. It cannot be denied that by perceiving only theoretical knowledge, students may not be able to develop a correlation between theory and practice. It is often found that students in practical examination fail in handling the equipment or managing a case in proper terms. The major reason behind this is that the student has not been provided with a proper practical or clinical training during the course of his academic training.

Materials and method:

A total number of 112 participants were included in the study. Verbal consent was obtained from all students included in this study. The questionnaire was structured by using google form and was distributed in different whatsapp groups via the internet. The questions were incorporated after going through various literature related to that, which consisted of a self-structured questionnaire divided into two parts A and B. Part A collected the demographic data including name, age, gender, email, course of study . The part B is again divided into two sections, section one consisted five questions in which 1-5 assessing the satisfaction of practical sessions at the university and section two consisted five questions in which 6-10 assessing the satisfaction of clinical sessions at the hospital. The 1-5 questions allotted to postgraduation and under graduation students who attended the posting. The 1-10 questions allotted to under graduation

students who attended the posting and internship

Statistical analysis:

The data collection was compiled, tabulated and analyzed. Analysis was done using google form.

The analysis was done using SPSS. Following test was performed.

1. Average mean and standard deviation.
2. Independent t-test or student t-test.
3. Mann-Whitney test.
4. ANOVA-test.

Result:

The result of this paper shows that out of 41 internship students, 33 students were satisfied which accounted for 8.4 % and only 8 students were not satisfied and that accounted to 19.6%. Out of 71 posting students only 4 students were found to be satisfied which means 5.6%, whereas 67 students were not satisfied that accounted for 94.4 %. From overall 112 students, 37 students were satisfied with the practical and clinical satisfaction, whereas 75 students were not satisfied.(Table1.0) It means that 33.7 % of the students were only satisfied and the maximum number of students were unsatisfied which resulted in 66.3 %. In our study 41 students belong from the internship category whereas 71 students belong from the posting category and this illustration confirms that the majority of the participants that is 63.4 % belong from the posting category and it was followed by the internship participants which accounted for 36.6 %. This result was similar with some other studies also where maximum students belong from the posting category rather than the internship category

Table1: show that the internship students 80.4% were satisfied, 5.6% posting students were satisfied and 33.7% overall student satisfied with practical and clinical satisfaction (Overall) in our study.

Total N=112	Satisfaction level	Frequency n/N=112(%)
Internship N=41	Satisfied	33(80.4)
	Not satisfied	8(19.6)
Posting N=71	Satisfied	4(5.6)
	Not satisfied	67(94.4)
Overall N=112	Satisfied	37(33.7)
	Not satisfied	75(66.3)

Table 2: Representation of Mean of all Questionnaire.

Questions	Mean	SD
Q1.	1.71	0.93
Q2.	2.26	1.10
Q3.	2.39	1.07
Q4.	2.36	1.05
Q5.	2.42	0.95
Q6.	2.19	1.08
Q7.	0.88	1.33
Q8.	0.89	1.36
Q9.	1.04	1.47
Q10.	0.86	1.35
Practical Satisfaction	11.13	3.63
Clinical Satisfaction	5.85	5.76
Total Satisfaction	16.98	8.25

Table shows the average of Choosing option-wise of all Question. It is illustrated from table that the majority of the participant choose average option (2.39) were Q3 compared to another Questions.

Table 3: Representation of Mean comparison of posting and internship participant with respect to Questionnaire.

Comparison of Satisfaction Level among Student Category				
Variables	**Student Category**	**Mean**	**Std. Deviation**	**P-Value**
Q.1	Internship	2.46	1.05	0.000
	Posting	1.27	0.45	
Q.2	Internship	2.54	1.03	0.043
	Posting	2.10	1.12	
Q.3	Internship	2.71	1.10	0.017
	Posting	2.21	1.01	
Q.4	Internship	2.63	0.94	0.033
	Posting	2.20	1.08	
Q.5	Internship	2.49	0.84	0.565
	Posting	2.38	1.01	
Q.6	Internship	2.49	0.90	0.024
	Posting	2.01	1.14	
Q.7	Internship	2.39	1.09	0.000
	Posting	0.00	0.00	
Q.8	Internship	2.44	1.12	0.000
	Posting	0.00	0.00	
Q.9	Internship	2.83	0.89	0.000
	Posting	0.00	0.00	
Q.10	Internship	2.34	1.24	0.000
	Posting	0.00	0.00	
Practical Satisfaction (Overall)	Internship	12.83	3.15	0.000
	Posting	10.15	3.55	
Clinical Satisfaction (Overall)	Internship	12.49	4.30	0.000
	Posting	2.01	1.14	
Total Satisfaction (Overall)	Internship	25.32	6.49	0.000
	Posting	12.17	4.43	

(For Significant difference of parametric data, we have been used independent t-test). All Significant because P-value is (<0.05) without Q5 in our study.

Table 4: Representation of Mean comparison of gender wise with respect to Questionnaire.

Variables	Gender	Mean	Std. Deviation	P-Value
Q1.	Male	1.70	0.97	0.889
	Female	1.72	0.85	
Q2.	Male	2.32	1.17	0.47
	Female	2.16	1.00	
Q3.	Male	2.41	1.14	0.872
	Female	2.37	0.95	
Q4.	Male	2.41	1.09	0.536
	Female	2.28	0.98	
Q5.	Male	2.41	1.05	0.845
	Female	2.44	0.77	
Q6.	Male	2.25	1.10	0.467
	Female	2.09	1.04	
Q7.	Male	0.83	1.37	0.624
	Female	0.95	1.27	
Q8.	Male	0.78	1.29	0.278
	Female	1.07	1.45	
Q9.	Male	0.97	1.46	0.558
	Female	1.14	1.49	
Q10.	Male	0.80	1.38	0.555
	Female	0.95	1.33	
Practical Satisfaction (Overall)	Male	11.23	3.94	0.72
	Female	10.98	3.11	
Clinical Satisfaction (Overall)	Male	5.62	5.67	0.603
	Female	6.21	5.95	
Total Satisfaction (Overall)	Male	16.86	8.23	0.837
	Female	17.19	8.37	

(For Significant difference of Non-parametric data we have be used Mann-Whitney test) -All not Significant because P-value is (>0.05) in our study.

Table 5: Representation of Mean comparison of age category wise with respect to questionnaire.

Comparison of Satisfaction Level among Age Category				
Variables	**Age Category**	**Mean**	**Std. Deviation**	**P-Value**
Q.1	17 to 20	1.38	0.65	0.164
	21 to 24	1.68	1.01	
	> 24	2.00	0.65	
Q.2	17 to 20	2.31	0.95	0.53
	21 to 24	2.19	1.13	
	> 24	2.50	1.10	
Q.3	17 to 20	2.31	0.75	0.63
	21 to 24	2.35	1.12	
	> 24	2.60	1.05	
Q.4	17 to 20	2.38	0.87	0.644
	21 to 24	2.30	1.08	
	> 24	2.55	1.05	
Q.5	17 to 20	2.23	0.93	0.073
	21 to 24	2.34	0.95	
	> 24	2.85	0.88	
Q.6	17 to 20	2.08	1.32	0.734
	21 to 24	2.16	1.03	
	> 24	2.35	1.14	
Q.7	17 to 20	0.77	1.24	0.33
	21 to 24	0.99	1.39	
	> 24	0.50	1.10	
Q.8	17 to 20	0.85	1.34	0.544
	21 to 24	0.97	1.40	
	> 24	0.60	1.23	
Q.9	17 to 20	0.85	1.34	0.51
	21 to 24	1.14	1.51	
	> 24	0.75	1.41	
Q.10	17 to 20	0.77	1.24	0.387
	21 to 24	0.96	1.44	
	> 24	0.50	1.05	
Practical Satisfaction (Overall) Clinical Satisfaction (Overall)	17 to 20	10.62	3.36	0.175
	21 to 24	10.87	3.75	
	> 24	12.50	3.14	

(For Significant difference of Non-parametric data we have be used ANOVA -test and Independent t-test). All not significant because P-value is (>0.05) in our study.

Discussion:

The majority of the participants that is 70.5% belong from the age group 21 to 24 years and it was followed by the age group where the participants were more than 24 years of age and the frequency percentage was 17.9 % and lastly the age group 17 to 21 years had 11.6%. While carrying out the representation of the mean of age it

was noticed that 22.49 was the mean age of all the study subjects and the standard deviation was 2.053. Then while carrying out the gender wise distribution of the study subjects it was noticed that the majority of the participants were males and they were 69 in number which accounted for 61.6 % whereas 43 of them were females which further accounted for 38.4%. The representation of the mean of all the questionnaires depicts the average of the choosing option wise of all questions. It is being illustrated that the majority of the participants opted for the average option which was 2.39 opted for question 3 while being compared to the other questions (Table2). The results also show that the mean of practical satisfaction was 11.13 whereas, the mean of clinical satisfaction was 5.85 and the mean of total satisfaction was 16.98. Then the table determining the representation of the main comparison of posting an internship participant with respect to the questionnaire for understanding the significant difference of parametric data where Independent t-tests have been used, which resulted all to be significant because the p-value <0.05 was except question number 5 of the study.(Table3) Next the representation of mean comparison of gender wise with respect to the question for understanding the significant difference of non-parametric data the Mann Whitney Test was being used where it was seen that all were not significant as the P value was >0.05 in our study.(Table4). Lastly, the representation of the mean comparison of the age category wise with respect to the questionnaire that used the ANOVA test and independent t- test for getting the significant difference of non-parametric data show that all were not significant as the P value was >0.05 in their study (Table5).

Conclusion:

Our study plays a very important role in the field of radiological technology by accessing the satisfaction of the students during their training sessions of radiography. Some prior knowledge which was gathered from previous researchers show that the radiation system brings into focus relating to the importance of integrating academic learning along with the professional training. So, the professional training in this radiological field is very important for enabling the students to learn regarding the technology which is used in various MRI scanners along with safety protocols practices and methods which need to be implemented while using this technology.

So, for the radiology practitioner's adequate training for proper handling and operating this radiological technology is very much important. That is why, for collecting proper responses from a sample of 112 students and evaluating their satisfaction during the training sessions. a questionnaire was being prepared which.

In our study this individual level wise comparison of satisfaction for Clinical training accounted to be satisfied to some extent for maximum of the students. Whereas the majority of them were also not satisfied with their hands on experience and thought that it won't be able to help them in their future. That is why, it is being suggested that for improving the satisfaction level of the students the interaction between the students and staff needs to be improved along with improving the quality of teaching inside the clinical environments. This can be done by promoting experienced faculty members and also enlarging the variety of patients or cases for the students along with increasing the clinical settings for providing a broad exposure to the students.

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