


SUFFICIENCY AND EFFICIENCY OF FIELD TRAINING FOR RADIOLOGY STUDENTS DURING INTERNSHIP EXPERIENCE IN NAJRAN UNIVERSITY, SAUDI ARABIA

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ARTICLE INFO	ABSTRACT
<p>Article history:</p> <p>Received 31 July 2023</p> <p>Accepted 30 October 2023</p>	<p>Purpose: The study was design to evaluate the effectiveness and adequacy of the internship period employing quantitative study descriptive survey approach.</p> <p>Theoretical framework: Internship is requirement of every student of radiology program of Radiological Sciences patch for the award of bachelor's degree at Najran University, Saudi Arabia. The competency level would demonstrate influence the sufficiency and efficiency of clinical training during internship period which represent six months after completing nine levels of radiology program.</p> <p>Design\Methodology\Approach: The survey was distributed to the tow levels of the last year of radiological sciences which composed of 81 male and female students which gathered seventy-seven (77) participants. Data collected through a questionnaire and summarized as percentages, frequencies, means and standard deviations using SPSS version 20.0.</p> <p>Findings: The study revealed un adequacy of the internship period and showed low efficiency due to its short duration.</p> <p>Research, Practical, Social Implication: The research construct and variables are identified the effectiveness and adequacy of the internship period. this study will be the modele of internship with a new qualitative change related to a period of time acceptable to students, similar to other universities.</p> <p>Originality/Value: The originality and value in this study are the framework conceptance and questionnaire that prepared and proved for evaluating the effectiveness and adequacy of the internship period for student of radiology program.</p> <p>Conclusion: In general internship period must be efficient and adequate to enhance sufficiency and efficiency experience by intern trainees.</p> <p>Doi: https://doi.org/10.26668/businessreview/2023.v8i11.4005</p>
<p>Keywords:</p> <p>Internship Period; Efficiency; Sufficiency; Adequacy; Field Experience.</p> <div data-bbox="169 1016 478 1263" data-label="Image">  </div>	

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SUFICIÊNCIA E EFICIÊNCIA DO TREINAMENTO DE CAMPO PARA ESTUDANTES DE RADIOLOGIA DURANTE A EXPERIÊNCIA DE ESTÁGIO NA UNIVERSIDADE DE NAJRAN, ARÁBIA SAUDITA

RESUMO

Objetivo: O estudo foi desenhado para avaliar a eficácia e adequação do período de estágio, empregando abordagem quantitativa de pesquisa descritiva.

Referencial teórico: O estágio é uma exigência de todo aluno do programa de radiologia do curso de Ciências Radiológicas para a obtenção do diploma de bacharel na Universidade de Najran, na Arábia Saudita. O nível de competência demonstraria influência na suficiência e eficiência do treinamento clínico durante o período de estágio, que representa seis meses após a conclusão de nove níveis do programa de radiologia.

Design\Metodologia\Abordagem: A pesquisa foi distribuída aos dois níveis do último ano de ciências radiológicas que eram compostos por 81 estudantes do sexo masculino e feminino que reuniram setenta e sete (77) participantes. Dados coletados por meio de questionário e resumidos em porcentagens, frequências, médias e desvios padrão no SPSS versão 20.0.

Resultados: O estudo revelou inadequação do período de estágio e mostrou baixa eficiência devido à sua curta duração.

Pesquisa, Prática, Implicação Social: O construto da pesquisa e as variáveis são identificadas a eficácia e adequação do período de estágio. Este estudo será o modelo de estágio com uma nova mudança qualitativa relacionada a um período de tempo aceitável para os alunos, semelhante a outras universidades.

Originalidade/Valor: A originalidade e o valor deste estudo são a concepção do framework e o questionário que preparou e comprovou para avaliar a eficácia e adequação do período de estágio para estudantes do programa de radiologia.

Conclusão: Em geral o período de estágio deve ser eficiente e adequado para aumentar a suficiência e eficiência da experiência dos estagiários.

Palavras-chave: Período de Estágio, Eficiência, Suficiência, Adequação, Experiência em Campo.

SUFICIENCIA Y EFICIENCIA DE LA FORMACIÓN DE CAMPO PARA ESTUDIANTES DE RADIOLOGÍA DURANTE LA EXPERIENCIA DE PASANTÍAS EN LA UNIVERSIDAD DE NAJRAN, ARABIA SAUDITA

RESUMEN

Propósito: El estudio fue diseñado para evaluar la efectividad y adecuación del período de pasantía empleando un enfoque de encuesta descriptiva de estudio cuantitativo.

Marco teórico: La pasantía es un requisito de todo estudiante del programa de radiología del parche de Ciencias Radiológicas para obtener una licenciatura en la Universidad de Najran, Arabia Saudita. El nivel de competencia demostraría influir en la suficiencia y eficiencia de la formación clínica durante el período de pasantía que representa seis meses después de completar nueve niveles del programa de radiología.

Diseño\Metodología\Enfoque: La encuesta fue distribuida a los dos niveles del último año de ciencias radiológicas la cual estuvo integrada por 81 estudiantes masculinos y femeninos los cuales reunieron a setenta y siete (77) participantes. Datos recopilados a través de un cuestionario y resumidos como porcentajes, frecuencias, medias y desviaciones estándar utilizando SPSS versión 20.0.

Hallazgos: El estudio reveló inadecuación del período de prácticas y mostró baja eficiencia debido a su corta duración.

Investigación, implicaciones prácticas y sociales: El constructo de investigación y las variables se identifican como la efectividad y adecuación del período de pasantía. Este estudio será el modelo de pasantía con un nuevo cambio cualitativo relacionado con un período de tiempo aceptable para los estudiantes, similar a otras universidades.

Originalidad/Valor: La originalidad y valor de este estudio son la concepción marco y el cuestionario que preparó y demostró para evaluar la efectividad y adecuación del período de pasantía para estudiantes del programa de radiología.

Conclusión: En general, el período de pasantía debe ser eficiente y adecuado para mejorar la suficiencia y la eficiencia de la experiencia de los pasantes.

Palabras clave: Período de Pasantía, Eficiencia, Suficiencia, Adequación, Experiencia de Campo.

INTRODUCTION

The field training can be defined as a set of skills and experiences that are offered to students within an institutional framework, or within an area of practice, so as to give the knowledge consciously intended to transfer students trainees from the limited knowledge in terms of skills, trends, and understanding, the field training represents the operations carried out through fieldwork practice using a variety of foundations and to assist the student to Acquire knowledge and field experience and technical skills, in addition to modifying themes, personal behaviors, so contribute significantly in the student's professional growth, by linking theoretical knowledge, practical application, in addition to commitment Full training curriculum is applied in certain institutions with a need for professional supervision as Bowddoin 2004.

Types of the Internships

Internships happen in a wide variety of activities and settings. An internship can be paid, unpaid, or partially paid (Heller,2014). A typical internship takes between one and four months (Dunn,2002), but can be shorter or longer, depending on the institute involved with Baume,2002.

- **Paid internships** are common in professional fields including medicine, architecture, science, engineering, law, business (especially accounting and finance), technology, and advertising into the company as Baume,2002.
- **Unpaid internships** are typically through non-profit charities and think tanks which often have unpaid or volunteer positions.
- **Partially paid internships** are when students are paid in the form of a pay. Stipends are typically a static amount of money. Usually, interns that are paid with stipends are paid on a set schedule associated with the institute.

Since Internship (Unpaid internship) is requirement of every student of radiology program of medical applied sciences for the award of bachelor's degree at Najran University, it becomes compulsory component after completing nine levels of radiology program. The clinical internship has been the subject of debate for years. American trainees in radiology Knights A.M. ,1997 found that 70% responded that the intern year was necessary for their development as a physician, while 49% responded that it was necessary for their development as a radiologist (Kozhimala, J. J., 2023).

LITERATURE REVIEW

After studying the adoption of the servant leadership style in higher education institutions, highlighted several principles that can improve an institutions. Because these challenging institutions are difficult to manage well, the board, faculty, and administration should work together to achieve an authentic solution. Leaders in these institutions should focus on strategic goals and the development of individuals, as well as the improvement of the whole community of concern.

Current literature on internships, internships as a way for schools to help students find jobs, basic information about technical universities of Ghana, human capital theory and the benefits of student internship to stakeholders,as Arthur,2023

Setting up efficient internship preparation programs is another strategy to address the problems related to students' inability to find suitable internships. Faculty supervisors, program leaders, and career counseling specialists can construct a collaborative program that will improve the students' job-seeking competencies. They may organize program-specific workshops that provide opportunities for students to learn how to write cover letters, prepare CVs, and excel in job interview. Clinical radiology technologist internship programs are the clinical training component of programs sponsored by the colleges listed below. Internship Program of the College of Applied Medical Sciences of king Saud bin Abdulaziz University are targeted to students studying to be technologists in CT, Mammography, MRI, Nuclear Medicine, Radiography, and Ultrasound. All inquiries regarding enrolling in these programs should be directed to the college listed below. For the clinical internship component of this training, job shadowing and continuing education, enquiries may be directed to the Radiology Technologist Director of Education.

Internship Program of the College of Applied Medical Sciences of king Saud bin Abdulaziz University is a one-year (52 weeks) training program, developed by each department in the clinical development of the undergraduate student in their chosen field.(Alharbi etal,2019).

METHODOLOGY

A quantitative study which employ descriptive survey approach that was conducted in radiological sciences department, a part of medical applied college in Najran University. The study includes students of last year male and female in level eight and nine whom are near to join internship period, there for other levels were excluded. The study sample was 81 male and

female radiology students from tow levels of the last year (level eight and nine) Data was collected throughout questionnaire from respondents and it was administered to all inclusion criteria gathering 77(95.06%) out of 81 participate. The 4(4.94%) excluded for they hadn't response to the questionnaire which consist of five sections Focus on efficiency and effectiveness and internship period. Statistical Package for Social Scientists (SPSS version 20.0) used to analyze data as numerical and demographic categories such as gender, Age group and marital status, with respect of these characteristics tables of counts and percentages presented. Approval was obtained from the Ethical Review and Protocol Committee of a higher institution. All participants inform previously, and ethical standard were considered, so the study had not involved any risk.

RESULTS

Table 1. show demographic distributions of respondents on this study were 77(95.1%) out of 81(100%) out of which 56 were female (72.7%), the remainder are male (27.3%). Clinical training centers settings perception were mostly agreed by student's more than 90% except current training period duration (6 months) which represent 5.2% as shown in Table 2.

Distributions of internship students for resources viability which shown in Table 3. X-ray Equipments (76.6%), Anatomical marker (80.5%), Monitoring devices (57.1%) and Contrast media and allergens (37.7%).

Distributions for imaging rooms during internship which shown in Table 4 are avaiailable (100-96%) except single photon emissin computed tomography (SPECT) 22%.

Table 1. Demographic distributions of respondents (n=77)

Respondents	level nine 62(80.5%)	level eight 15(19.5%)
Gender	Male 21(27.3%)	Female 56(72.7%)
Age group (21-24)	Male 33(47.2%)	Female 37(52.9%)
Age group (25-28)	Male 5(7.2%)	Female 2(2.9%)
Marital status	Male 0(0.0%)	Female 8 (10.4%)

Source: prepared by the author (2023 February)

Table 2. Distributions of student's perception at clinical training centers settings

Perceptions	Strongly Agree	Agree	Disagree	Strongly disagree
There is a high degree of agreement between the training needs and the training program	34(44.2)	42(54.6)	1(1.3)	0(0.0)
A sufficient amount of theoretical and practical content is included in the training program	32(41.6)	30(39.0)	7(9.1)	8(10.4)
A consistent methodology is followed to conduct the training	44(57.2)	31(40.3)	4(5.2)	1(1.3)
You feel that the trainers have adequate communication and teaching skills.	29(37.7)	48(62.4)	1(1.3)	1(1.3)

You feel that most of the trainers have practical experience in the training topics that they do	38(49.4)	36(46.8)	3(3.9)	0.0
Get the opportunity to fully use my skills, knowledge and abilities in training fairly and equally.	27(35.1)	28(36.4)	13(16.9)	9(11.7)
The location and quality of the training facilities are determined to meet my training needs in terms of the availability of equipment	45(58.5)	26(33.8)	4(5.2)	2(2.6)
The current training period (6 months) is sufficient to possess the training skills of my department	4(5.2)	8(10.4)	35(45.6)	30(39.0)
It is better to extend the concession period to a full year to increase the efficiency and effectiveness of training.	39(50.7)	28(36.4)	5(6.5)	5(6.5)
The trainees are committed to the date of arrival and departure to the hospital at the specified time.	41(53.3)	34(44.2)	1(1.3)	1(1.3)
The trainees perform the tasks assigned to them according to the required quality standards.	37(48.1)	22(28.6)	13(16.9)	5(6.5)

Source: prepared by the author (2023 February)

Table 3. Distributions of internship students for resources viability

Resources	Very adequate	Adequate	Inadequate	Not available
X-ray Equipment Anatomical marker	59(76.6)	12(15.6)	6(7.8)	0(0.0)
Monitoring devices	62(80.5)	13(16.9)	2(2.6)	0(0.0)
Contrast media and allergens	44(57.1)	24(31.2)	8(10.4)	1(1.3)
Radiation protection aprons and x-ray measuring dosimeter	29(37.7)	27(35.1)	11(14.3)	10(13)

Source: prepared by the author (2023 February)

Table 4. Distributions for imaging rooms during internship

Imaging modalities	yes	No	Total
General x-ray	77(100.0)	0(0.0)	77(00.0)
FLOUROSCOPY	71(92.2)	6(7.8)	77(00.0)
ULTRASOUND	75(97.4)	2(2.6)	77(00.0)
CT	77(100.0)	0(0.0)	77(00.0)
MRI	76(98.7)	1(1.3)	77(00.0)
MAMMOGRAM	74(96.1)	3(3.9)	77(00.0)
Ortho pan tomography	38(49.4)	39(50.6)	77(00.0)
SPECT	17(22.0)	60(78.0)	77(00.0)

Source: prepared by the author (2023 February)

DISCUSSION

Table .1 show that most of respondents 70 (91%) belong to the age group (21-24) and the least were in the age group (25-28) as maximum age, most respondents were on level nine 62 (80.5%) while level eight respondents were only 15 (19.5%). None of male respondents was married while 8 female (10.4%) were married which made single status predominant (89.6%). Respondents were asked to report on the efficiency and effectiveness of internship period also

provide some suggestions to improving the clinical experience of interns. Most of them agree that it is better to extend clinical duration of the internship period to a full year to increase the efficiency and effectiveness of training. Was enough for each rotation in a particular duty room Respondents reported that during internship training, they were satisfied with meeting their training needs and the training program objectives, (Mahdi, N. A., 2022) following consistent methodology to conduct the training having adequate communication and teaching skills, enjoyed their time and worked as a team which was revealed by 91.4% of the respondents The majority of students said that the current training period (6 months) wasn't sufficient to possess the training skills of department (15.6%) while 78% of the respondents pointed to extend the concession period to a full year to increase the efficiency and sufficiency of training which was shown in Table.2. Table.3 shown that most of the respondents were of opinion that X-ray equipment's and Monitoring devices were adequate at the department with indications of 76.6% and 80.5% respectively. This revelation is very significant since X-ray equipment's were the main required during the training as raw materials (Schweitzer, 2020). Availability of resources make it more efficient and beneficial to the students such as contrast media and allergens which adequate in percentage of 44% while availability of radiation protection aprons and x-ray measuring dosimeter were inadequate with percentage of 36% at all training centers as shown in Table.4.

General x-ray rooms and CT were adequate (100%) followed by MRI, ultrasound, mammogram and fluoroscopy representing 98.7%, 96.1% and 92.2%, respectively, on the other hand half of the respondents reported that adequacy of specialized imaging modalities such as Ortho pan tomography represent 49.4%, furthermore SPECT represent only 22%.

CONCLUSION

Chosen of the specialty and location of intern clinical placements, are now allowable so, time and type of experience needed in the clinical setting can be useful if facilities were improved. In general, there was efficiency of internship period of radiology program in medical applied sciences Najran University, but on the other hand the period wasn't sufficient.

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