

The General Surgery Residents Perception for the Training Program at the King Faisal Specialist Hospital and Research Center, Jeddah, Saudi Arabia

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Abstract

Background: A good number of research work indicates that trainees as beneficiaries are usually the most equipped resources to evaluate the extent to which their learning and training experience is useful, informative, satisfactory, beneficial, and worthwhile. Although the trainees' assessment on such matters is not objective enough for the course effectiveness and instructional techniques, yet such a feedback is a reliable and legitimate indicator of the students' satisfaction. The aims of this study are to retrieve, understand, and critically examine the education program at the King Faisal Specialist Hospital and Research Center Jeddah, (KFSHRC-J) through the eyes of the end-users and the beneficiaries, the surgical residents.

Methods: This is an exploratory descriptive study, conducted at the KFSHRC-Jeddah, targeting the surgical resident's physicians who have recently finished their training. Self-Administered Questionnaire was used for data collection. Data processed using SPSS software program version 20.

Results: This is an exploratory descriptive study included 24 participants; 10 (41.7%) males and 14 (58.3%) females. Some residents believed that the ward rounds are not properly utilized for educational purposes, and only run as business rounds. All participants expressed the paramount need for increasing the hands-on experience of the residents each at his/her level and they recommended that the program should continue, but some changes has to be introduced and implemented, 3.6% of them suggest freezing of the program.

Conclusion: In conclusion we believe that the data collected shows that residents at this training program of the KFSHRC-J are generally satisfied with the surgical training they receive. Most of them rated the quality and volume of their surgical training as adequate and satisfactory and will improve if their suggestion shall be taken seriously studied and implemented.

Keywords: Surgery; Residency; Training program

Introduction

A good number of research work indicates that trainees as beneficiaries are usually the most equipped resources to evaluate the extent to which their learning and training experience is useful, informative, satisfactory, beneficial, and worthwhile. Although the trainees' assessment on such matters is not objective enough for the course effectiveness and instructional techniques, yet such a feedback is a reliable and legitimate indicator of the students' satisfaction. There is also substantial research linking students' satisfaction to effective teaching. The use of students' ratings for evaluating teachers' effectiveness is the single most researched issue in higher education [1]. Most universities and medical schools apply students' rating system to help evaluate instructors. These ratings are used for curriculum development, faculty development, and promotion/tenure considerations. Students rating have been generally accepted as a useful tool in the evaluation of the teaching process, and emphasis has been placed on immediate, rather than delayed evaluation feedback to the instructors [2]. Although students' ratings are an important data source for the evaluation of teaching merits, this should not be the only

source. Similarly, students' ratings' constitute an essential part of the data for the evaluation of courses, workshops, and degree programs. It is essential to look at the data relating to other dimensions of merit such as needs analysis and needs demand, opportunities for symbiosis, content, and cost, and estimates their relative importance [3].

Overview of the King Faisal Specialist Hospital and Research Center-Jeddah (KFSHRC-J) surgical residency program

The King Faisal Specialist Hospital and Research Center-Jeddah (KFSHRC-J) is a tertiary care center that receives referrals from the south and western parts of Saudi Arabia. The cases referred are complex cases, with a lot of comorbidities, advanced disease, and multiple redo and revision cancer cases. Proper highly advanced patients care, scientific and clinical research, training and education are the main pillars of the cited hospital mission. The five years' general surgery training program has been established and accredited by the Saudi Commission for Health Specialties since the year 2002.

The main features of the general surgery training program

Like most of other residents' training programs, the KFSHRC-J program consists of residents, trainers, and trainers of the trainers, and a well written objective structured multidisciplinary curriculum. It addresses the general and specific objectives of each surgical disease, as well as the program contents, the instructional techniques, and the teaching and training methods and plans. The training program's scientific, academic and training activities consist of a daily morning meeting that discusses last night's new emergency admissions, as well as inter-departmental consultations including ICU and inpatients. On Sundays there is a half-day academic activity. During which a facilitator resident gives a problem oriented structured presentation. This educational session is attended by an assigned instructor usually a consultant surgeon, other consultants who are free are encouraged to attend, as well as the assistant consultants. A surgical radiology session follows this session where a consultant radiologist conducts and supervises this one hour session. Here again each unit presents the interesting radiology cases and the radiologist usually leads the discussion. Monday mornings are assigned for an up-to date consultant or assistant consultant presentation on a topic of common interest or a case presentation. Tuesday mornings are shared weekly between a numbers of departmental activities. Once a month journal club, mortality and morbidity meeting, a business departmental meeting and the last Tuesday morning of the month is assigned for a surgical subspecialty presentation. Three Multi-Disciplinary Meetings (MDT) are held weekly to discuss, and take decisions on presented breast cancer cases, gastrointestinal cancer cases, and endocrine and neuroendocrine diseases.

The 8 units of general surgery include; colorectal, breast, vascular, pediatrics, transplant, endocrine and upper GI and hepatobiliary surgery, and minimally invasive surgery. Each unit conducts educational and business rounds on daily basis except on the operating day. On Thursday there is a sign-out meeting when all the in-hospital cases will be discussed and endorsed to the on call teams. A question search result is sometimes presented, and this consists of a subject debated during the week in the morning meetings or during any of the educational activities.

The junior residents R1-R3 do all the subspecialty rotations (plastic surgery, pediatric surgery, vascular surgery, and emergency medicine, ICU and 3 months elective rotation before they get promoted to senior years). Six months of the juniors' rotation must be spent in a secondary care hospital. The senior residents R4 – R5 spend the two years in general surgery and they have to spend one full year in an outside secondary care hospital to get more learning and training exposure.

Materials and Methods

Research design: This is an exploratory descriptive study.

Setting: The study was conducted at the KFSHRC Jeddah

Subjects: The target population was the residents in training at KFSHRC-J. There were 10 male residents and 14 female residents. The study involved 24 subjects including residents and physicians who have recently finished their training.

Tool for data collection: A self-Administered Questionnaire was used for data collection. It comprised three parts:

Part I: This part included questions related to socio demographic characteristics of the study subjects such as gender, level of training

and the training service unit at the time of the survey. Their perception to the program as a whole, the operating room sessions, the teaching, and training and the attendance of the program activities.

Part II: This part was used to explore the participant view about the program activities. It is a Likert scale format that contains 10 statements answered on a 5 points response scale: Excellent=5, very good=4, good=3, bad=2, very bad=1.

Part III: This part included a space for open-ended opinions to express their views, ideas, suggestions, critique, and any other issues raised.

Methods: The study was conducted along the following steps:

The completed proposal was submitted to the KFSHRC-J Institutional Review Board, (IRB) which granted the researchers the ethical and scientific approval for the study. The intervention tools used in this study were developed by the researchers after reviewing the relevant and current literature and was also approved by the IRB.

The purpose of the study was explained to each participant and an oral consent to participate in the study was obtained. The questionnaires were distributed among the participants and the data was collected from the questionnaire and analyzed.

Statistical analysis: The collected data was fed, coded, edited and analyzed using the statistical packages for social science (SPSS) version 20 for windows. Descriptive statistics were done using numbers and percentages.

Results: This is an exploratory descriptive study included 24 participants; 10 (41.7%) males and 14 (58.3%) females. Two participants recently completed their training and 22 residents under training. Table 1 and Figure 1 show the distribution of gender and the rotation year.

Gender	Rotation year					Completed the training	Total
	R1	R2	R3	R4	R5		
Male	4	2	1	3	0	0	10
Female	4	2	1	4	1	2	14
Total	8	4	2	7	1	2	24

Table 1: Gender and rotation year distribution of the participants.

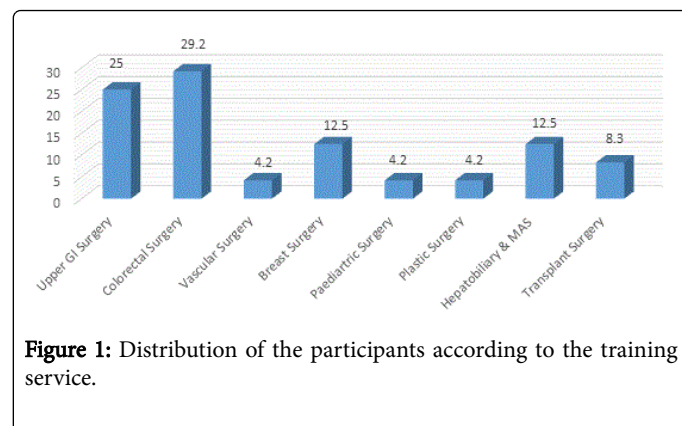


Figure 1: Distribution of the participants according to the training service.

Table 2 shows the perception of the residents to the teaching activity of the program. The unit activity and ward rounds, the Monday

department presentation, and the Sunday half day activity scored highest as excellent and very good whereas morning meeting, radiology meeting and department morbidity and mortality meeting scored low as bad.

Activity	Very bad N (%)	Bad N (%)	Good N (%)	Very good N (%)	Excellent N (%)
Morning meeting	0 (0)	7 (29.2)	9 (37.5)	8 (33.3)	0 (0)
Sunday 1/2 day activity	0 (0)	0 (0)	4 (16.7)	15 (62.5)	5 (20.8)
Radiology meeting	4 (16.7)	6 (25.0)	7 (29.2)	7 (29.2)	0 (0)
GI tumour board	0 (0)	0 (0)	6 (25.0)	13 (54.2)	5 (20.8)
Monday department presentation	1 (4.2)	0 (0)	3 (12.5)	10 (41.7)	10 (41.7)
Morbidity and mortality meeting	0 (0)	5 (20.8)	8 (33.3)	6 (25.0)	5 (20.8)
Breast tumour board	0 (0)	1 (4.2)	5 (20.8)	11 (45.8)	7 (29.2)
Thyroid tumour board	0 (0)	0 (0)	6 (25.0)	11 (45.8)	7 (29.2)
Sign out meeting	0 (0)	0 (0)	14(58.3)	7 (29.2)	3 (12.5)
Unit activity and word round	0 (0)	2 (8.3)	4 (16.7)	9 (37.5)	9 (37.5)

Table 2: Showing the participants perceptions on the training activities.

As shown in Figure 2 the operating room (OR) chances is little to no chance in more than 65% of the participant. The attendance of the residents to the different activates of the department is shown in Figure 3.

The majority of the participant suggested that the program should continue as it is and 3.6% of them suggest freezing and implementation of changes (Figure 4).

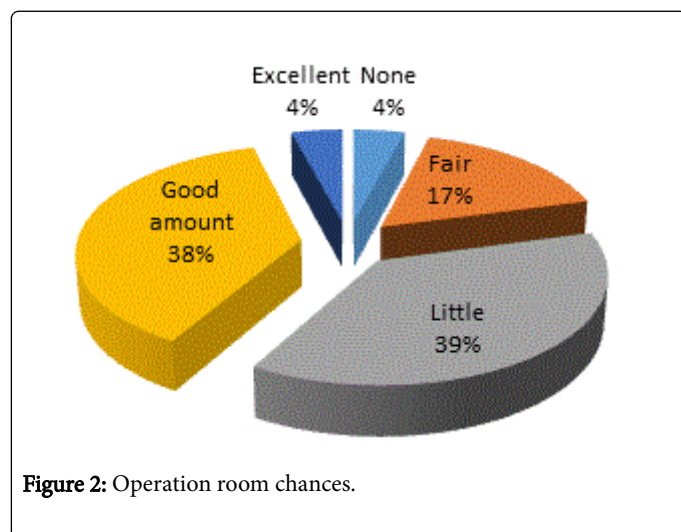


Figure 2: Operation room chances.

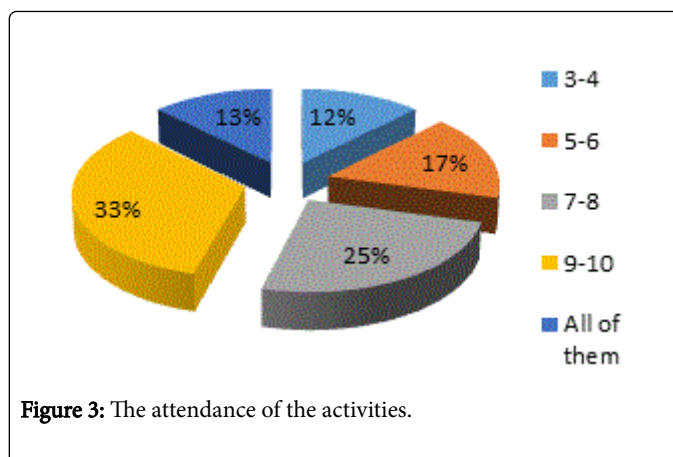


Figure 3: The attendance of the activities.

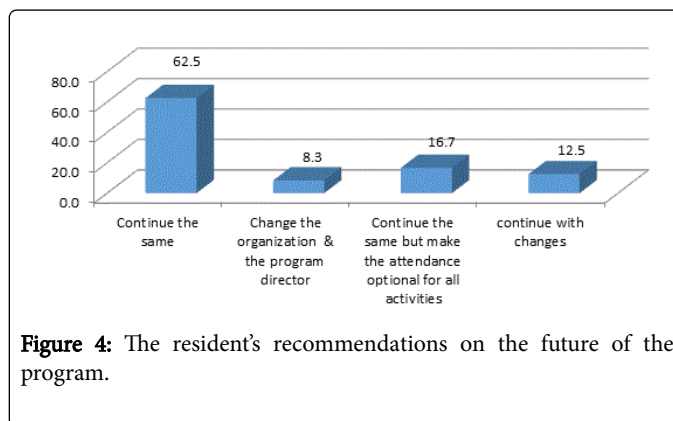


Figure 4: The resident's recommendations on the future of the program.

Qualitative data

The majority of the participants recommend that, in the morning meeting one interesting case to be presented in full details and to be discussed fully as far as its management is concerned. The rest of the routine cases and inter-departmental consultations are to be briefly presented highlighting the main features of its management allowing sometime for trainees' questions. Few (2) participant suggested that the sign-out meeting is better conducted in a ward round manner for better discussion and patients' involvement for better benefits to all.

The majority of the residents point out that the half-day activity is very useful but they suggested presence of a specialized consultant in the topic presented which will increase and enrich the discussion. Few of them reported that this important activity interferes with their operation room and clinics time which sometimes makes that particular service consultant unable to attend all the teaching activities on that day, as well as the rest of his team, and they suggested to stagger the half-day teaching day along the week.

Few participants emphasized the importance of the radiology session however they thought it might be more useful if residents get exposed to more than one radiologist. Other participants said: that the radiology session is not useful and would be better off replace it with another specialty lectures such as medical oncology.

All the participants expressed the paramount need for increasing the hands-on experience of the residents each at his/her level. The believed the scarcity in cutting being due to the difference in consultants' attitudes or due to the big number of residents or small

number of cases. All participants agreed that a basic skills lab is mandatory to enhance basic surgical skills training among the residents.

Some residents believed that the ward rounds are not properly utilized for educational purposes, and only run as business rounds. Others think that introducing the bedside teaching grand round would probably be a good opportunity for teaching and training in clinical skills. The same can be done at a smaller scale during the daily unit rounds and the consultants who are conducting the teaching and training activities need to be motivated. They may also need to be trained on how to conduct the teaching the way the Saudi Council wants it done, as some believe that not every consultant is a good teacher.

All participants recommended that the program should continue, but some changes have to be introduced and implemented. The suggested changes include:

The training program should be run according to a well and detailed written curriculum to cover all the three domains of medical education, namely the cognitive, psychomotor and attitudinal domains.

The program should clearly specify the levels of required knowledge and skills in each training year, through writing clear aims and objectives and to closely supervise their implementation so that they don't remain ink on paper.

The residents should self-steer their program, and play a pivotal role in the facilitation of the smooth running of the activities together with the program director and the other trainers and instructors. The program director and the instructors should also cast a close eye on trainee's supervision in all the areas of training and teaching with special reference to the operating room and other clinical skills.

Create an academic atmosphere and environment through enhancement and motivation to inject in residents the soul of hard work and to stimulate competitive attitudes of perfection.

Apply continuous assessment and self-assessment among the residents throughout the academic year.

Encourage the attitude of an active feedback from all enrolled in the training program that will increase the productivity and achievements.

Orientation of the new residents, increase the outside hospital rotation duration to obtain more exposure to learn how to do some simple general surgery procedures which is not available in tertiary care hospitals.

Introduce, apply, and implement career advice sessions and more interaction among the training team as a whole.

Discussion

The aim of this study is to retrieve, understand, and critically examine the education program at the King Faisal Specialist Hospital and Research Center Jeddah, (KFSHRC-J) through the eyes of the end-users and the beneficiaries, the surgical residents. The responses obtained worked out as a feedback provided by residents who participated in the study. The findings were used to identify the strengths and the weaknesses of the surgical residency training program. The KFSHRC-J is a state-of-the-art health providing institution with a healthy education and training environment in which residents are expected to be able to experience real-life learning

of most of the surgical activities. A curriculum is the most important determinant of the learning environment, and it actually controls the behavior of all stakeholders [4]. The existing curriculum needs to be updated at least every three years in a widely represented meeting where all the stakeholders are involved and participate to the betterment of the training program.

Our study had a slightly higher representation of females (58.3%) as compared to males which was similar to the study conducted by Papanna et al. [5] with 56.6% and in another study conducted by Carpenter [6] female representation was 82%. The reason for this difference in our study was due to the proportion of female residents getting admitted to our institution compared to male residents.

It's clear from the findings of this study that any activity that contains active discussion and interaction has the highest marks in the residents' rating like MDTs where an extensive thorough discussion of clinical cases usually takes place in a multidisciplinary media when and where the residents get exposed to applied radiology, and anatomic pathology, knowledge and information integrated within the special clinical surgical context and perspective together with medical and radiation oncology combined with surgical opinion, such experience will enrich their theoretical knowledge and add much to their practice to graduate as safe knowledgeable surgeons.

Operative experience has been shown repeatedly to be one of the most important predictors of satisfaction with surgical training [7,8]. This study showed that more than 65 % of surgical residents were rating getting the chance to practice cutting in the operating room is so small and is rated as little to no chance at all. All residents also believed that increasing OR chances is desperately needed. Our results compare well with Saud et al. [9] study which showed that 85% of the surgical trainees were not satisfied with their operative experience.

Possible barriers to increasing OR chances from the residents perspective are, some consultants like to do all the operation on their own, moreover they are not motivated to train juniors. The current and future numbers of residents in training are increasing. Their distribution is also uneven, adding to this the small number of cases that can be done by the residents under supervision. There is also gross shortage of beds and OR time. To compensate for this it is clearly stated by some training authorities that the basic skills lab is mandatory to enhance the basic surgical skills. Nair and Hensley study who found that 100% of participants thought bed side teaching to be the most effective way of learning clinical skills [10]. The same has been matched among our participants that the unit activities and bed side teaching in the ward and the clinics was rated very good to excellent in 91.7% of the residents.

In conclusion we believe that the data collected shows that residents at this training program of the KFSHRC-J are generally satisfied with the surgical training they receive. Most of them rated the quality and volume of their surgical training as adequate and satisfactory and will improve if their suggestion shall be taken seriously studied and implemented.

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