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**Assessment of the Education Environment of the
Saudi Board of Family medicine, KSA. 2020**

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Abstract

Background: Competent educational environment for medical postgraduate is crucial to ensure sound clinical outcome. The quality of the educational environment is influenced by many factors, physical, social and intellectual. The current study aimed at assessing the educational environment in a postgraduate Saudi Board for Family Medicine in Jeddah.

Methodology: Through cross sectional study design, all residents in the Saudi Board of Family medicine in Jeddah were invited to participate in the study; they were asked to fill a predesigned adopted valid questionnaire based on the Scan of Postgraduate Educational Environment Domain (SPEED) which is used to assess the quality of the Post Graduate Medical Education. Data were collected during gathering of the residents in a usual didactic teaching day. A total of 186 residents responded, making a response rate 93%.

Results: Out of all participants (n=186), females formed two thirds of the residents (60.8%), their mean age was 27.6 ± 2.27 years, with an almost equal representation of the four residency levels. The highest scores about the quality of the educational process was observed in the item regarding the supervisors being respectful towards the registrars (mean score 4.1 out of 5), followed by the being approachable and helpful (mean score 4.0). The lowest scores were observed regarding presence of staff in general who have positive impact on the educational environment (mean score 3.2), followed by availability of good clinical supervisors all the time (mean score 3.3). The overall mean score accounted for 3.6 ± 0.56 , although it was higher in females (3.7 ± 0.642) than males (3.5 ± 0.661), and in those in R1 (3.7 ± 0.509) and R4 (3.7 ± 0.605), however, these differences are not statistically significant $p > 0.05$. Also, no statistically significant correlation between age and overall mean score was observed.

Conclusion and recommendations: The Saudi Board residents for Family Medicine considered their educational environment as more positive than negative with potential areas for improvement. Although females perceived the educational environment better than male trainees, no significant changes observed along the different stages of the program. It is recommended to use these findings in reforming the educational environment in the Saudi Board.

Keywords: *Educational environment, perception, postgraduate, Saudi Board.*

1. Introduction

The educational environment refers to the physical, emotional and intellectual context in which learning occurs and the perspective of the learner is most commonly used to construct and interpret the quality of the educational environment (Boor et al., 2007). The context in which learning occurs may affect the engagement of the learner, their motivation and their perception of the relevance of that learning to themselves (Hutchinson, 2003). Educational environment has substantial, real and influential effects on the trainee and makes a substantive contribution to the trainee's success, achievement and satisfaction (Genn & Harden, 1986), (Harden, 2011). Evidence in the literature suggest that trainee satisfaction translates to career commitment, retention and positive professional attitude (Clynes & Raftery, 2012). Trainee perception has also been highlighted as a tool in evaluating the quality of the educational process (Xu et al., 1998). In the medical career, poor learning and training environments may result in poor safety and poor quality in patient care. Therefore, the educational environment is crucial for the doctor's professional development and should be as much of a focus in adult learning as other elements of teaching such as sharing knowledge and expertise (Hutchinson, 2003). In the postgraduate educational context, junior doctors are employed by health services, and concurrently learn, whilst providing patient care.

Evaluating postgraduate medical trainees' perception could facilitate the development of effective educational experiences (Cannon et al., 2008). This is because the learners' perception of the environment impacts their behavior and determines the efficacy of the environment for learning. Therefore, perceptions of learners represent a consequential and meaningful measure of the educational environment. The importance of a positive educational environment in medical education has received growing acknowledgement and has stimulated the development of several instruments to assess the quality of the postgraduate educational environment (Cassar, 2004). In Saudi Arabia, graduate physicians should pass the Saudi Commission for Health Specialties (SCFHS) test to be enrolled in a residency program. Completing the residency program qualifies the trainee to receive certification as a specialist (Al-Marshad & Alotaibi, 2011). This study aimed at evaluating the educational environment of a postgraduate board program for family physicians in Saudi Arabia, through assessing perception of the candidates in the program. Resident's perceptions about the Board educational environment should provide valuable information on the effectiveness as well as the strengths and weaknesses of the learning and teaching process that could help in future planning.

2. Material and methods:

Through a cross sectional study design, the study was conducted in Jeddah which is the main seaport of the Kingdom of Saudi Arabia, and comes second largest city after capital Riyadh. The building of the Saudi Board for Family Medicine is located in Eastern Jeddah as part of the National Guard compound. The clinical training is conducted chiefly in the primary health care centers as well as governmental hospitals. The list of residents was obtained from the administration of the Board; all of them were invited to be included in the study (n=186). A self-administered questionnaire was used in the study; the questionnaire was based on the Scan of Postgraduate Educational Environment Domain (SPEED) which is used to assess the quality of the Post Graduate Medical Education (PGME) environment. SPEED is concise and based on a theoretical framework that emphasizes three human environment domains in the medical education context, namely; goal orientation, relationships and organization. The questionnaire included 15

items measured on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The questionnaire had been proven to be valid and reliable for determining perception of the trainees in the medical field about educational environment (Malau-Aduli et al., 2019). In order to pinpoint more specific strengths and weaknesses based on individual items, a mean score of 3.5 or above was considered a real positive result. The researcher made benefit from the presence of the trainees, who attended didactic lectures weekly in the Board center. First, the researcher described the aim, objectives and expected repercussion of the results of the study, then the attendants were invited to be included in the study by responding to the questionnaire. Ethical approval was ensured from the regional Institutional Research Board (IRB) in Jeddah. SPSS ver. 20 was used for data entry and statistical analysis. Qualitative variables were presented in frequency distribution, while quantitative variables are presented as means and standard deviation. P value <0.05 was considered as an indication for statistical significance.

Results:

Table 1: Characteristics of the study group (n=186).

Characteristics	Frequency	%
<i>Gender</i>		
Male	73	39.2%
Female	113	60.8%
<i>Age</i>		
<30 years	154	82.8%
≥ 30 years	32	17.2%
<i>Residence level</i>		
R1	44	23.7%
R2	41	22.0%
R3	53	28.5%
R4	48	25.8%

Females constituted almost two thirds of the residents (60.8%), their mean age was 27.6 ± 2.27 years, the majority (82.8%) aged <30 years; the four residency levels are almost equally represented in the study [Table 1].

Table 2: Response of the candidates to the items describing their agreement about the quality of the educational processes in the program.

Items	SA n(%)	A n(%)	N n(%)	D n(%)	SD n(%)	Mean score
The supervisors are respectful towards registrars	64(34.4)	82(44.1)	31(16.6)	5(2.7)	4(2.2)	4.1
The supervisors are approachable and helpful	54(29.0)	88(47.3)	32(17.2)	9(4.8)	3(1.6)	4.0
Feel part of the team	28(15.1)	86(46.2)	57(30.6)	11(5.9)	4(2.2)	3.7
Supervisors are all positive role models	36(19.4)	91(48.9)	44(23.7)	12(6.5)	3(1.6)	3.8
Training in the post prepares me for my future career	34(18.3)	84(45.2)	52(28.0)	13(7.0)	3(1.6)	3.7
My supervisor supports me in difficult situations	34(18.3)	77(41.4)	61(32.8)	8(4.3)	6(3.2)	3.7
The practice/post staff are clear about my duties and responsibilities	19(10.2)	91(48.9)	50(26.9)	20(10.8)	6(3.2)	3.5
Level of autonomy is appropriate to my level of training	24(12.9)	97(52.2)	56(30.1)	7(3.8)	2(1.1)	3.7
Good clinical supervision is available at all times	23(12.4)	56(30.1)	64(34.4)	34(18.3)	9(4.8)	3.3
The staff have a positive impact on the educational environment	15(8.1)	64(34.4)	51(27.4)	47(25.3)	9(4.8)	3.2
Supervisor reports are useful for my performance	28(15.1)	71(38.2)	73(39.2)	14(7.5)	0(0.0)	3.6
Supervisor helps me avoid too many tasks irrelevant to my learning	25(13.4)	63(33.9)	63(33.9)	26(14.0)	9(4.8)	3.4
My supervisor reserves time to supervise/counsel me	29(15.6)	76(40.9)	59(31.7)	17(9.1)	5(2.7)	3.6
Teaching and learning are emphasized in the post	19(10.2)	93(50.0)	57(30.6)	14(7.5)	3(1.6)	3.6
Feedback of my supervisor focus on my strengths and weaknesses	32(17.2)	80(43.0)	60(32.3)	11(5.9)	3(1.6)	3.7

SA: Strongly agree A: Agree N: Neutral D: Disagree SD: Strongly disagree

The highest level of agreement about the quality of the educational process was observed in the item regarding the supervisors being respectful towards the registrars (mean score 4.1 out of 5), followed by the being approachable and helpful (mean score 4.0) and being positive role models (mean score 3.8). On the other hand, the lowest scores were observed regarding presence of staff in general who have positive impact on the educational environment (mean score 3.2), followed

by availability of good clinical supervisors all the time (mean score 3.3) and efforts of the supervisor to help residents avoid irrelevant tasks (mean score 3.4) [Table 2].

Table 3: Differences in the mean scores of agreement about educational processes in the program according to characteristics of the candidates.

Characteristics	Mean score Mean±SD	P
Gender		
Male	3.5±0.661	0.080*
Female	3.7±0.642	
Residence level		
R1	3.7±0.509	0.211**
R2	3.5±0.567	
R3	3.6±0.799	
R4	3.7±0.605	

*Based on Independent Sample T test **Based on ANOVA test

The overall mean score accounted for 3.6 ± 0.56 , although it was higher in females (3.7 ± 0.642) than males (3.5 ± 0.661), and in those in R1 (3.7 ± 0.509) and R4 (3.7 ± 0.605) if compared to those in R2 (3.5 ± 0.567), however, these differences are not statistically significant $p > 0.05$ [Table 3].

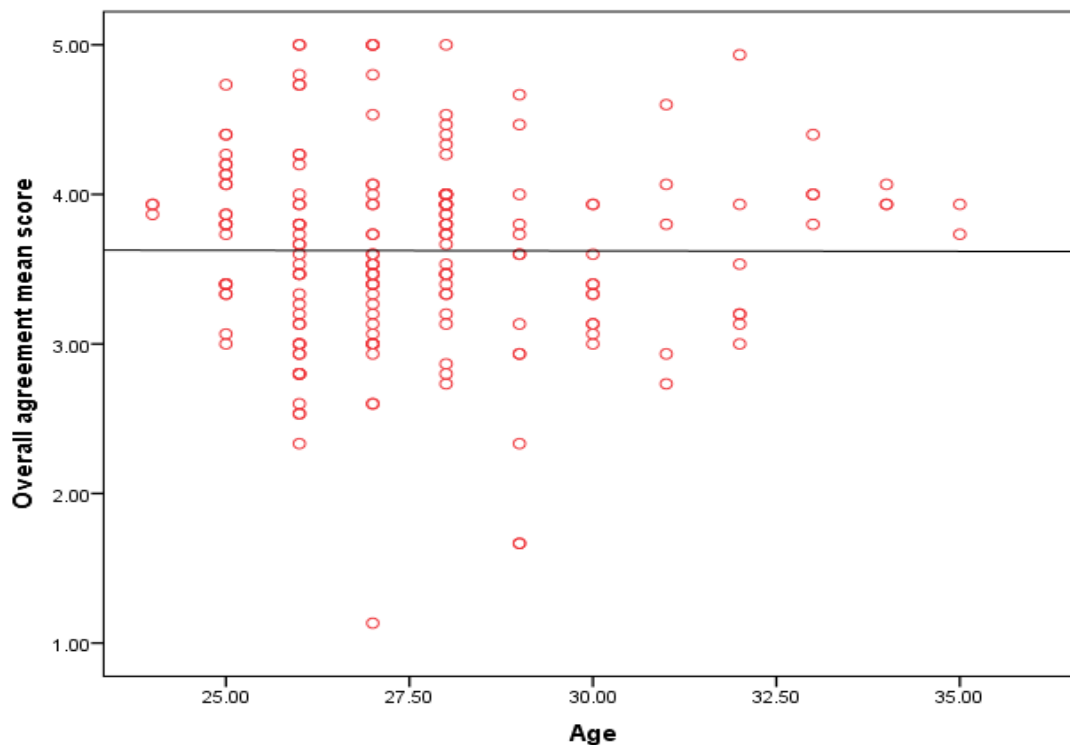


Figure 1: Correlation between age of the residents and the overall agreement score on the quality of educational environment.

No statistically significant correlation between age and overall mean score was observed between residents $p>0.05$ [Figure 1].

Discussion

This is the first study with adequate sample size that used (SPEED) tool to assess the educational environment in the Saudi Board of Family medicine. Globally, (SPEED) has been regarded as a valid tool with excellent reliability to achieve this objective (Malau-Aduli et al., 2019). All residency levels were well presented in the study; the overall mean score accounted for 3.6 ± 0.56 suggesting positive than negative perception with chances of improvement. Similar results were observed in developed and developing countries although using different tools (Roff et al., 2005; Sheikh et al., 2017). Mean scores of the majority of the items ranged between 3.6 and 3.7. The lowest score was recorded in the item describing the positive impact of the teaching staff on the educational environment (mean=3.2). In this regard, Frischer and Larsson (2000) pointed to the crucial impact of the teaching staff on the candidates through effective attitude that is reflected on their approachability and friendliness, they described effective attitude as “being supportive and positive, being open-minded and willing to recognize errors, being organized and stimulating, and transmitting enthusiasm”, which gives a good clue for teaching staff in the postgraduate programs (Frischer & Larsson, 2000). The second lowest score was observed in the availability of good clinical supervision at all times (mean=3.3); in this respect, Spencer (2003) emphasized that despite “on the job” clinical teaching for postgraduate physicians is the core for their professional development; “clinical teaching has been much criticized for its variability, lack of intellectual challenge, and haphazard nature”; and face a lot of challenges including time, especially when there is imbalance between the number of residents and number of trainers; and “Lack of congruence or continuity with the rest of the curriculum” (Spencer, 2003); which necessitate succinct planning for clinical training putting into consideration the sequence of the curriculum, logistics of the training places, number of residents and number of the supervisors.

A key aspect of the effective supervision in postgraduate training is the supervisor-student relationship. This dynamic interaction is affected by the changing needs of students and institutional conditions, as well as the skills, attitudes, and roles of supervisors and their supervisory styles (Orellana et al., 2016). The supervision style describes the way the supervisors follow along their supervision process with their candidates, it varies along time according to the different roles assigned for each step. It was expected that this variance would impact the perception of the candidates in different residence level, however, the highest scores were recorded in R1 residents and R4 residents, which comes in accordance with the ICU residents in UK (Clapham et al., 2007), and residents in a university hospital in Saudi Arabia (Al-Marshad & Alotaibi, 2011). High scores observed in R1 could be attributed to being the first contact with the supervisor where the candidates are anxious about the forthcoming future in the program and they usually find support from supervisors that alleviate their worry, and the higher scores observed in R4 residents could be attributed to the stage when the candidates are finalizing their thesis and comes more in direct contact with their supervisor. The apparent difference between male and female residents, comes in accordance to what had been reported in other setting in Saudi Arabia, where they attributed the difference in agreement scores between males and females to many

factors; including societal culture that creates disparity at workplace between male and female. This may have an influence on how both genders perceive the environment of work.

Conclusion: The Saudi Board residents for Family Medicine considered their educational environment as more positive than negative with potential areas for improvement. Despite that females perceived the educational environment more positive than male trainees, as well as residents in R1 and R4, these differences are not statistically significant.

Recommendations: Future planning for the clinical training and assignment of staff in the Saudi Board should put into consideration the findings of the current study as areas for improvement.

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