ORIGINAL ARTICLE

SATISFACTION OF TRAINEES WITH FAMILY MEDICINE TRAINING PROGRAM: A CROSS SECTIONAL STUDY FROM QASSIM, SAUDI ARABIA

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Background: Focus on quality of postgraduate training has increased. One of the quality indicators is satisfaction of trainees with the residency programs. We aimed to assess the level of satisfaction of Saudi Board family medicine trainees with training program in Qassim. **Methods:** Anonymized online survey, using a structured questionnaire, was conducted among the current family medicine residents (n=60) in Qassim in 2019. Descriptive analyses were carried out to calculate frequencies of the responses. Satisfaction level was compared between basic (R1, R2) and advance (R3, R4) levels using Chi-square test. **Results:** About 67% (40) were basic level trainees. A higher proportion (>80%) of trainees was satisfied with the program director. Satisfaction with trainers ranged 45% to 85% for different items. About 79% of the trainees were satisfied with the training program organization. In the domain of training processes higher proportion (73–83%) was satisfied with supervision and feedback while a lower proportion (63–68%) was satisfied with evaluations. Proportion of satisfied trainees in the domain of hospital rotations was lowest (43%) for academic activities in the hospitals. About family medicine rotations, a higher proportion (75%) was satisfied with academic activities. Higher proportion of trainees (78–86%) was satisfied with research facilitation and supervision. Mean score for overall satisfaction was 7.63 out of 10. **Conclusion:** The results of this study would help focus on certain domains to improve the quality of program. We recommend family medicine programs to regularly carry out such surveys for continuous quality improvement.

Keywords: Family Medicine; Residents; Satisfaction; Training; Saudi Arabia

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INTRODUCTION

A family physician is the cornerstone for effective and efficient health care services. Globally, successful health care systems rely on the family physicians to deliver health care services at the grass root level, thus improving the health service outcome leading to an improvement in the population health.[1] The specifications of health care services rendered by the family physician may vary from country to country, however, basically they are committed to the continuity and comprehensiveness of health care for their patient.[2] Because of their unique role in health care system, the family physicians need to be equipped to handle the demographic, cultural as well as professional transitions. They need to be well-prepared for the social and institutional changes in a timely and effective manner.[3] The holistic approach needed by family physicians calls for provision of quality training to make them able to deal with all relevant situations.

Worldwide, the trainings in family medicine are undergoing changes in terms of their organization and delivery. These changes are introduced to prepare the family physicians to tackle recent challenges such as rising patient expectations, growing technology use in health care, and increasing complexity of health care.[2] Thus the curriculum, the setting as well as the methods of teaching should be customized according to the needs of the target population.[4]

Studies have shown a downward trend of job satisfaction among family physicians. Young quoted personal communication with Shields about the American Academy of Family Physicians (AAFP) annual survey which noted a decline, with the passage of time, in the proportion of family physicians agreeing to choose the same career again if provided an opportunity.[5] Young *et al* found satisfaction with family medicine much lower than AAFP survey, where 50.5 percent responded that they would select again family medicine as a career in comparison to 70 percent answering as 'yes' in the AAFP survey.[5] It was also found that job satisfaction was significantly associated with the training of the family physicians. Job satisfaction was positively associated with "exceptionally broad and in-depth" training. Practical skills for various medical procedures, clinical

experience of managing wide variety of patients and clinical care for hospitalized patients with complications were the attributes of training program that were associated with job satisfaction.[5] Moreover, satisfaction of the trainee physicians regarding their training also affects their learning as well as work performance.[6]

Various studies conducted on satisfaction of family physician trainees have found features of the program that promote professional growth,[6] qualified teachers as role models, adequate teaching time, and training for practical skills for patient management[7] as important factors. Focusing on the factors related to family physician trainee satisfaction is expected to result in improved patient outcomes, better work performance, leading to successful physicians finally resulting in inspiring brilliant students to join the family medicine program.[6]

Over the last few years, there has been increased focus on the quality of medical education at both undergraduate and postgraduate levels.[8] In this context, ongoing assessment of the family medicine training programs is recommended by international organizations related to family medicine (FM).[9] A successful family medicine program needs to have contended trainees who are satisfied with their teachers, curriculum as well as the teaching methods. Seeking trainees' opinion is also helpful in resolving the problems faced by family medicine training programs such as deficiencies related to infrastructure and curriculum development.[10] The comments and suggestions of the trainees regarding their curriculum, clinical training, and infrastructure are helpful in making timely modifications for improvement of the program.[11] Trainees' satisfaction is also one of the quality indicators of training programs.[12]

As a part of quality management of Saudi Board Family Medicine (SBFM) Qassim, we carried out a trainees' satisfaction survey in 2019 to assess the satisfaction of trainees with different aspects of the program. To the best of our knowledge, this was the first comprehensive satisfaction survey for Family Medicine Training Program in Qassim. The purpose of the survey was to learn about the training gaps and to explore how to improve the family medicine training in a way that the future family physicians are well prepared to work effectively in the primary health care environment. The results of this survey will inform the policy makers and program managers about the needs and areas for improvement in the training of family physicians. The findings of the study can be used to take measures for increasing trainees' satisfaction, which may result in improved work performance of the graduates finally resulting in better patient satisfaction.

MATERIAL AND METHODS

This was a cross sectional survey carried out in February to March 2019 among FM residents in Buraidah, Qassim. Postgraduate Family Medicine training in Al Qassim region of Kingdom of Saudi Arabia (KSA) started in 2009 as Saudi diploma family medicine which was upgraded to 4-year Saudi Board Family Medicine program in 2017. We included in our survey all the residents enrolled in program; Resident year 1 (R1) to resident year 4 (R4). A questionnaire was developed based on Saudi Commission for Health Specialties accreditation guidelines, review of literature[6,11,13,14] and consultation with family and community medicine consultants and specialist who are working in postgraduate medical education. Questions were scaled on a five-point likert scale (1 being the lowest and 5 being the highest). Questionnaire contained 57 items divide into 12 sections. Data was collected about biodata of the participants. Satisfaction was assessed for human resources; trainers, program director and secretaries, hospital and family medicine rotations, training processes, evaluations, resources, research process, opportunities, skill development and overall satisfaction. Questions in the last section were scaled on 1–10 points. Data was collected online through Google forms.

Analyses were carried out using SPSS version 21.0. Reliability of the questionnaire was assessed by calculating Cronbach's Alpha. Five-point responses were condensed to three categories; "Disagree" by merging "strongly disagree" and "disagree" categories, "Neutral" and "Agree" by merging "strongly agree" and "agree" categories. Frequencies and proportions of responses were calculated. Means score out of five was calculated along with standard deviation for each of the items. Chi-square and Fisher exact test were used to assess the differences in satisfaction between basic (R1 and R2) and advance (R3 and R4) levels. *p*-value less than 0.05 was considered statistically significant. This study was reviewed and approved by Regional Research Ethics Committee, Qassim.

RESULTS

Response rate was hundred percent. All residents (n=60) completed the questionnaire. Among the residents, 38.3% (23) were R1, 28.3% (17) were R2, 15.0% (9) were R3 and 18.3% (11) were R4. Forty percent (24) of the residents were female.

Table-1 shows the reliability analysis and Cronbach's alpha for the different domains assessed during the survey. For research process some of the variables e.g. facilitation for data collection, thesis defence and research evaluators were not included in reliability analyses as those pertained to only senior residents (R3 and R4 only). Overall, there was good internal consistency as Cronbach's alpha values ranged from 0.771 to 0.936 for different domains.

Satisfaction with program director (PD) was high. Approximately 82% of the trainees agreed to "PD treats all residents equally" and adheres to Saudi Commission guidelines. Satisfaction with approachability to PD and communication skills was also high 90% and 85% respectively. In the domain of satisfaction with trainers, 45% of the trainees agreed on adequate number and about one third 32% were neutral. Satisfaction with attendance of trainers in academic activities was good as it ranged between 73–85% for different activities. Satisfaction with program secretaries was also higher and it ranged from 78% for adequate numbers to 85% for approachability to the secretaries (Table-2)

Seventy eight percent trainees agreed that program is well organized and 77% agreed that program encourages learning process. Around two third 67% believed program provides good support to the trainees. In the domain of training process, about 73% were satisfied with effective supervision and mentoring. About 68% agreed on adequate overall assessments during training. (Table-3)

Regarding the hospital rotation, 75% of the trainees agreed that these are well organized. Sixty seven percent agreed that residents' input is taken while planning hospital rotations and only 43% were satisfied with adequacy of academic activities in the hospitals. With respect to FM rotations, 68% agreed that these are well organized while 63% believed time allotted is adequate in PHCCs. Satisfaction with variety of cases at PHCCs was low as only 55% believed that there is variety of cases. (Table-4)

With respect to the resources, 55% agreed on adequate audio/visual (AV) resources and 57% believed adequate simulation/skill lab resources. About accessibility of trainees to learning resources, 60% were satisfied and 71% agreed on access to e-resources.

In the domain research process, about 78% agreed that there is adequate facilitation by the program to conduct research and 85% agreed on adequate facilitation by hospitals/Primary Health Care Centres (PHCCs) for data collection. About 86% of the trainees were satisfied with research supervisors. About two third 68% believed that there are adequate resources available for research. Satisfaction with research day activity (R2 proposal presentations) and theses defence (R4 research evaluation) were high 77% and 100% respectively. Satisfaction with external learning opportunities was generally low as only about 52% agreed that there are adequate opportunities for attending CMEs. Similarly, 50% and 45% were satisfied with opportunities to attend conference and present research respectively.

Around 63% agreed that program helped them develop clinical and critical thinking skills. A higher proportion 75% agreed that program helped develop communication skills while only 53% agreed with computer skills development by the program. Mean overall satisfaction with the program was 7.63 (±1.68) out of 10. For recommending others to join program mean score was 7.68 (±2.41) out of 10. (Figure-1)

When we compared satisfaction levels of basic and advance level trainees, we found significantly higher satisfaction among seniors 100% compared to 78% juniors with attendance of trainers in Half Day Release Course (HDRC) (*p*-value 0.034). There was no significant difference between the two groups with respect to other items in other domains of satisfaction.

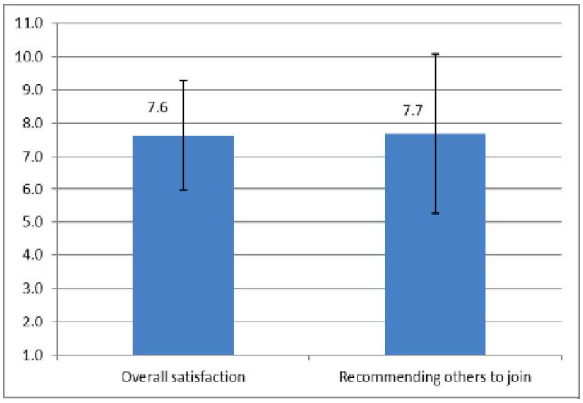

Figure-1 Mean scores of overall satisfaction level and recommending other to join program (Measured on 10-point scale)

Table-1: Reliability analysis of the questionnaire

Domain	Number of Items	Cronbach's Alpha
Trainers	6	0.809
Program Director	4	0.904
Secretaries	5	0.924
Program	3	0.805
Training process	11	0.855
Hospital Rotations	5	0.771
Family Medicine Rotations	5	0.844
Resources	5	0.863
Research Process	4	0.829
Opportunities	3	0.936
Skills development	4	0.832

Table-2: Satisfaction of family medicine trainees with human resources

Domain	Response % (n)			Mean* (SD)
	Disagree	Neutral	Agree	
Program Director				
Treats residents equally	10.0 (6)	8.3 (5)	81.7 (49)	4.17 (1.15)
Adheres to Saudi Commission guidelines	6.7 (4)	11.7 (7)	81.7 (49)	4.25 (1.02)
Approachable	3.3 (2)	6.7 (4)	90.0 (54)	4.50 (0.83)
Good Communication Skills	3.3 (2)	11.7 (7)	85.0 (51)	4.35 (0.88)
Trainers				
There is adequate number of trainers and assistant trainers	23.3 (14)	31.7 (19)	45.0 (27)	3.23 (1.10)
Trainers attend their assigned activities;				
Mentoring sessions	6.7 (4)	20.0 (12)	73.3 (44)	3.85 (0.92)
Half Day Release Course	5.0 (3)	10.0 (6)	85.0 (51)	4.10 (0.84)
Morning meetings	8.3 (5)	10.0 (6)	81.7 (49)	4.00 (0.84)
Trainers are available easily for learning and guidance	20.0 (12)	28.3 (17)	51.7 (31)	3.42 (1.03)
Program Secretaries				
Adequate number	5.0 (3)	16.7 (10)	78.3 (47)	4.13 (0.93)
Well organized	6.7 (4)	10.0 (6)	83.3 (50)	4.13 (0.96)
Approachable	6.7 (4)	8.3 (5)	85.0 (51)	4.18 (0.96)
Professional	10.0 (6)	10.0 (6)	80.0 (48)	4.08 (1.09)
Resolve my issues	8.3 (5)	15.0 (9)	76.7 (46)	3.98 (1.10)
***Means were calculated using five points scores**				

Table-3: Satisfaction of family medicine trainees with program and training process

Domain	Response %(n)			Mean* (SD)
	Disagree	Neutral	Agree	
Program				
Well organized	8.3 (5)	13.3 (8)	78.3 (47)	3.95 (0.85)
Encourages learning process	8.3 (5)	15.0 (9)	76.6 (46)	3.87 (0.87)
Provides good support to the trainees	13.3 (8)	20.0 (12)	66.7 (40)	3.77 (1.02)
Training Process				
Program offers effective supervision and mentoring	6.7 (4)	20.0 (12)	73.3 (44)	3.87 (0.8)
Portfolio/logbook is discussed	3.3 (2)	13.3 (8)	83.3 (50)	3.98 (0.75)
Constructive feedback is given	11.7 (7)	13.3 (8)	75.0 (45)	3.82 (0.87)
There are regular evaluations	5.0 (3)	15.0 (9)	80.0 (48)	3.93 (0.73)
Adequate documentation of evaluations	3.3 (2)	15.0 (9)	81.7 (49)	4.03 (0.74)
Overall assessments are adequate during training	10.0 (6)	21.7 (13)	68.3 (41)	3.72 (0.82)
Trainees are adequately involved in yearly planning	13.3 (8)	31.7 (19)	55.0 (33)	3.48 (0.93)
Introductory module meets the objectives	18.3 (11)	25.0 (15)	56.7 (34)	3.42 (1.00)
Adequate assignments in theoretical courses	1.7 (1)	25.0 (15)	73.3 (44)	3.88 (0.961
Adequate field visits in theoretical courses	6.7 (4)	18.3 (11)	75.0 (45)	3.82 (0.81)
There is practical work/hands on in theoretical courses	11.7 (7)	28.3 (17)	60.0 (36)	3.52 (0.98)
***Means were calculated using five points scores**				

Table-4: Satisfaction of family medicine trainees with clinical rotations

Doman	Response % (n)			Mean* (SD)
	Disagree	Neutral	Agree	
Hospital Rotations				
Well organized	5.0 (3)	20.0 (12)	75.0 (45)	3.92 (0.85)
Beneficial	11.7 (7)	16.7 (10)	71.7 (43)	3.80 (0.90)
Resident input is taken while planning hospital rotations	18.3 (11)	15.0 (9)	66.7 (40)	3.63 (1.06)
Cooperation of hospital staff is satisfactory	20.0 (12)	25.0 (15)	55.0 (33)	3.38 (1.01)
Adequate academic activities in hospitals	25.0 (15)	31.7 (19)	43.3 (26)	3.20 (0.95)
Family Medicine Rotations				
Well organized	13.3 (8)	18.3 (11)	68.3 (41)	3.80 (1.02)
Allotted time is adequate	20.0 (12)	16.7 (10)	63.3 (38)	3.58 (1.08)
Variety of cases at PHCCs©	16.7 (10)	28.3 (17)	55.0 (33)	3.52 (0.98)
Adequate number of patients at PHCCs	13.3 (8)	15.0 (9)	71.7 (43)	3.78 (1.08)
Adequate academic activities in FM rotations	13.3 (8)	11.7 (7)	75.0 (45)	3.78 (0.99)
***Means were calculated using five points scores; ©Primary Health Care Centres**				

DISCUSSION

Family medicine is going through expansions and transformations globally. For effective and safe primary care services delivery, high quality FM training programs are required. This calls for changes and improvement in the quality of family medicine trainings and regular assessments.[2,9] As a part of training program quality improvement initiative, residents' satisfaction was assessed in Qassim region of KSA. Satisfaction levels varied for different domains and items within each domain.

Adequate number of trainers is an important factor which is related to satisfaction in other domains of the training programs.[15] Satisfaction with adequacy of number of trainers in our study 45% is lower than 86%, reported in a study conducted in four regions of KSA.[16] In contrast, it is slightly higher than reported (39%) in another study conducted previously.[11] Availability of trainers for support and guidance in our study was also similar to reported elsewhere in the KSA.[17] Overall satisfaction with program director was high in our study. This finding is similar to reported in FM resident exit survey in Toronto, Canada.[18] There is need to acquire adequate number of trainers and allocate them efficiently for supervision and mentoring of trainees.

Satisfaction of trainees with the training has been associated with learning and work performance.[6] Generally satisfaction level with the training processes was high in our study means scores ranging from 3.42 to 4.03 for different items within training processes. However, a previous study on satisfaction of trainees with Saudi Diploma Family Medicine in four examination centres of KSA found a slightly higher level of satisfaction with overall organization and processes domain of training where mean scores ranged from 3.5–4.0.[13] Another study from Montenegro reported higher levels of satisfaction with program organization and processes 4.41–4.68 out of 5.[19] The possible reason for higher satisfaction reported in study by Al-Khalidi *et al*[13] was that they did not reported neutral opinion about the items which might have over-estimated the satisfaction level. In our study we along with two opinions, we included neutral opinion also to see more accurate perception of the trainees. Our study results showed higher satisfaction levels with certain domains such as effective supervision (73%) and availability of facilities (71%) compared to a previous study where only 60% and 59% of the trainees were satisfied with supervision and availability of internet and library respectively.[11] This difference could be due to fact that over the period Saudi Commission for Health Specialties has revised its accreditation standards and guidelines. Further there are regional differences in the satisfaction levels of trainees in FM training programs in the Kingdom.[11,13,14]

Clinical rotations are important aspect of FM training for adequate knowledge and skills acquisition. There was good satisfaction with the organization of hospital rotations in our study; however, satisfaction with the cooperation of hospital staff and adequacy of academic activities was low. This finding is consistent with previous study.[13] A study from Turkey also reported low satisfaction of FM residents with hospital rotations and a high demand for improved coordination between program and hospitals to improve the outcome of hospital rotations.[10] Programs should develop mechanisms for effective coordination and monitoring of hospital rotations. There is also need for involvement of FM trainees in the formal academic rounds, meetings and other academic activities in the hospitals. Satisfaction with FM rotations was moderate in this study. Exposure to variety of cases during FM rotations was lower than reported previously in different settings.[10,13,18] This calls for proper implementation of case exposure guidelines during the rotations to ensure adequate exposure to variety of cases. Satisfaction with opportunities to participate in Continued Medical Education and other scientific activities was lower and similar to reported previously in the KSA.[17] Satisfaction with skills development by the program such as communication and research was similar to the report from Canada.[18]

Overall satisfaction of the trainees with program in our study 7.61 out of 10 was comparable to reported from Montenegro 4.1 out of 5[19] and higher than United Sates 50%[5]. Residents' intentions to recommend others to join program was also higher in this study 7.7 out of 10 which is slightly lower than reported previously 89%.[11]

We did not observe differences in the satisfaction levels of basic and advance level trainees. This lack of significance could be due to lack of statistical power to detect smaller differences as sample size was small. Other possible reason could be standardized training procedure in the program across all the levels. This study has identified certain aspects of training which need improvement such as number of trainers and availability of trainers, involvement of trainees in the planning process, hospital rotations and family medicine introductory module. Another important finding in our study is that a large proportion of the trainees were neutral for many of the domains and items with in domains. This could be due to fact that we also included R1 in the survey, who might have not been exposed to all the experiences of training. However, for some of the specific domains such as theoretical course we

restricted responses for relevant year of training only who have gone through such experiences. Nonetheless this is an area to work on by the program management to convert neutral opinions on the right side of equation of satisfaction.

CONCLUSION

This study has provided information about areas of strength and weaknesses of the program which should be addressed by program management. This study will also help other programs to work on this dimension of training program quality and calls for other programs to start studying trainees' satisfaction and areas of improvement to overall improve the quality of training programs.

AUTHORS' CONTRIBUTION

UR, SAA: Study conceptualization and methods. UR, CSK: Data collection and analysis. UR, CSK, SJ, AAS: Manuscript writing. SAA: Critical review of the draft. All the authors reviewed and approved final version for publication.

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