



## PATIENTS' KNOWLEDGE, PERCEPTION AND EXPERIENCE TOWARD FAMILY MEDICINE RESIDENTS IN PRIMARY HEALTH CARE CLINICS, EP, KSA.

### General Medicine

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### ABSTRACT

**Purpose:** to assess patients' knowledge, perception and experience toward family medicine residents in primary health care clinics in Eastern Province of KSA.

**Methods:** This cross-sectional study included all accredited family medicine training clinics (N=7). Using validated and reliable self-administered questionnaire, 120 patients/care givers were randomly invited to participate in the study between from September 2016 till April 2017.

**Results:** One hundred and six patients/ care givers participated in the study. Regarding participants' knowledge about the family medicine residents: (67.6%) of them don't know the clinic is belonging to the post graduate family medicine program, and (55.2%) of them said a resident is a medical student. Patients' views and experience regarding the involvement of residents in their care were high. Patients' Job is significantly associated with the preference of residents' participation during a health care visit. Non health professionals and those who have no job prefer residents' participation much more than students and retired participants (P = .000). Patients' gender, education and job were found to be significantly associated with the preference of same gender residents' in their care (p= .018, .016, .036).

**Conclusion:** The study revealed a high positive experience and point of view toward family medicine trainee. However, most respondents have deficient information about family medicine residency program

### KEYWORDS

#### Introduction:

Patient's lie at the heart of medical education process and real case-based teaching is vital in training students and resident doctors [1]. Traditionally, patients have had a passive role in medical education, but usually not invited to be a fully informed partner. Now, as greater emphasis is given to providing patient-centered care; there has been a corresponding shift towards patient-centered learning within medicine. This paradigm shift of patient's role from passive participants to a fully informed partner necessitates the study of patient's perceptions, concerns and experience towards trainees' particularly resident doctors. A lot of studies discuss medical education but few consider patients' perception, experience, and views toward residents. [2] Patients were found to be satisfied with care provided by residents even without being fully informed about the trainee's system. [3] [7] In general patients have positive experience, which was related to their interest of being a part of teaching process and discussion. However, some patients refuse family medicine residents and prefer their usual family physician. [4]

Female patients did not like the presence of students during physical and gynecological examination. Also patients did not prefer the presence of more than one student; however Patients' views were changed over decades. [5] [6] Patients feel less comfortable with residents doing their surgical procedure. [8]

Many factors were associated with patients' dissatisfaction like discussing psychological or sexual problems, when the patient is child, or patient had a clear organic problem. [9]

Patients play essential role in medical education. Literature about patient- oriented learning lacks the descriptive and evaluative role of patient in medical education.[10] [11] This study will assess the patients' knowledge, perception and experience about family medicine residents in Eastern Province of KSA.

#### Methods:

**Study setting and sampling procedure:** This cross-sectional study included all accredited family medicine FM training clinics (N=7) in Dammam and Khobar cities, Eastern province, KSA. There are 4 family medicine clinics scheduled weekly for residents' training, three

for board and one for diploma residents. Therefore 75% of the sample was collected from board and 25% for diploma clinics. One hundred and twenty patients/care givers were randomly invited to participate in the study between from September 2016 till April 2017.

**Data collection:** Self-administered questionnaire used. The questionnaire was adopted from previously published research. [4] The reliability had a Cronbach's alpha of 0.777. Moreover, the questionnaire has five sections. First section includes residents and clinic basic information and responding patients' characteristics. Second section asks about the patients' relationship with clinic and health center. Third section evaluates the patients' knowledge about the residents and family medicine training program. Fourth section explores the patients' views about the involvement of residents in their care. The last section assesses the patients' experience with family medicine residents in their care. After obtaining consent, questionnaires were handed to the respondents after their visit to the family medicine clinic. A trained nurse in each center assisted in questionnaires distribution and respond to participants' inquiries.

**Statistical analysis:** Data analyzed using Statistical Package of the Social Sciences (SPSS) program version 19. Descriptive statistics, frequency and percentage performed to describe patients and residents characteristics. Chi-square and Fisher-exact tests used to assess the association between patients' knowledge, views and experience and patients/residents characteristics.

#### Results:

##### Residents and patients characteristics:

One hundred and six patients/ care givers participated in the study, of them 88 (83.02%) was patients and 18 (16.92%) was care givers to pediatric patients. More than one third 39 (36.8) of patients/care givers consultations attended by one resident while 42 (39.6%) attended by two residents, and the rest 25 (23.6%) attended by either three or four residents. Board residents participated in two thirds of the consultations. **Table 1** shows the description of residents involved in participants' care.

**Table 1:** Description of residents involved in participants' care

**Table 1: Description of residents involved in participants' care**

Characteristic Description	N	%	
Number of residents In Clinic (N=106) Residents level (N=106)	1	39	36.8%
	2	42	39.6%
	3	7	6.6%
	4	18	17.0%
	Junior	24	22.6%
Resident Certificate	Senior	82	77.4%
	Board	73	68.9%
	Diploma	26	24.5%
Residents Gender (N=106)	Mix	7	6.6%
	Male	16	15.1%
	Female	75	70.8%
	Mixed	15	14.2%

Number of residents In Clinic Female constituted 70.8% of the participated patients/care givers. Most of the participants (83.5%) have secondary education and above, the majority (91.5%) rated their relationship with the health center as good or excellent. The characteristics of the participants are shown in Table 2.

**Table 2: The characteristics of the participating patients/care givers**

Characteristic	Description	N	%
Gender (N=106)	M	31	29.2%
	F	75	70.8%
Education (N=103)	No School	3	2.9%
	Primary	14	13.6%
	Secondary	37	35.9%
	University	48	46.6%
	Postgraduate	1	1.0%
Job (N=102)	No job	26	25.5%
	School Student	6	5.9%
	University Student	6	5.9%
	Housewife	16	15.7%
	Health Professional	5	4.9%
	Non Health Professional	35	34.3%
Years of Follow up in the health center (N=106)	Retired	8	7.8%
	0-1	28	28.0%
	2-5	35	35.0%
	6-10	14	14.0%
Relationship to the health center (N=106)	> 10	23	23.0%
	Excellent	63	59.4%
	Good	34	32.1%
	Not Bad	9	8.5%
Evaluation of current health status (N=106)	Bad	0	0.0%
	Excellent	46	43.4%
	Good	52	49.1%
	Not Bad	7	6.6%
	Bad	1	.9%

**Patients/care givers knowledge about the family medicine residents:** Above two thirds (67.6%) of the patients/care givers don't know the family medicine clinic is belonging to the post graduate family medicine program. More than half (55.2%) of the participants said a resident is a medical student, and 86.8% preferred a resident participation in their care. Knowledge about the family medicine residents is displayed in Table 3.

**Table 3: Patients' knowledge about Family Medicine residents in the clinic**

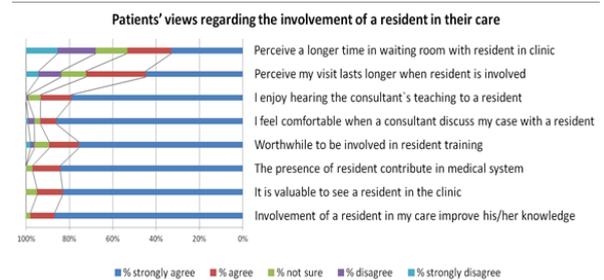
Characteristic	Description	N	%
Is a FMC belonging to the PFMP? (N=105)	Yes	34	32.4%
	No	71	67.6%
Is a resident a medical student? (N=105)	Yes	58	55.2%
	NO	33	31.4%
Is a resident will be specialist? (N=106)	Not Sure	14	13.3%
	Yes	88	83.0%
	NO	6	5.7%
	Not Sure	12	11.3%

Number of resident in your Care? (N=104)	1-2	82	78.8%
	3-4	20	19.2%
	More than 5	2	1.9%
Do you prefer the participation of residents during your visit? (N=106)	Yes	92	86.8%
	NO	4	3.8%
	Not Sure	10	9.4%

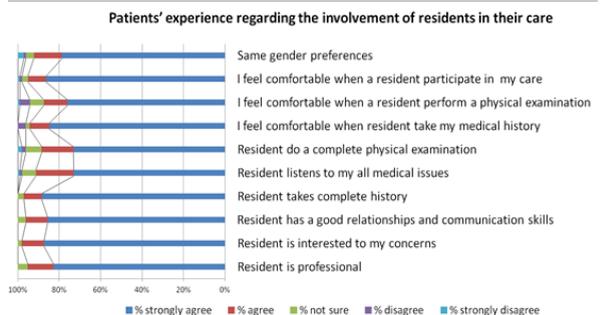
**Patients' views and experience regarding the involvement of residents in their care:**

Majority (86.8%) of the participants is strongly agreed that involvement of a resident in their care improve his/her knowledge and (85.8%) of them feel comfortable when consultants discuss their cases with residents. On the other hand around half (44.8%) strongly agree that the visit time increases with the presence of residents. One third (33%) of the participants are strongly agree that waiting time to enter the family medicine clinic increases with the presence of resident. Also 78.8% strongly agree that they prefer to be seen by residents from their gender. Figures 1 and 2 display the participants views and experiences regarding the involvement of residents in their care.

**Figure 1: Patients' views regarding the involvement of residents in their care**



**Figure 2: Patients' experience with the involvement of a resident in their care**



**Associated factors with participants' views and experiences about residents:**

Patients' Job is significantly associated with the preference of residents' participation during a health care visit. Non health professionals and those who have no job prefer residents' participation much more than students and retired participants (P = .000). Patients' gender, education and job were found to be associated with the preference of same gender residents' in their care (p= .018, .016, .036). Females' preference of same gender residents is significantly higher than males, while educated patients, retired and health professionals were having less preference. Table 4 displays the association between patients' characteristics and their preference of same gender residents' in their care.

**Table 4: Association between patients' characteristics and their preference of same gender residents' in their care.**

Patients' characteristics	Preference of same residents' gender								Fisher exact test P-Value			
	Totally Agree		Agree		Not Sure		Disagree			Totally Disagree		
	N	%	N	%	N	%	N	%		N	%	
Gender	M	18	(60.0)	6	(20.0)	3	(10.0)	1	(3.3)	2	(6.7)	.018

	F	64 (86.5)	8 (10.8)	1 (1.4)	0 (0.0)	1 (1.4)	0 (0.0)	1 (1.4)	0 (0.0)	1 (1.4)	.016
Education	No School	3 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	
	Primary	12 (85.7)	1 (7.1)	0 (0.0)	0 (0.0)	0 (0.0)	1 (7.1)	0 (0.0)	0 (0.0)	0 (0.0)	
	Secondary	27 (77.1)	6 (17.1)	2 (5.7)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	
	University	37 (77.1)	7 (14.6)	1 (2.1)	1 (2.1)	1 (2.1)	2 (4.2)	0 (0.0)	0 (0.0)	0 (0.0)	
	Postgraduate	0 (0.0)	0 (0.0)	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	

Female patient is significantly associated with being as part of medical education than male. (P=.021, .032 & .005) for the variables; valuable to see a resident in the clinic; worthwhile to be involved in resident training; and Feel comfortable when consultant discuss my case with the resident. The presence of female resident in the clinic is also significantly associated with positive agreement of patients to be as part of medical education process. (P=.007 & .016) for the variables; valuable to see a resident in the clinic; and feel comfortable when consultant discuss my case with the resident. Table5. Displays the association between patients being as part of medical education and demographic characteristics

**Table5: Association between patients being as part of medical education and demographic characteristics**

		It is valuable to see a resident in the clinic										P-Value
		Totally Agree		Agree		Not Sure		Disagree		Totally Disagree		
		N	Row N %	N	Row N %	N	Row N %	N	Row N %	N	Row N %	
Resident level	Junior	21	95.5%	0	0.0%	1	4.5%	0	0.0%	0	0.0%	.145
	Senior	63	79.7%	12	15.2%	4	5.1%	0	0.0%	0	0.0%	
Resident Gender	Male	8	53.3%	6	40.0%	1	6.7%	0	0.0%	0	0.0%	.007
	Female	64	88.9%	5	6.9%	3	4.2%	0	0.0%	0	0.0%	
	Mixed	12	85.7%	1	7.1%	1	7.1%	0	0.0%	0	0.0%	
Patient Gender	M	18	66.7%	7	25.9%	2	7.4%	0	0.0%	0	0.0%	.021
	F	66	89.2%	5	6.8%	3	4.1%	0	0.0%	0	0.0%	
Worthwhile to be involved in resident training												
Patient Gender	M	18	62.1%	7	24.1%	1	3.4%	1	3.4%	2	6.9%	.032
	F	60	81.1%	7	9.5%	6	8.1%	1	1.4%	0	0.0%	
Job	No job	16	64.0%	4	16.0%	4	16.0%	1	4.0%	0	0.0%	.002
	School Student	2	33.3%	1	16.7%	2	33.3%	1	16.7%	0	0.0%	
	University Student	6	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	
	Housewife	12	75.0%	3	18.8%	1	6.3%	0	0.0%	0	0.0%	
	Health Professional	4	80.0%	1	20.0%	0	0.0%	0	0.0%	0	0.0%	
	Non Health Professional	30	88.2%	4	11.8%	0	0.0%	0	0.0%	0	0.0%	
	Retired	5	62.5%	1	12.5%	0	0.0%	0	0.0%	2	25.0%	
Feel comfortable when consultant discuss my case with the resident												
Resident level	Junior	19	79.2%	1	4.2%	3	12.5%	1	4.2%	0	0.0%	0.043
	Senior	65	79.3%	14	17.1%	3	3.7%	0	0.0%	0	0.0%	
Resident Gender	Male	9	56.3%	7	43.8%	0	0.0%	0	0.0%	0	0.0%	0.016
	Female	61	81.3%	8	10.7%	5	6.7%	1	1.3%	0	0.0%	
	Mixed	14	93.3%	0	0.0%	1	6.7%	0	0.0%	0	0.0%	
Patient Gender	M	18	58.1%	9	29.0%	3	9.7%	1	3.2%	0	0.0%	0.005
	F	66	88.0%	6	8.0%	3	4.0%	0	0.0%	0	0.0%	

**Discussion:**

There were many international studies evaluated patients` knowledge, attitude and experience toward residents in different training programs, however no single study found in Middle East. Moreover, the research reveals that more than half (55.2%) of respondent think that residents are medical students, as found in a similar Canadian research [4]. Although, (83%) believe that resident will eventually become a specialist, few of them know about SPFM training program and its clinics (32.2 %). That reflects insufficient public recognition and awareness about medical training centers. Even though, majority of respondents prefer the presence of residents in their care (78.8%), as seen in previous studies done in other specialties with the exception of residents` involvement in surgical procedures [4,7,8]. This preference was seen more in patients who work in non-health related professions and those without job in comparison to students and retired.

Up to thirty three percent of patients totally agree that waiting time increases in the presence of residents; however this doesn't represent a significant reason to make patients avoid training clinics [4]. Many patients, 44.8% totally agree that visit time increased, this could mainly be attributed to the application of comprehensive care by

trainees.

Fortunately, overall patients` experience was favorable by 95% of them. In addition to that up to 94% of respondents feel happy as being part of education process which is slightly higher than percentages in old published studies [4, 7, 8]. This is may be because public awareness about the importance of teaching junior physicians had improved, and it is mostly seen if there were female resident. Generally female patients were having significantly higher agreement than males in being as part of medical education. Moreover, the presence of female resident in the clinic is positively affecting the patients` opinion to be as part of medical education process. Patients who visit PHC more frequently (82.4% of monthly visitors), university students (100%), and workers in non-health related professions (88.2%) find it worthy to get involved of resident training in comparison to retired patients. Lastly, feeling comfortable about consultant- residents discussion was seen in eighty eight percent of female patients.

Additionally, as previous published studies many patients prefer to be seen by resident of same gender particularly females and housewives [4], while it is less likely in highly educated patients.

On one hand, the strength of the study seen in high patient response rate and that is a result of colleagues' cooperation in different PHC. Besides that the variation in PHCs, and residents' level were considered in the study.

On the other hand, there were some limitations in the study because no comments written by the patient although there were a blank for that, another thing most respondents were woman.

Study implications are patient should be informed about family medicine training program and their role of education of future Family physicians.

#### **Conclusion:**

Residents were evaluated by supervisor meeting, clinical and written exam, while the most valuable member the patient is not included. The study fortunately, revealed high positive experience and point of view toward family medicine trainee. Also it showed patients' passion to be an educator. However, most respondents have deficient information about family medicine residency program. Generally female patients were having significantly higher agreement than males in being as part of medical education. The presence of female resident in the clinic is positively affecting the patients' opinion to be as part of medical education process.

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