Gender Differences in Consultation Time and its Relation to Patient's Satisfaction: a cross-sectional study at King Khalid University Primary Health Care Clinics In Riyadh, Saudi Arabia

Haya Al-Abbad

Correspondence:
Haya Al-Abbad
Department: Family and Community Medicine
King Khalid University Hospital
Riyadh, Saudi Arabia.
P.O.BOX 5949, POSTAL CODE 11432
King Khalid university hospital, Family and Community Medicine
Phone: 00966553163105
Email: Haya_alabbad@hotmail.com

Abstract

Background: Patient's satisfaction is regarded as an outcome of care in itself and is one of the major contributors toward better patient compliance leading, presumably, to better clinical outcomes. Many studies have been done in Saudi Arabia assessing health care services but only few were conducted assessing consultation per se and was quite a long time ago. The objective of the study is to find the relation between consultation time and patient's satisfaction of both male and female patients and the other correlates of patient's satisfaction among those attending Primary Health Care Clinics.

Methods: A descriptive cross-sectional study was carried out over April-June during 2013; adult patients ≥ 18 years old were selected from Primary Care Clinics in Riyadh City. Data was collected using a self-administered questionnaire with 21 items of patient satisfaction scale. Data were analyzed using descriptive and analytic statistics.

Results: The study included 400 patients. The average consultation time among females was (16.28±8.006) minutes and among males was (17.68±9.049) with no significant difference (p-value=0.102,CI -0.280,3.080). The mean satisfaction score among females was (94.18,SD=±1.54), while among males was (104.68,SD=±11.99). The difference between the two groups in the overall satisfaction score is significant. Female patient's satisfaction was positively correlated with consultation time as well as the age. Among males, the satisfaction didn't show any correlation with the consultation time but it was negatively correlated with marital status, experiencing bad experience with family medicine doctor in the last year, and with the waiting time in waiting area.

Conclusion: Females' satisfaction is positively correlated with consultation time, with consideration to give more time to them, focusing on psychological problems, which needs better doctor-patient communication skills. On the other hand, males' satisfaction didn't show significant correlation with consultation time and other aspects of satisfaction other than consultation itself should be analyzed such as health care system and services (waiting area setting, nurses, pharmacy, and building).

Key words: Consultation time, consultation length, gender, patient satisfaction.

Background

Patient satisfaction is regarded as an outcome of care in itself and is one of the major contributors toward better patient compliance leading, presumably, to better clinical outcomes [1]. Through consultation, one can measure the quality of care provided and overall patient's satisfaction [2].

Many Studies have been conducted to assess patient's satisfaction, most of them were about health care services, others about drugs and prescriptions [2, 3, 4, 5, 6] and few were about consultation itself and consultation time. One study conducted in Philadelphia, United States , reported mean patient satisfaction with primary care physicians of (62.9) for males and (60.7) for females [7]. Another study in Slovenia, reported that (58.2%) of participants rated the level of care received as excellent with no discrimination between genders [1].

One study conducted at Ministry of Health facilities in Jeddah, Saudi Arabia, assessed the factors associated with patient's care during consultation in 1997, and showed that the rate of patient's satisfaction with the primary health care clinics was (73.2%) without discrimination between genders although the study stated that gender is a significant factor affecting patient care [2]. Another study conducted in Qateef, Saudi Arabia, assessed the determinants of users' satisfaction with primary health care settings in 1999 and included consultation time as one the components, and revealed the rate of patients' satisfaction with consultation time as (79.7%) but again no differences were shown between genders [4].

Many factors play a role on patient's satisfaction during the consultation, including physician's characteristics, patient's characteristics, organizational factors and health care system [8]. Among patients' characteristics, studies found that gender difference has an effect on patient's overall satisfaction [3]. Al-Dawood mentioned that female gender is the most influential factor [5] and some studies showed that females are less satisfied with their consultation [3]. This in turn may be related to consultation time, which could be short or insufficient for them [9] and ultimately can affect patient's satisfaction as was mentioned by Raja Lexshimi who revealed low patient's satisfaction with consultation time [10].

Hence, looking at consultation time, different countries showed different average consultation times [9, 11]. A study done in Europe measuring consultation length among six different countries, showed that Germany had the shortest consultation time with mean of (7.6) minutes and Switzerland had the longest consultation time with mean of (15.6) minutes [9]. Another study in Qatar stated that the mean time was (10.7) minutes and for Arabian Gulf Areas was (5.9) minutes [11]. In Saudi Arabia, a study was conducted in eastern province primary health care centers and showed that the mean consultation time was (7.3) minutes with a range between (4.6-12.6) minutes with no differences given between males and females [5].

Different reasons attribute toward different consultation times and ultimately to different satisfaction rates. Female gender with their own characteristics as they reported higher psychological problems than males including depression, anxiety and emotional issues [12], had longer consultation time and the longest consultation time was found when a female doctor was dealing with a female patient [13].

Female gender needs longer consultation [2]. This study aims to identify if female patients, in comparison with males, are satisfied with longer consultation time at King Khalid University Primary Health Care Clinics.

The rationale of this project is that many studies have been done in Saudi Arabia assessing health care services but only one was found that conducted assessing consultation per se and was done in 1997 which is quite a long time ago. In fact, satisfaction is one of the measures of quality outcome, which needs to be assessed continuously.

Materials and methods

This is a cross-sectional study conducted from April-June, 2013 at Primary Health Care Clinics in Riyadh, Saudi Arabia. A total of 400 patients (200 males, 200 females) were included in the study. The sample size was calculated based on the assumption that females are at twice the risk of low satisfaction than males, taking into account CI=95% , power of 80, ratio between male and female =1 and percent of control exposed =30% with refusal rate of 10%.

Separate primary health care clinics (PHCC) are conducted for males and females. Four (PHCC) were randomly selected during each morning and afternoon slots (2 female and 2 male clinics) and patients were selected consecutively. Male and female patients attending PHCC $\geq$ 18 years old were included involving Saudi and non-Saudi patients. These clinics were run by Saudi and non-Saudi doctors who are working as (professors, consultants, senior registrars, registrars). Clinics that were run by residents and under graduate students were excluded as well as patients < 18 years old, very ill patients presenting as emergency cases, and mentally retarded, blind and deaf patients. Data was collected through self-administered questionnaire from the period (April-June) during 2013. Each questionnaire had two parts; one for the health care provider with consultation time and information about the doctor, whereas the second part was for the patient. Patients were asked to fill in the questionnaire in the waiting area after they were done with their consultation. Written and signed consent was taken before filling in the forms . One male and female research assistants were trained to collect data and interview those patients who had difficulty in reading or writing. Patients completed a questionnaire consisting of Sociodemographic characteristics (age, gender, nationality, marital status, educational level, occupation, residence. In cases if the participant was married, educational level and occupation of the spouse was also inquired about), health status and factors related to patient's satisfaction (participants were

asked if they have any common chronic diseases, any history of stressors in the last 6 months, a history of bad experience with family medicine doctor, their next follow-up appointment, waiting time in the waiting area and things to be changed if it was not comfortable), and the overall patient's satisfaction scale (Medical Interview Satisfaction Scale MISS-21). MISS-21 consists of 21 items with four factors (distress relief, communication comfort, rapport and compliance intent) with 7 point Likert scale [1=very strongly disagree,2=strongly disagree,3=disagree,4=uncertain,5=agree,6=strongly agree,7=very strongly agree]. The original scale was validated, used and adapted for British general practice in 2002. The scale was translated from English to Arabic language with backward translation by two bilingual experts (family physicians) as no previous Arabic version of the scale was found. The minimum score is 21 and maximum score is 147. The score used doesn't have any cutoff point; it is taken as a continuous variable, the more the score, the more the satisfaction.

Pilot testing was carried out on 20 patients. Any ambiguity identified was removed with the approval of an expert epidemiologist. In addition, health care providers completed a questionnaire consisting of doctor's gender, doctor's nationality, professional status, presenting problem if new or follow up, and the number of the visits to the clinic within the last 2 years. The consultation time was calculated in minutes by the health care provider using her/his watch from the moment the patient entered the room to the moment he/she left. After collecting the data, it was coded and entered using SPSS statistical software version 16. Descriptive statistics were done. Frequency tables and appropriate charts of different variables were performed. For seven point satisfaction questions, total score for each patient was summated for all 21 questions. Maximum possible score was (21*7=147). To evaluate statistical difference, Student-t test was used for comparison between mean values of 2 groups. Linear and multiple regression analysis was used to assess correlation. P-value of < 0.05 was used as a level of significance. Approval was taken from the departement administration. Written consent was obtained from those accepted to participate. The survey was anonymous and participants' anonymity was assured by assigning each questionnaire with a code number for the purposes of analysis only.

Results

Data were obtained from 400 patients giving a response rate of 89%. The sample was composed of 200 females and 200 males. Mean age (SD) of female patients was (43, ±14.37) years and ranging from (>18 to 85) years. Mean age (SD) of males was (48, ±16.89) years and ranging from (>18 to 86) years. The difference between the two genders in age is significant with (p-value=0.002, CI =1.764-7.983). Female patients represent (99.5%) Saudi and (0.5%) non-Saudi females, whereas male data represent (95.5%) of the sample as Saudi and (4.5%) non-Saudi.

Average consultation time among females was (16.28) minutes (SD=8.006), (minimum=4 minutes, maximum=50 minutes). While average consultation time among males was (17.68) minutes (SD=9.049), (minimum=3 minutes, maximum=55). The difference between the two groups is not statistically significant with (p-value= 0.102, CI =-0.280, 3.080) as shown in Table 1 and Figures 1 & 2.

Table 1. Average consultation time of both genders:

	Female	Male	P value	CI
Average consultation time (mean ±SD)	16.28(±8.006)	17.68(±9.049)	0.102	(-0.280 , 3.080)

The mean satisfaction score among females was (94.18±1.54). While mean satisfaction score among males was (104.68±11.99). The difference between the two groups in the overall satisfaction score is significant with (p-value=0.000, CI= 7.139,12.947) as shown in Table 2 and Figures 3 & 4.

The majority of female patients were married (64.5%) as were male patients (85%). For education, females reported that most of them were at the level of high school (31%) and most of male patients were at the level of university and advanced studies (42%). For occupation, the majority of female patients were retired or housewives (78.5%) and the remaining (21.5%) were either students, teachers or working in private sector. In contrast, most of male patients were working (60.1%) while (30.3%) are retired and (9.6%) were students. The majority of female and male patients were coming from urban rather than rural areas with frequencies of (90.5% vs. 9.5%) respectively for both genders.

Figure 1. Frequencies of consultation time among female patients

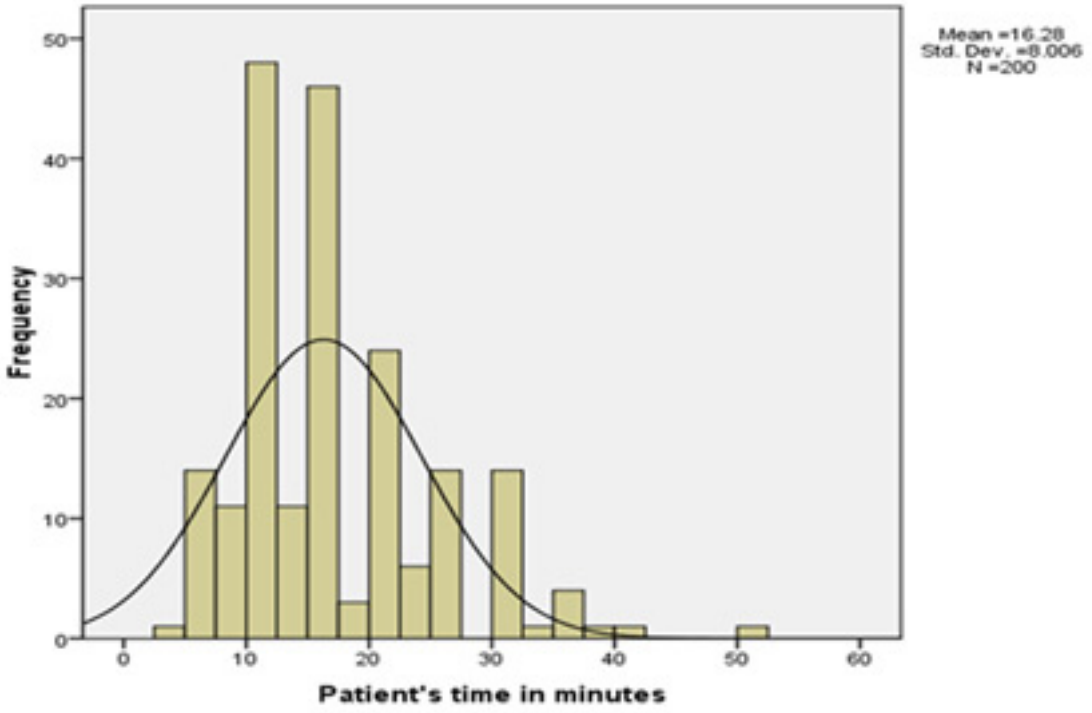


Figure 2. Frequencies of consultation time among male patients

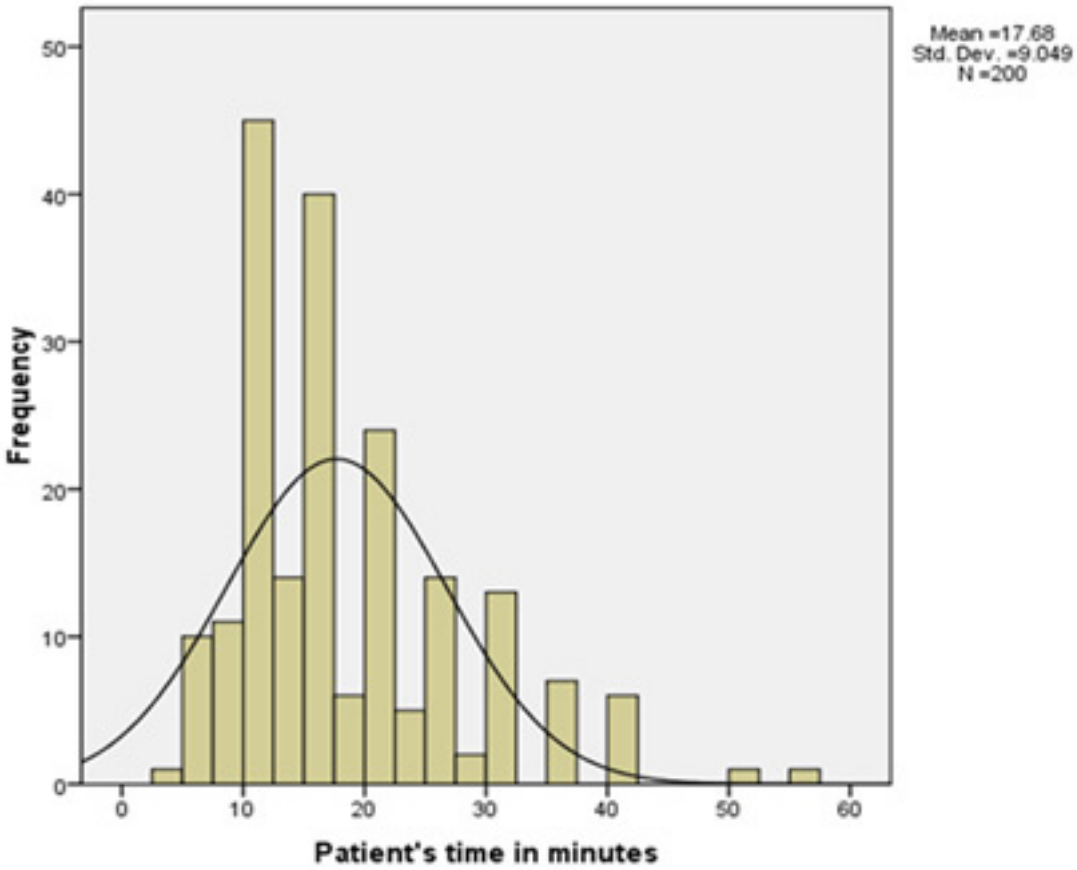


Table 2. Mean satisfaction scores of both genders:

	Female	Male	P value	CI
Satisfaction score (mean ±SD)	94.18(±1.54)	104.68(±11.99)	0.00	(7.139 , 12.947)

Figure 3. Frequencies of overall satisfaction among female patients

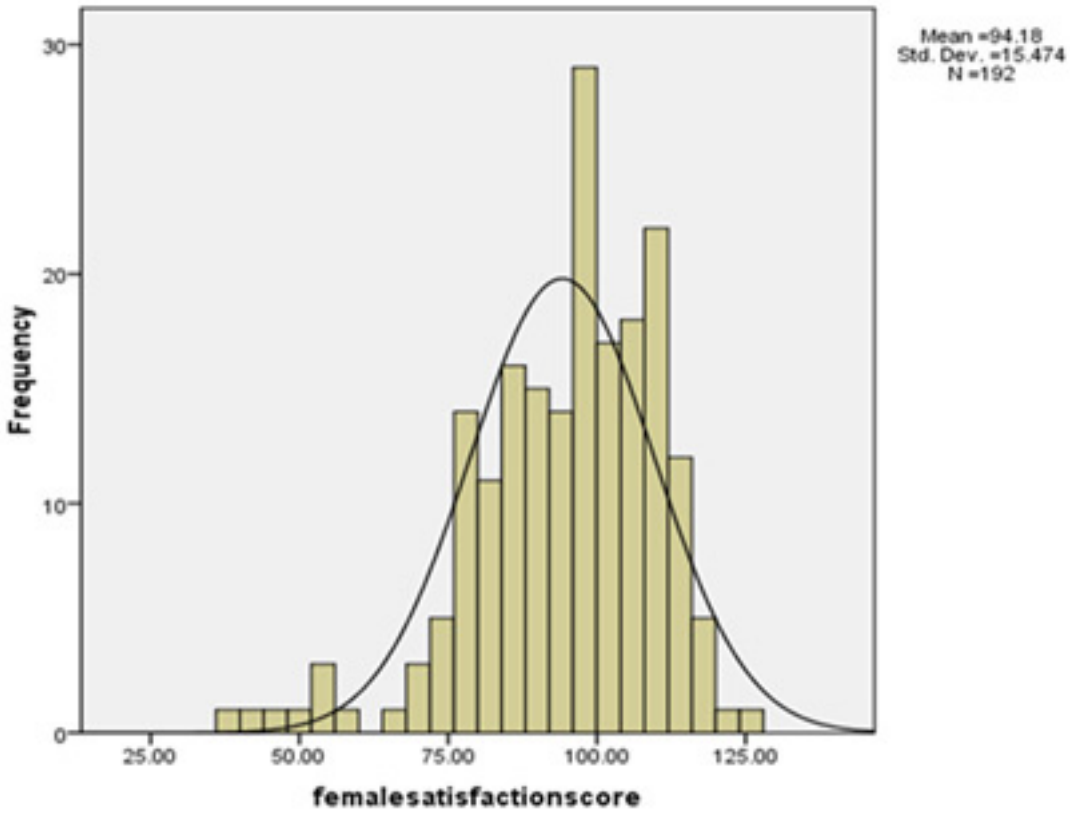
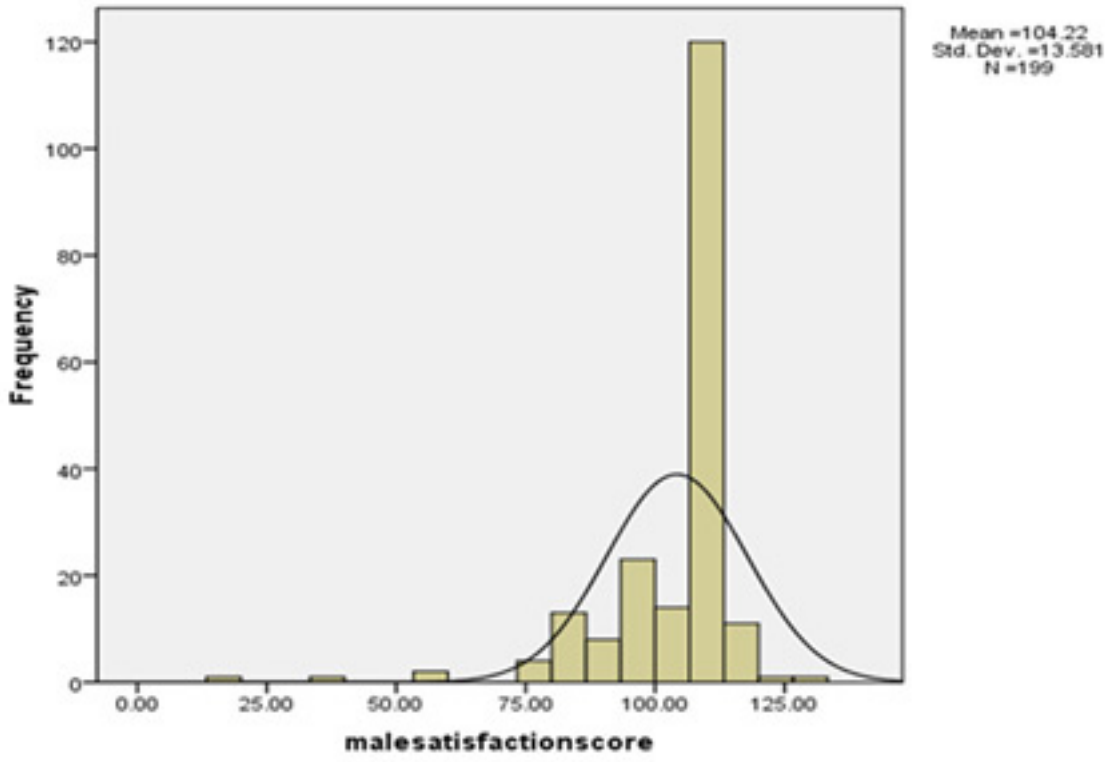


Figure 4. Frequencies of overall satisfaction among male patients



The main reason for most patients' presentation were for follow-up and old problem instead of new problem which was (87.% vs. 12.%) respectively among females and (85% vs. 15%) among males. Chronic diseases have been reported being diagnosed in (82%) of females (in the form of diabetes, hypertension, dyslipedemia, osteoarthritis, hypothyroidism, depression, bronchial asthma, obesity or other diseases such as cardiac, renal, gastritis or dermatological) and most of them had two to three chronic diseases (34.5%) whereas among males, (97%) reported having chronic diseases and most of them had one form of chronic disease (61%). Most female patients were given a follow-up appointment within 6 months-<1 year (66.5%) whereas male patients were mostly given appointments within 3-<6 months (52.5%). The majority of the patients were visiting primary health care clinics more than twice per year in the previous two years (52.2% and 43.3%) among female and male patients respectively.

Among female patients, (43%) reported having stressors in the last 6 months with the highest stressors being socially related (40.69% were social, 26.9% were bereavement, 15.11% were financial, 9.3% were work-related, 9.3% were medical and 4.6% didn't mention the type of their stressors) in contrast, (5.5%) males reported having stressors (36.37% reported bereavement, 18.8% reported medical stressors and 45.45% didn't mention their type of stressor) and both genders fell in the category of having one type of stressor rather than having multiple stressors within the last 6 months. Reporting bad experience was mentioned by (5%) of females and (10.5%) of males with the highest bad experience for females being in communication with their doctors (40%) but for males (95%) didn't mention what type of bad experience they had. For waiting time in waiting area, females showed variable frequencies of waiting time (19.5% waited 5-<15 minutes, 24% waited 15-<30 minutes, 28% waited 30 minutes<1 hour and 28% waited from 1-2 hours) in contrast, for males (41% waited 5-<15 minutes, 33% waited 15-<30 minutes, 19.5% waited 30-<1 hour and 6.5% 1-2 hours). When reporting about if the waiting area was comfortable for them, (90.5%) of females reported that it was comfortable and (77.5%) of males reported so. Females mentioned that the things that must be changed in waiting area if it wasn't comfortable for them were (100% for prayer rooms, 63.15% for chairs, 47.36% for space of waiting area, 36.84% for educational aids, 36.48% for availability of bathrooms, 31.57% for privacy, 10.52% for cleanliness and 26.31% mentioned other things such as receptionist. While males showed that (53.3% for space of waiting area followed by 40% for receptionist, 33.3% for availability of bathrooms, 26.6% for chairs, 11.11% for educational aids, 8.88% for prayer rooms and 46.66% didn't mention anything).

Female patients were seen by female doctors most of the time (93.2% seen by females doctors vs. 6.8% seen by male doctors) as did males where they were seen most of the time by male doctors (93.5% by male doctors vs. 6.5% seen by females). For professional status of the doctors, (50.5%) females and (54.5%) males were seen by professor or consultant. Most of females and male patients were seen by Saudi doctors. The majority of patients were seen by Saudi doctors (66.5% of females vs. 54% for males). Table 3 shows frequency distribution of each variable.

Separate models were made for males and females. Univariate analysis of female patients' satisfaction was highly significant and positively correlates with the consultation time (p-value =0.003, beta=0.211, CI= 0.135, 0.668) and was significant with positive correlation with the age of the patient (p-value= 0.009, beta=0.190, CI =0.049,0.343). It didn't show any correlation with other sociodemographic characteristics or other related factors shown in Table 4. In contrast, male patients' satisfaction didn't show any association with the consultation time (p-value= 0.952, Beta=-0.004, CI= -0.191,0.180). The satisfaction showed negative correlation with marital status (p-value= 0.000, Beta=-0.252, CI= -13.335,-3.977), presence of stressors within the last 6 months (p-value= 0.031,Beta=-0.143, CI= -17.318,-0.856), history of bad experience with family medicine doctor within the last year (p-value 0.010, Beta=-0.182, C=I -14.420,-1.970) and with waiting time in waiting area (p-value= 0.045, Beta=-0.142, CI= -4.116,-0.048). It didn't show any correlation with other sociodemographic characteristics or with other factors related to patient's satisfaction as shown in Table 5.

Multivariate regression showed that female patient's satisfaction was positively correlated with only consultation time (p-value=0.019, Beta=0.176 , CI= 0.054 , 0.588) as well as their age (p-value= 0.057, Beta= 0.141 , CI= -0.005 , -0.297). Among males, the satisfaction didn't show any correlation with the consultation time (p-value= 0.869, Beta= 0.011, CI=-0.187, 0.221) but it was negatively correlated with marital status (p-value= 0.000 , Beta= -0.243, CI= -12.992 , -3.728), experiencing bad experience with family medicine doctor in the last year (p-value=0.009, Beta= -0.179, CI= -14.123 , -1.997) and with the waiting time in waiting area (p-value=0.033 , Beta= -0.146, CI= -4.098 , -0.176) as shown in Tables 6 & 7.

Table 3. Descriptive frequencies of sociodemographic, health care provider and patient's satisfaction related variables: (Part 1)

	Female (n%)	Male (n%)
Sociodemographic:		
Age in years[F =195 , M =198]		
18-<30	39 (19.5%)	33 (16%)
30-<40	26 (13%)	28 (14%)
40-<50	55 (27.5%)	29 (14.5%)
50-<60	48 (24%)	56 (28%)
60->70	27 (13.5%)	52 (26%)
Patient's nationality[F =200,M =200]		
Saudi	199 (99.5%)	191 (95.5%)
Non-Saudi	1 (0.5%)	9 (4.5%)
Marital status[F =200,M =200]		
Single	33 (16.5%)	28 (14%)
Married	129 (64.5%)	170 (85%)
Divorced	11 (5.5%)	2 (1%)
Widowed	27 (13.5%)	---
Educational level of the patient [F =200, M =200]		
Illiterate	58 (29%)	8 (4%)
Elementary	16 (8%)	31 (15.5%)
Intermediate	25 (12.4%)	26 (13%)
High school	62 (31%)	51 (25.5%)
University plus advanced	39 (19.9%)	84 (42%)
Educational level of spouse "if married": [F = 127,M =163]		
Illiterate	14 (11%)	34 (27.6%)
Elementary	19 (15%)	29 (22.7%)
Intermediate	10 (7.9%)	18 (11%)
High school	35 (27.6%)	37 (22.7%)
University plus advanced	49 (38.6%)	45 (27.6%)

Table 3. Descriptive frequencies of sociodemographic, health care provider and patient's satisfaction related variables: (Part 2)

Occupation: [F =191,M =198]		
Retired+ housewife	150 (78.5%)	60 (30.3%)
Student	11 (5.8%)	19 (9.6%)
Government offices	---	61 (30.8%)
Military	---	10 (5.1%)
Teacher	24 (12.6%)	22 (11.1%)
Businessman/private sector	6 (3.1%)	25 (12.6%)
Doctor +lawyer	---	1 (0.5%)
Occupation of spouse "if married" [F =125,M =169]		
Retired +housewife	48 (38.4%)	138 (81.7%)
Student	---	2 (1.2%)
Government offices	28(22.4%)	7 (4.1%)
Military	11 (8.8%)	---
Teacher	22 (17.6%)	21 (12.4%)
Businessman	11 (8.8%)	---
Doctor +lawyer	5 (4%)	1 (0.6%)
Residency[F =200,M =200]		
Urban	181 (90.5%)	181 (90.5%)
Rural	19 (9.5%)	19 (9.5%)
Health status and factors related to patient's satisfaction:		
Medical Problem[F =200,M =200]		
New	25 (12.5%)	30 (15%)
Follow up	175 (87.5%)	170 (85%)
Number of Chronic diseases present [F =200,M=200]		
0	36 (18%)	6 (3%)
1	43 (21.5%)	122 (61%)
2	28 (14%)	40 (20%)
3	41 (20.5%)	24 (12%)
4	26 (13%)	6 (3%)
5	15 (7.5%)	2 (1%)
6	10 (5%)	--
7	1 (0.5%)	--
Average consultation time in minutes [F =200,M =200]		
(mean ±SD)	16.28 (+- 8.006)	17.68(+-9.049)

Table 3. Descriptive frequencies of sociodemographic, health care provider and patient's satisfaction related variables: (Part 3)

Next follow up appointment: [F =200,M =200]		
Less than three months	10(5%)	27 (13.5%)
3 months< 6 months	28 (14%)	105 (52.5%)
6 months< 1 year	133 (66.5%)	53 (26.5%)
More than one year	15 (7.5%)	4 (2%)
No appointment	14 (7%)	11 (5.5%)
Number of visits to the clinic in the last 2 years: [F =182),M =190]		
None	21 (11.5%)	19 (10%)
Once	23 (12.6%)	28 (14.7%)
Twice	43 (23.6%)	32 (32.1%)
More than twice	95 (52.2%)	82 (43.2%)
Any stressors in the last 6 months [F =200,M =200]		
Yes	86 (43%)	11 (5.5%)
No	114 (57%)	189 (94.5%)
Number of stressors in the last 6 months:[F=200,M=200]		
0	114 (57%)	189 (94.5%)
1	74 (37%)	9 (4.5%)
2	11 (5.5%)	2(1%)
3	1 (0.5%)	--
History of bad experience with FM doctor during the last year: [F =200,M =200]		
Yes	10 (5%)	21 (10.5%)
No	190 (95%)	179 (89.5%)
Waiting time in waiting area [F =200, M =200]		
5-<15 minutes	39 (19.5%)	82 (41%)
15-<30 minutes	48 (24%)	66 (33%)
30-<1 hour	56 (28%)	39 (19.5%)
1 hour-2 hours	57 (28%)	13 (6.5%)
Comfortable waiting area: [F =200, M =200]		
Yes	181 (90.5%)	155 (77.5%)
No	19 (9.5%)	45 (22.5%)
Health care provider information: Doctor's gender: [F =191,M =200]		
Male	13 (6.8%)	187 (93.5%)
Female	178 (93.2%)	13 (6.5%)

Table 3. Descriptive frequencies of sociodemographic, health care provider and patient's satisfaction related variables: (Part 4)

Professional status: [F =200,M =200]		
Professor/ consultant	101(50.5%)	109 (54.5%)
Senior registrar/ registrar	99 (49.5%)	91 (45.5%)
Doctor's nationality[F =200,M =200]		
Saudi	133 (66.5%)	108 (54%)
Non-Saudi	67 (33.5%)	92 (46%)

Table 4. Univariate analysis of female patients' satisfaction score with sociodemographic, health status and health care provider variables:

Variable	*B*	*Beta*	*95% CI*	*P value*
Age (in years)	**0.196**	**0.190**	**(0.049 , 0.343)**	**0.009**
Patient's Nationality	9.869	0.046	(-20.78, 40.519)	0.526
Marital status	-2.072	-0.107	(-4.834 , 0.690)	0.141
Educational level of the patient	1.204	0.120	(-0.223 , 2.632)	0.098
Educational level of spouse	0.592	0.059	(-1.222 , 2.406)	0.519
Occupation of the patient	0.309	0.032	(-1.115 , 1.733)	0.669
Occupation of spouse	-0.265	-0.037	(-1.558 , 1.028)	0.686
Residency	0.849	0.016	(-6.546 , 8.244)	0.821
Status of Medical problem	-1.923	-0.041	(-8.595 , 4.750)	0.570
Number of chronic diseases present	1.207	0.137	(-0.038 , 2.452)	0.057
Average consultation time	**0.402**	**0.211**	**(0.135 , 0.668)**	**0.003**
Next follow up appointment	-1.325	-0.071	(-3.973 , 1.323)	0.325
Number of visits to the clinic in the previous 2 years	-1.645	-0.112	(-3.831 , 0.542)	0.139
Recent stressors in the last 6 months	-1.297	-0.042	(-5.752 , 3.157)	0.566
Number of stressors within the last 6 months	-0.359	-0.15	-3.893 , 3.174)(	0.841
History of bad experience with family medicine doctor within the last year	-1.669	0.024	(-11.606 ,8.268)	0.741
Waiting time in the waiting area in this last visit	1.461	0.104	(-0.531 , 3.452)	0.150
Uncomfortable waiting area	-2.305	-0.045	(-9.694 , 5.084)	0.539
Doctor's gender	8.033	0.128	(-1.081 ,17.147)	0.084
Doctor's professional status	1.660	0.054	(-2.751 , 6.071)	0.459
Doctor's nationality	-0.203	-0.006	(-4.888 , 4.482)	0.932

Table 5. Univariate analysis of male patients' satisfaction score with sociodemographic, health status and health care provider variables:

	B	Beta	95% CI	P value
Age (in years)	0.076	0.109	(-0.22 , 0.175)	0.129
Patient's Nationality	8.380	0.129	(-0.704,17.464)	0.070
Marital status	**-8.656**	**-0.252**	**(-13.335 ,-3.977)**	**0.000**
Educational level of the patient	0.487	0.044	(-1.059 , 2.034)	0.535
Educational level of spouse	0.137	0.019	(-0.987 , 1.261)	0.810
Occupation of the patient	0.010	0.001	(-1.090 , 1.111)	0.985
Occupation of spouse	0.640	0.082	(-0.542 , 1.822)	0.287
Residency	-3.794	-0.082	(-9.990 , 1.390)	0.248
New Medical problem	-4.982	-0.130	(-10.249 , 2.661)	0.068
Number of chronic diseases present	0.172	0.012	(-1.891 , 2.235)	0.870
Average consultation time	-0.006	-0.004	(-0.191 , 0.180)	0.953
Next follow up appointment	-1.173	-0.052	(-2.801 , 1.283)	0.218
Number of visits to the clinic in the previous 2 Years	0.475	0.036	(-1.454 , 2.404)	0.628
Any stressors in the last 6 months	**-9.087**	**-0.153**	**(-17.318 , -0.856)**	**0.031**
Number of stressors in the last 6 months	-1.350	-0.024	-9.205 , 6.505)(	0.735
History of bad experience with family medicine doctor within the last year	**-8.195**	**-0182**	**(-14.420 , -1.970)**	**0.010**
Waiting time in the waiting area in this last visit	**-2.082**	**-0.142**	**(-4.116 , -0.048)**	**0.045**
Uncomfortable waiting area	-2.468	-0.076	(-7.005 , 2.069)	0.285
Doctor's gender	-2.865	-0.059	(-9.657 , 3.928)	0.407
Doctor's professional status	0.220	0.008	(-3.600 , 4.041)	0.910
Doctor's nationality	-2.979	-0.110	(-6.777 , -0.819)	0.124

Table 6. Multivariate analysis of female patients' satisfaction score:

	B	Beta	95% CI	P value
Consultation time	0.321	0.176	(0.054 , 0.588)	0.019
age	0.146	0.141	(-0.005 ,-0.297)	0.057

*The results were adjusted for education level, occupation, marital status, waiting time in waiting area, number of chronic diseases, presence and number of stressors within the last 6 months and history of bad experience with family medicine doctor.

Table 7. Multivariate analysis of male patients' satisfaction score:

	B	Beta	95% CI	P value
Consultation time	0.017	0.011	(-0.187 ,0.221)	0.869
Marital status	-8.360	-0.243	(-12.992 ,-3.728)	0.000
History of bad experience with family medicine doctor within the last year	-8.060	-0.179	(-14.123 , -1.997)	0.009
Waiting time in waiting area	-2.137	-0.146	(-4.098 , -0.176)	0.033

*The results were adjusted for age, education level, occupation, number of chronic diseases, presence and number of stressors within the last 6 months.

Discussion

The mean consultation time of female patients' (16.28±8.006) minutes and of males (17.68 ±9.049) minutes is much better than what was reported earlier from PHCC in Saudi Arabia. One study conducted at eastern province showed that average consultation time was (7.3±5.7) minutes [5]. Another study conducted in Jeddah reported mean consultation time of (5.94±0.2) minutes [2]. Looking at different aspects, mean consultation time for Europe was (10.7±6.7) minutes with the longest consultation being reported in Belgium and Switzerland (15±7.2 and 15.6±8.7) minutes respectively, whereas in Arabian Gulf countries, the average consultation time was (5.9±2.4) minutes [4]. This improvement in consultation time would reflect the improvement in the health care system. On the other hand, most of our sample patients were above the age of 40 years. Tahepold H reported in her study that patients > 46 years of age had longer consultations while Myriam Deveugele mentioned in her study that as the patient age increases by one year, the consultation time increases by one second [9, 14 , 15]. Most of the patients presenting to the clinic had one or more chronic diseases and the higher the number of health problems, the more the consultation time [8]. Our study did not show significant difference in the consultation time between both genders. The same was presented in a study conducted at an Estonian family practice [15]. The studies are contradictory, regarding gender and consultation time, with other studies showing that females require more consultation time [2, 9, 15].

Consultation time is considered one of the main factors influencing patient's satisfaction [16]. Looking at the overall patient's satisfaction first, then its relation with consultation time, the study shows that the score of patients' satisfaction of both genders is below expected with significant difference between female and male patients (64.1% for females vs. 71.2% for males) (p. value=0.00, CI=7.139 , 12.947). It is near to what was conducted in Jeddah, which reported a total patient satisfaction of both genders of (73.2%) [2]. Another study conducted in Qatar, showed satisfaction rate of 79%.

The satisfaction among male patients is higher than females. Al-Dawood identified that sex of respondents is the most influential factor on the level of satisfaction, with males being more satisfied [4].

Among males, consultation time didn't show an association with the level of satisfaction; other correlates such as marital status, waiting time in waiting area and bad experience with family medicine doctor within the last year were associated with it inversely. These findings were also shown in some previous studies. Al-Faris reported that being married is associated with more satisfaction [4] and Hassali reported that waiting time more than 2 hours is associated with less satisfaction [16] while Janko reported from a study conducted in Slovenia that waiting in waiting room has the poorest satisfaction [1].

Among females, satisfaction score positively correlated with consultation time. The more time given to females, the more satisfaction. Psychological problems and stressors tend to be higher among females and the presence of emotional stressors is associated with less satisfaction as mentioned by Jane Odgen [14]. Elaborating on psychological stressors takes more time but leads to better satisfaction especially among females. In our study, the rate of psychological problems were expected to be higher than what was found. Although (10%) of females reported

being diagnosed with depression, and (43%) reported having stressors in their life within the last 6 months, they didn't show an association with patient satisfaction. This could be explained by the small sample of patients reporting having depression, as people in our country tend to be conservative with some cultural barriers. In addition, this could explain the overall lesser female satisfaction score. Another explanation is the poor communication skills rather than the time of consultation per se. Doctor-patient communication can affect rate of satisfaction [3] and the best way to assess this is by, videotaping the consultation. This was difficult to conduct, as it is culturally not accepted by Saudi females.

Another positive correlate for female satisfaction in this study is the age. The more advanced the age, the more is the satisfaction which is in accordance with the findings of most previous studies [3, 4].

Other sociodemographic factors such as (level of education, occupation or residency) didn't show any correlation with patients' satisfaction although previous studies showed less satisfaction with lower educational level or being unemployed [4, 6]. Doctor related factors such as gender, nationality or professional status also did not show any correlation. C. Carolyn stated that physicians can promote higher satisfaction by the way they interact with their patients [3] and with perceived empathy from the doctors [16]. Satisfaction is not simply a product of patient demographics and physician skills, it is also affected by the way in which care is provided [3]. It is a complicated construct involving an array of factors including physician's knowledge, clinical and communication skills, accessibility, convenience and location of surrounding areas and continuity of care.

Conclusion

Female satisfaction is positively correlated with consultation time, with consideration to give more time to them, focusing on psychological problems, which needs better doctor-patient communication skills. On the other hand, males' satisfaction didn't show significant correlation with consultation time and other aspects of satisfaction other than consultation itself should be analyzed such as health care system and services (waiting area setting, nurses, pharmacy, and building).

The study highlights the need to increase the consultation time among females for better satisfaction as well as the need to focus on psychological problems especially among females with good training in communication skills. It emphasizes the need for continuous studies for evaluation of patients' satisfaction with the consultation.

Conducting studies for evaluation of patients' satisfaction with other aspects such as health care services is suggested, since they play a major role in overall patients' satisfaction.

This study had some limitation in the form of study sample population. Although it was done in a large primary care clinic in Riyadh, it is better if we involve other primary health care centers in Riyadh to make the generalization more accurate. And for better assessment of the consultation and its quality, videotaping should be used but, because of our cultural barriers it will be difficult to apply with a high rate of refusal especially among females.

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