1	Original Research Article
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3	Pharmacist Perceived barriers to Patient counseling; A study in Eastern
4	region of Saudi Arabia
5	ABSTRACT
6	Background: Pharmaceutical care model (PCM) is the philosophy of practice that includes
7	identifying and resolving medication therapy problems to improve patient outcomes. Patient
8	counseling by a pharmacist is a fundamental step in health care practice, as it allows the
9	patients to have an adequate knowledge about their drug therapy which leads to more
10	adherence and less adverse effect hence better outcome for PCM. However, there are many
11	barriers that may hinder this step.
12	The aim of the study: This study highlights the barriers to patient counseling in hospital and
13	retail pharmacy at Eastern region of Saudi Arabia.
14	Methods: A cross sectional method, with a developed survey questionnaire using a cluster
15	sampling technique among pharmacists working in retail and hospital pharmacies in the
16	Eastern region of Saudi Arabia, was used in the study. The responses gathered were analyzed
17	using Statistical Package for Social sciences software (SPSS v 22) through descriptive and
18	cross tabulation statistical analysis methods (P<0.05).
19	Results: A response rate of 88.4% was observed. Three-fourths of the population was Saudi
20	pharmacist (76.6%) with almost equal number of male and female pharmacists. An
21	overwhelming majority of the pharmacists (71.8%) were working in hospital pharmacy with
22	a major qualification of B. Pharm and experience of $>5$ years. The pharmacists in retail
23	pharmacies counseled mostly acute ill patients for over the counter medications whereas
24	hospital pharmacists mostly counseled chronic ill patients for prescription only medications.
25	However, the age group mostly counseled was the adults (18 to 45 years) in both cases.
26	Regarding frequency of counseling, retail pharmacist counseled the patients most of the times
27	(90%) whereas hospital pharmacists counseled with a frequency of sometimes (50%). The
28	most common barriers observed during patient counseling were; lack of education and
29	privacy along with the impatient behavior of patients as reported by retail pharmacists and
30	time constraints of pharmacists along with gender difference as reported by hospital
31	pharmacists.
32	Conclusion: Despite advances in the health fields along with the more expanded clinical role
33	of pharmacists, some serious barriers still exists on behalf of pharmacists as well as
34	organizational structure.

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Keywords: Retail pharmacist, Hospital pharmacists, patients, counseling, barriers,

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### 39 INTRODUCTION

Physicians nowadays are prescribing multi drug regimens for treatments of patients in order 40 41 to achieve quick and effective recovery (1) however this increase in the number of 42 medication generally leads to an increased probability of medication errors (2) (3) hence may 43 result nonadherence (4). The problem of non-adherence to medication therapy is widely 44 increasing and many patients are facing this problem as reported (5) (6). Patient counseling 45 by a pharmacist play an effective role in reducing the possibility of patient medication 46 problems. PC is described as; providing oral and written information to patients regarding 47 medication use, side effects, adverse effects, storage, precautions as well as dietary and life 48 style changes (7) (8). PC have a key role in providing effective health care (9) as it ensures 49 the patient knows well and have sufficient information regarding the drugs prescribed. Proper PC helps improve the use and adherence of medications and reduces the adverse effects 50 related to medications use thus improve the quality of life (10) alongwith a cost-effective 51 52 health care (11)(3).

- 53 The shift towards PCM requires pharmacist to take responsibility for proper PC regarding medication (10) (12) whereby a positive impact have been observed on the quality of 54 55 pharmacotherapy (13). During PC, pharmacist provides services such as counseling regarding 56 adequate use of medication, precise information related to therapeutic regimen, utilizes the 57 expertise to resolve and address problems related to drugs and educate as well as guide the patient properly (8) (14) (15). However despite the noticeable benefit of pharmacist 58 counseling, many barriers exists i.e. pharmacist or patient related, posing resistance in the 59 way of PC (11). 60
- Pharmacist related barriers consists of; functional barriers i.e. lack or insufficient staff and
  resources as well as financial resources and time, inadequate training (6) (7) (11) (16), special
  variants related to patients i.e. cultural differences and level of patient education as mostly
  the pharmacist provided information or guidance is in complicated format and hard for the
  patient to understand (6) (7) (17) (18).
- Patient related barriers includes; physical factors i.e. impairments such as deaf or blind
  patients where special communicating skills and guidance is needed on behalf of pharmacist
  (8) (17), comprehension rate of patients i.e. health literacy and level of education as

69 understanding of pharmacist provided information is patient education dependent (6) (7). 70 Furthermore; privacy issues, rush hours and gender difference (between pharmacist and 71 patient) alongwith counseling related to sensitive topics such as pregnancy, lactation and oral 72 contraceptive drugs hinders the services of PC and avoidance of counseling by patient (9) 73 (19). The aforementioned barriers can make considerable effects on PC and particularly the 74 health care. This study aims to find the existence of any of the aforementioned barriers in the 75 region of Eastern province i.e. Dammam, Alkhobar and Qatif, and to observe their impact on 76 the PCM. This is a first time study of its kind, in Eastern region of Saudi Arabia reporting No. Constant 77 common barrier observed during patient counseling.

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#### 79 **METHODS**

A cross sectional study was conducted in hospital and retail pharmacist working in Dammam, 80 81 Khobar and Qatif cities of Eastern province Saudi Arabia. The duration of the study was six 82 (06) months. The study included all graduated pharmacists with bachelor of pharmacy (B. 83 pharmacy) as well as doctor of pharmacy (Pharm-D) degree working in retail and hospital pharmacies. Other health care professionals, unlicensed and unemployed pharmacists, and 84 interns were excluded from the study. The retail and hospital pharmacist from other 85 86 provinces were also excluded. In addition, all incomplete and incorrectly filled responses 87 along with non-consenting participants were excluded from the study. For sample size 88 calculation, the number of registered non-Saudi pharmacists (456) in the Eastern region of 89 Saudi Arabia as per MOH (ministry of health) 1436H (2014/15), was considered as target 90 population (20). Using an online calculator (Raosoft, Inc.) with confidence level of CI=95%, 91 the required sample size i.e. 209 was calculated. For sampling process, a convenient sampling 92 method was opted where the pharmacist in close proximity to the researcher in their free 93 timing were approached. The pharmacists were briefed regarding the purpose of study and a 94 prior consent was sorted. Those willing to participate were handed over the questionnaire.

The research instrument consists of survey questionnaire with thirteen (13) close ended 95 questions. The questionnaire was divided into four (04) sections; the first part dealt with the 96 97 demographic information of the respondents, the second section was concerned with the level 98 of education and work place alongwith work experience, the third section dealt with the age 99 group patients which are frequently counseled by pharmacists, whereas fourth section dealt 100 with the common barriers and age group observed with more difficulties during counseling. 101 The questionnaire was subjected to piloting and validation. It was piloted in ten pharmacists 102 and the results were subjected to a panel of experts including college professors and

- 103 pharmacists. After reviewing of pilot results the questionnaire was validated by modification 104 of age variable from age limit classification (1 to 2, 2 to 5) to (1 to 2, 3 to 5) in order to remove confusion. Similarly, the variable classified under item of frequency of patient 105 106 counseled were mixed for cross tabulation study and the new classification is as mostly 107 (90%), sometimes (50%) and rarely (30%), now.
- The data gathered was entered in statistical package for social sciences (SPSS; v 22) for 108 109 frequencies and cross tabulation analysis using a P value of 0.05. The study was subjected to ethical approval by ethics committee of Imam Abdulrahman Bin Faisal University (formerly 110 And the second second 111 University of Dammam) and was granted exemption from review.
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#### 113 **RESULTS**

#### 114 **Response** rate

115 A total of 243 questionnaires were distributed. The questionnaires received back were 215 in number. Seven incomplete as well as two questionnaires filled by pharmacists registered in 116 other regions were excluded from the study. The study was completed gathering a final total 117 118 of 206 responses with 88.4% response rate. 

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#### 120 Demographic characteristics of respondents

A total of 206 responses were collected in the study where majority of the pharmacists were 121 122 Saudi national (N=158/206, 76.7%) followed by Egyptian (N=44/206, 21.4%). Almost equal proportion was observed for both male (N=100/206, 48.5%) and female (N=106/206, 51.5%) 123 124 pharmacists however three fourth of the respondent pharmacist were observed working in 125 hospital pharmacy (N=148/206, 71.8%). Majority of the pharmacists (N=176/206, 85.4%) 126 hold bachelor of pharmacy (B. pharm) degree as their highest qualification with a work experience of more than 5 years (N=146/206, 70.9%). The summary for demographics 127 characteristics is presented in Table 1. 128

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## Characteristics of patients counseled

131 The majority of patients counseled (N=148/206, 71.8%) by pharmacists were adults (18 to 45) 132 years) whereas majority of the pharmacist counseling was done in chronic ill patients 133 (N=132/206, 64.1%). Furthermore, three fourth (N=122/206, 59.2%) of the population was 134 counseled for the use of prescription only medications (POMs). The summary about 135 characteristics of patient counseled is presented in Table 2.

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#### 137 Frequency and difficulty observed during counseling

138 One third of the pharmacist (N=74/206, 35.9%) were counseling the patients mostly (90% of 139 the patient) whereas slightly less than on third (N=62/206, 30.1%) of the pharmacists were 140 counseling the patient sometimes (50% of the patients). Furthermore, in response to the question of any difficulty observed during last month, almost half of the pharmacists 141 (N=86/206, 41.7%) observed this difficulty sometimes (50% of the patients). The summary 142 143 for the frequency of patient counseling and any difficulty observed in patient counseling during last month is presented in Table 3. 144 

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#### Barriers observed in patient counseling and its characteristics 146

147 The barriers observed during counseling were mostly in geriatrics (above 45 years) i.e. two 148 third (N=134/206, 65%) of the total population whereas the therapeutic classes of drugs most 149 difficult to counsel were as; cardiac (N=50/206, 24.3%), sedative and hypnotics (N=42/206, 150 20.4%), antibiotics (N=40/206, 19.4%). In addition, the barriers making hurdle in counseling 151 process as observed were; lack of education (N=44/206, 21.4%), time constraints of pharmacists (N=42/206, 20.4%), gender difference (N=35/206, 17%), impatient behavior of 152 patients (N=32/206, 15.5%) and lack of privacy (N=31/206, 15%). The summary of barriers 153 154 observed as well as characteristics of barriers are presented in Table 4.

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#### Cross tabulation of demographics with common counseling barriers 156

The demographics of the respondents such as gender, work experience and work place were 157 158 cross tabulated with different counseling variables. The association of gender with type of 159 illness was significant with chi square value reported at 48.5, P value= 0.00 with strong effect 160 size (Phi=0.5). The gender was also statistically associated (P less than 0.05) with nature of 161 medication and frequency of counseling with chi square reported at 12.57 and phi value with weak to moderate effect and chi square value of 8.3 (P value=0.01) with weak to moderate 162 effect, respectively. The demographic variable of work experience was significantly 163 164 associated (P value=0.00) with frequency of counseling; chi square value 23.46 with 165 moderate effect. For age group of patient counseled a significance of P value=0.00, chi square of 15.21 with weak to moderate effect was observed with work place. Similarly, work 166 place was again statistically associated (P value=0.00) with; type of illnesses ( $X^2$ =82.82, 167 phi=0.63), nature of medication ( $X^2$ =68.2, phi=0.57) and age group of patient having most 168 difficulty in counseling ( $X^2$ =14.4, phi=0.26). Furthermore, the demographic variable of 169 170 gender (P value= 0.03, chi square value=14.78 and phi value=0.26) and work place (P value=

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0.00, chi square value=21.59 and phi value=0.32) were statistically associated with common barriers to patient counseling. The summary of cross tabulation is reported in table 5 and 6.

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### 174 DISCUSSION

175 Patient education and counseling is one of the most important roles of pharmacist as it may enhance the patient adherence as well as rational use of medication leading towards a 176 177 successful outcome of PCM. This study was conducted for the first time in Eastern region of Saudi Arabia in order to report the major barriers countered by pharmacists during patient 178 179 counseling. A total of 206 responses were collected from pharmacists working in retail and 180 hospital pharmacies, out of which three fourth of the population was Saudi origin 181 pharmacists. Although, gender wise the respondents were equal in number however majority 182 of the pharmacists were seen working in hospital pharmacies with bachelor of pharmacy 183 degree as highest qualification. It is worthy to mention here that the expatriates pharmacists 184 are less then Saudi national pharmacists however the majority of retail pharmacists working 185 in this region were Egyptians. The same scenario regarding dominancy of non-Saudi pharmacists with bachelor of pharmacy degree working in retail pharmacies have been 186 reported already in different literatures (21) (22). Similarly, though the female were in equal 187 188 proportion to male pharmacists however none of the female was observed working in retail pharmacies. As per literature reports the female are not allowed to work in private sectors 189 190 (23) (21) (24) however this trend is changing recently and female have been granted 191 permission to work in any organization. Still no female pharmacists were observed in retail 192 pharmacies. With regard to experience, an overwhelming proportion of the pharmacists had 193 an experience of >5 years. This huge amount of pharmacist is a self-supportive fact for the 194 characteristics of demographics i.e. more hospital pharmacists observed, reported in this study. Literature showed a high number of Saudi pharmacists working in hospital pharmacies 195 due to low salaries and less job satisfaction thus they prefers to work in public sectors rather 196 the private sectors (21) (23) (25). Regarding frequency of patient counseling, both male and 197 198 female pharmacists were observed counseling the patient mostly (90% of the patients) within 199 the age group of 18 to 45 years i.e. adults. Our findings are in line with a study reporting the 200 same age group and frequency of counseling (90%) as published (26). The difficulty level 201 during counseling, reported by most of the pharmacists was sometimes (50% of the patients). 202 Pharmacists working in retail pharmacy were observed counseling acute ill patients more as 203 compared to hospital pharmacists where an overwhelming proportion of patients counseled 204 were chronic ill patients. This finding is also addressed by a study which reports; patients with acute illness generally thinks the symptoms as non-serious one and they do not need tovisit a practitioner (26).

- 207 In addition, the nature of medications for which the patients were counseled, consisted of 208 over the counter drugs (OTC) in retail and prescription only medications (POMs) in hospital 209 pharmacies. Numerous studies have already reported a more patient counseling for OTC 210 drugs in retail pharmacies. Mostly the patient visiting retail pharmacies have complain 211 regarding acute illness without any prior visits to a practitioner thus they asks for OTC drugs where a proper counseling may be required from pharmacist as reported (26). Another study 212 213 reported that the patient even agree to pay for counseling by pharmacists regarding the OTC 214 drug they receive and thus the consumer prefer pharmacists counseling for OTC drugs (27) 215 (26). Regarding prescription only medications (POMs), the counseling was observed in 216 hospital pharmacy only. The overwhelming majority of chronic ill patients being counseled 217 by hospital pharmacists maybe considered as an evidence for the POMs counseling in 218 hospital only. None of the studies have been reported regarding the counseling of POMs in 219 hospital only.
- With respect to the barriers observed most commonly during patient counseling, lack of 220 education, lack of privacy and impatient behavior of patient were reported by retail 221 222 pharmacists whereas time constraints of pharmacists and gender differences were reported by 223 hospital pharmacists. Lack of education or low level of education is directly proportional to 224 medication knowledge. Lesser the medication knowledge a patient have, the more difficult it 225 is for a pharmacist to counsel a patient and communicate properly, as reported (28) (29). A 226 study by Alkatheri reports, patient with lower level of knowledge receives less continuous 227 counseling as compare to educated patients (28). The problem may be overcome through 228 implementation of special communication protocols by pharmacist. For this some special 229 professional subjects related to communication and patient counseling may be introduced at 230 undergraduate level (30). Similarly, continuous professional development (30) as well as involvement of pharmacists in special trainings such as medication counseling program 231 232 targeting teach back and plain language (31) can improve pharmacist-patient counseling 233 skills. Lack of privacy was another barrier observed by retail pharmacist however none of the 234 hospital pharmacist reported lack of privacy as a barrier in counseling at hospitals. Various 235 literatures have already highlighted this fact as a common barrier during counseling for retail 236 pharmacies (32) (33) (34). For hospital pharmacies, mostly a proper counseling point exists 237 thus none of the studies have reported lack of privacy as a barrier in patient counseling at

hospitals (35). For retail pharmacies, incorporation of a private counseling area as well as
patient waiting area may aid in smooth pharmacist-patient counseling (2).

- 240 Similarly, gender difference was also reported as a common barrier which was most probably 241 expected in the study outcomes due to societal norms (6). However this finding is not in 242 concordance with a previous study reported (35) which denies gender difference as a barrier 243 during counseling. On the other hand, a point of common interest still exist between the two studies i.e. male were seemed more satisfied with counseling as reported and we also 244 observed in our study that gender difference as a barrier in patient counseling was reported by 245 246 female pharmacists only. Though time constraints of pharmacists, due to rush hours, more 247 work load, working hours and shifts alongwith less job satisfaction have been reported in 248 retail pharmacies as compared to hospital pharmacies (36) (37) (38) still hospital pharmacists 249 reported time constraints of pharmacists as a common barrier. Further detailed and specific 250 studies, related to work load, rush hours and time constraints of hospital pharmacists which 251 may affect patient counseling, are required in this regard. Impatient behavior of patient was 252 also reported by retail pharmacists as a barrier during patient counseling. According to a 253 literature report, consumer waiting for a particular service is generally regarded as a negative 254 experience and may result in frustration and impatience behavior of the consumer (39) (40). 255 In addition, most of the consumers overestimate the duration of their waiting time which 256 leads to a decreased service evaluation (40) (41) (42) (43). The problem of impatient 257 behavior may be overcome by reducing patient distraction during waiting time. Hence 258 pharmacists may engage and enlighten the consumers with different activities during their 259 wait (42) which may improve consumer patience as well as service evaluation (42) (40).
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### CONCLUSION

262 In this study some real barriers were observed for patient counseling. Though it is hard to 263 eradicate all the barriers at once or just focusing the pharmacists, yet various important 264 barriers may be resolved on behalf of pharmacists. Engaging pharmacist and providing them 265 continuous professional development programs as well patient counseling training may 266 enhance pharmacist-patient counseling session. On behalf of organization, providing a 267 private area for confidential discussion alongwith enriching the consumer waiting area to be 268 more functional such as inclusion of an aquarium, newspaper, kids play area and coffee 269 machine etc. may help reduce patient frustration and impatient behavior. This may lead to an 270 enhanced service evaluation as well as achieving a successful outcome for the PCM.

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## 273 CONFLICT OF INTEREST

274 No conflict of interest exists among authors.

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### Table 1: Respondents Demographics characteristics

Variable	No (N)	%age
Gender	<u> </u>	
Male	100	48.5
Female	106	51.5
Total	206	100.0
Nationality		
Saudi	158	76.7
Egyptian	44	21.4
Indian	2	1.0
Sudanese	2	1.0
Total	206	100.0
Qualification		
Doctor of Pharmacy (PharmD)	18	8.7
Bachelor of Pharmacy (B. Pharm)	176	85.4
Masters	12	5.8
Total	206	100.0
Work Place		
Retail Pharmacy	58	28.2
Hospital Pharmacy	148	71.8
Total	206	100.0
Work Experience		
1 to 2 Years	20	9.7
3 to 5 Years	40	19.4
More than 5 Years	146	70.9
Total	206	100.0

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### Table 2: Characteristics of patients counseled more

Variable	<b>No (N)</b>	%age
Age group of patients counseled more		
Children (2 to 8 years)	14	6.8
Teens (9 to 17 years)	2	1.0

Adult (18 to 45 years)	148	71.8
Geriatrics (Above 45 Years)	42	20.4
Total	206	100.0
Illness type of patients counseled more		
Acute ill patients	74	35.9
Chronic ill patients	132	64.1
Total	206	100.0
Type of medications for which patients are counseled more		
Prescription only medications (POMs)	122	59.2
Over the counter medications (OTC)	80	38.8
Both	4	1.9
Total	206	100.0

# Table 3: Frequency of counseling and difficulty observed counseling last month

Variable	No (N)	%age
Frequency of counseling the patients		
Always (100% of the patients)	58	28.2
Mostly (90% of the patients)	74	35.9
Sometimes (50% of the patients)	62	30.1
Rarely (30% of the patients)	12	5.8
Total	206	100.0
Difficulty observed last month during patient counseling		
Always (100% of the patients)	10	4.9
Mostly (90% of the patients)	36	17.5
Sometimes (50% of the patients)	86	41.7
Rarely (30% of the patients)	56	27.2
Never	18	8.7
Total	206	100.0

# Table 4: Characteristics of barriers observed during counseling

Variable	No (N)	%age
Age group of patients observed with most difficulty counseling		
Children (2 to 8 years)	24	11.7
Teen (9 to 17 years)	18	8.7
Adults (18 to 45 Years)	30	14.6
Geriatrics (Above 45 Years)	134	65.0
Total	206	100.0
Therapeutic class of drug with most difficulty counseling		
OTCs	4	1.9
Antibiotics	40	19.4
Oral contraceptives and Abortifacient	10	4.9
GITs Drugs	8	3.9
Sedative and Hypnotics	42	20.4
Antihypertensive	26	12.6
Cardiac Drugs	50	24.3
Topical Products	10	4.9
Antipsychotic	10	4.9

Chemotherapeutic drugs	2	1.0
Neurological drugs	4	1.9
Total	206	100.0
Most common barriers observed during patient counseling		
Lack of education	44	21.4
Lack of privacy	31	15.0
Gender difference	35	17.0
Time constraints of pharmacist	42	20.4
Impatience behavior of the Patient	32	15.5
Nonseriousness of patient towards counseling	4	1.9
Language differences	12 👞	5.8
Rush hours	6	2.9
Total	206	100.0

# 38Pable 5: Demographics vs Common barriers

	Cross tal	bulation	N=206 Observed (Expected count)				<i>P</i> -value		
		N	Which age group of pat	ient you counsel	the most?				
Condon		Children (2 to 8 Y)	<b>Teens (9 to 17 Y)</b>	Adult (18 to 45 Y)		Geriatrics (> 45 Y)			
Genuer	Male	6 (6.8)	0(1)	80 (71.8)		14 (20.4)	> 0.05		
	Female	8 (7.2)	2 (1)	68 (76.2)		28 (21.6)	_		
		In v	which type of illness you	u counsel the pati	ients mos	tly?			
Condor		Acute ill p	patients	$\nabla \nabla$	Chronic	ill patients			
Genuer	Male	60 (35	5.9)		40 (64.1)				
	Female         14 (38.1)         92 (67.9)								
	Which nature of medications you counsel the patients mostly?								
Gender		POMs	отс			Both			
Gender	Male	48 (59.2)	48	3 (38.3)		4 (1.9)	0.00		
	Female	74 (62.8)	32	2 (41.2)		0 (2.1)			
	In which age group patients you observed the most difficulty while counseling?								
Gender		Children (2 to 8 Y)	<b>Teens (9 to 17 Y)</b>	Adult (18 to 45 Y)		Geriatrics (> 45 Y)			
Gender	Male	14 (11.7)	8 (8.7)	12 (14.6)		66 (65)	> 0.05		
	Female	10 (12.3)	10 (9.3)	18 (15.4)		68 (69)			
			What is the frequency	of counseling the	patients?				
Gender		Mostly (90%)	Sometim	es (50%)		Rarely (30%)	0.01		
	Male	66 (64.1)	24 (3	30.1)		10 (5.8)	0.01		

	Female	66 (67.9)	38 (31.9)		2 (6.2)	
			Which age group of pat	tient you counsel the mos	t?	l
Work		Children (2 to 8 Y)	<b>Teens (9 to 17 Y)</b>	Adult (18 to 45 Y)	Geriatrics (> 45 Y)	
work	<b>1 to 2 Y</b> 2 (1.4)		0 (0.2)	18 (14.4)	0 (4.1)	> 0.05
in voors	2 to 5 Y	2 (2.7)	0 (0.4)	30 (28.7)	8 (8.2)	_ > 0.05
in years	>5 Y	10 (9.9)	2 (1.4)	100 (105)	34 (29.8)	
		Inv	which type of illness you	u counsel the patients mo	stly?	
Work		Acute ill	patients	Chron	ic ill patients	
experience	1 to 2 Y	10 (7	7.2)		0 (12.8)	> 0.05
in years	2 to 5 Y	10 (14	4.4)	3	_ > 0.03	
	>5 Y	54 (5)	2.4)	92		
		Whic	h type of medications y	ou counsel the patients n	nostly?	
Work		POMs	то	С	Both	
experience	1 to 2 Y	14 (11.8)	6 (7	.8)	0 (0.4)	> 0.05
in years	2 to 5 Y	26 (23.7)	14 (1	5.5)	0 (0.8)	0.05
	>5 Y	82 (86.5)	60 (5	6.7)		
		In which age g	roup patients you obser	rved the most difficulty w	vhile counseling?	
Work		Children (2 to 8 Y)	Teens (9 to 17 Y)	Adult (18 to 45 Y)	Geriatrics (> 45 Y)	
experience	1 to 2 Y	2 (2.3)	2 (1.7)	4 (2.9)	12 (13)	
in years	2 to 5 Y	4 (4.7)	0 (3.5)	6 (5.8)	30 (26)	
	>5 Y	18 (17)	16 (12.8)	20 (21.3)	92 (95)	
Work			What is the frequency	of counseling the patients	<u>;</u> ?	

experience		Ν	lostly (90%)	Sometimes (50%)		Rarely (30%)			
in years	1 to 2 Y		16 (12.8)	4 (6)			0 (1.2)	0.00	
	2 to 5 Y		26 (25)	6 (12)			8 (2.3)	0.00	
	>5 Y		90 (93.6)	52 (44)			4 (8.5)		
	Which age group of patient you counsel the most?								
Work place			Children (2 to 8 Y)	Teens (9 to 17 Y)	Adult (18	to 45 Y)	Geriatrics (>45 Y)		
work prace	Retail Pharma	cy	6 (3.8)	0 (0.5)	48 (4	0.2)	2 (11.4)	0.00	
	Hospital Pharm	nacy	8 (10.2)	2 (1.5)	100 (2	108)	40 (30.6)		
	In which type of illness you counsel the patients mostly?								
Work place			Acute ill pati	ients Chronic ill pa			ents		
WOLK place	Retail Pharmacy48			0.1) 8 (35			(35.9)		
	Hospital Pharm	nacy	26 (54)	26 (54) 124 (9			(96.1)		
	Which type of medications you counsel the patients mostly?								
Work place			POMs OTC				Both		
work place	Retail Pharma	cy	8 (33.2)	44 (21.7)		4 (1.1)			
	Hospital Pharm	nacy	114 (89)	36 (58.3)					
		1	n which age group pati	ients you observed the mo	ost difficult	y while cou	nseling?		
Work place			Children (2 to 8 Y	() Teens (9 to 17 Y)	Adult (1	8 to 45 Y)	Geriatrics (> 45 Y)		
work place	Retail Pharma	cy	14 (6.5)	6 (4.9)	6 (	8.2)	30 (36.4)	0.00	
	Hospital Pharm	nacy	10 (17.5)	12 (13.1)	24 (	21.8)	104 (97.6)		
Work place			What is t	the frequency of counseling	ng the patie	ents?			
,, or a prace		V	Mostly (90%)	Sometimes (50	)%)	Ra	arely (30%)	> 0.05	

<b>Retail Pharmacy</b>	36 (36)	16 (17)	4 (3.3)
Hospital Pharmacy	96 (96.1)	46 (45.1)	8 (8.7)

# 38Pable 6: Common barriers observed during counseling

	What are the most common Barriers to Patient counseling?									
Gender		Lack of education	Lack of privacy	Gender difference	Time constraints of pharmacist	Impatience behavior of the patient	Nonseriousness of patient towards counseling	Language differences	Rush hours	<i>P</i> -value
	Male	26 (21.4)	15 (15)	12 (17)	21 (20.4)	16 (15.5)	4 (1.9)	6 (5.8)	0 (2.9)	0.03
	Female	18 (22.6)	16 (16)	23 (18)	21 (21.6)	16 (16.5)	0 (2.1)	6 (6.2)	6 (3.1)	0.05
Work	Retail Pharmacy	16 (12)	10 (8.4)	7 (9.5)	5 (11.4)	10 (8.7)	4 (1.1)	4 (3.3)	0 (1.6)	0.00
experience	Hospital pharmacy	28 (32)	21 (22.6)	28 (25.5)	37 (30.6)	22 (23.3)	0 (2.9)	8 (8.7)	6 (4.4)	