Original Research Article

Pharmacist Perceived barriers to Patient counseling; A study in Eastern region of Saudi Arabia

ABSTRACT

Background: Pharmaceutical care model (PCM) is the philosophy of practice that includes identifying and resolving medication therapy problems to improve patient outcomes. Patient counseling by a pharmacist is a fundamental step in health care practice, as it allows the patients to have an adequate knowledge about their drug therapy which leads to more adherence and less adverse effect hence better outcome for PCM. However, there are many barriers that may hinder this step.

The aim of the study: This study highlights the barriers to patient counseling in hospital and retail pharmacy at Eastern region of Saudi Arabia.

Methods: A cross sectional method, with a developed survey questionnaire using a cluster sampling technique among pharmacists working in retail and hospital pharmacies in the Eastern region of Saudi Arabia, was used in the study. The responses gathered were analyzed using Statistical Package for Social sciences software (SPSS v 22) through descriptive and cross tabulation statistical analysis methods ($P<0.05$).

Results: A response rate of 88.4% was observed. Three-fourths of the population was Saudi pharmacist (76.6%) with almost equal number of male and female pharmacists. An overwhelming majority of the pharmacists (71.8%) were working in hospital pharmacy with a major qualification of B. Pharm and experience of >5 years. The pharmacists in retail pharmacies counseled mostly acute ill patients for over the counter medications whereas hospital pharmacists mostly counseled chronic ill patients for prescription only medications. However, the age group mostly counseled was the adults (18 to 45 years) in both cases. Regarding frequency of counseling, retail pharmacist counseled the patients most of the times (90%) whereas hospital pharmacists counseled with a frequency of sometimes (50%). The most common barriers observed during patient counseling were; lack of education and privacy along with the impatient behavior of patients as reported by retail pharmacists and time constraints of pharmacists along with gender difference as reported by hospital pharmacists.

Conclusion: Despite advances in the health fields along with the more expanded clinical role of pharmacists, some serious barriers still exists on behalf of pharmacists as well as organizational structure.

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

INTRODUCTION

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

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 pharmacotherapy (13). During PC, pharmacist provides services such as counseling regarding adequate use of medication, precise information related to therapeutic regimen, utilizes the 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 counseling, many barriers exists i.e. pharmacist or patient related, posing resistance in the way of PC (11).

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 understanding of pharmacist provided information is patient education dependent (6) (7). Furthermore; privacy issues, rush hours and gender difference (between pharmacist and patient) alongwith counseling related to sensitive topics such as pregnancy, lactation and oral contraceptive drugs hinders the services of PC and avoidance of counseling by patient (9) (19). The aforementioned barriers can make considerable effects on PC and particularly the health care. This study aims to find the existence of any of the aforementioned barriers in the region of Eastern province i.e. Dammam, Alkhobar and Qatif, and to observe their impact on the PCM. This is a first time study of its kind, in Eastern region of Saudi Arabia reporting common barrier observed during patient counseling.

METHODS

A cross sectional study was conducted in hospital and retail pharmacist working in Dammam, Khobar and Qatif cities of Eastern province Saudi Arabia. The duration of the study was six (06) months. The study included all graduated pharmacists with bachelor of pharmacy (B. 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 interns were excluded from the study. The retail and hospital pharmacist from other provinces were also excluded. In addition, all incomplete and incorrectly filled responses along with non-consenting participants were excluded from the study. For sample size calculation, the number of registered non-Saudi pharmacists (456) in the Eastern region of Saudi Arabia as per MOH (ministry of health) 1436H (2014/15), was considered as target population (20). Using an online calculator (Raosoft, Inc.) with confidence level of CI=95%, the required sample size i.e. 209 was calculated. For sampling process, a convenient sampling method was opted where the pharmacist in close proximity to the researcher in their free timing were approached. The pharmacists were briefed regarding the purpose of study and a 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 questions. The questionnaire was divided into four (04) sections; the first part dealt with the demographic information of the respondents, the second section was concerned with the level of education and work place alongwith work experience, the third section dealt with the age

group patients which are frequently counseled by pharmacists, whereas fourth section dealt with the common barriers and age group observed with more difficulties during counseling.

The questionnaire was subjected to piloting and validation. It was piloted in ten pharmacists and the results were subjected to a panel of experts including college professors and pharmacists. After reviewing of pilot results the questionnaire was validated by modification 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 counseled were mixed for cross tabulation study and the new classification is as mostly (90%), sometimes (50%) and rarely (30%), now.

The data gathered was entered in statistical package for social sciences (SPSS; v 22) for 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 University of Dammam) and was granted exemption from review.

RESULTS

Response rate

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 other regions were excluded from the study. The study was completed gathering a final total of 206 responses with 88.4% response rate.

Demographic characteristics of respondents

A total of 206 responses were collected in the study where majority of the pharmacists were 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%) pharmacists however three fourth of the respondent pharmacist were observed working in hospital pharmacy (N=148/206, 71.8%). Majority of the pharmacists (N=176/206, 85.4%) 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 characteristics is presented in Table 1.

Characteristics of patients counseled

The majority of patients counseled (N=148/206, 71.8%) by pharmacists were adults (18 to 45 years) whereas majority of the pharmacist counseling was done in chronic ill patients

(N=132/206, 64.1%). Furthermore, three fourth (N=122/206, 59.2%) of the population was counseled for the use of prescription only medications (POMs). The summary about characteristics of patient counseled is presented in Table 2.

Frequency and difficulty observed during counseling

One third of the pharmacist (N=74/206, 35.9%) were counseling the patients mostly (90% of the patient) whereas slightly less than on third (N=62/206, 30.1%) of the pharmacists were 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 (N=86/206, 41.7%) observed this difficulty sometimes (50% of the patients). The summary for the frequency of patient counseling and any difficulty observed in patient counseling during last month is presented in Table 3.

Barriers observed in patient counseling and its characteristics

The barriers observed during counseling were mostly in geriatrics (above 45 years) i.e. two third (N=134/206, 65%) of the total population whereas the therapeutic classes of drugs most difficult to counsel were as; cardiac (N=50/206, 24.3%), sedative and hypnotics (N=42/206, 20.4%), antibiotics (N=40/206, 19.4%). In addition, the barriers making hurdle in counseling 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 patients (N=32/206, 15.5%) and lack of privacy (N=31/206, 15%). The summary of barriers observed as well as characteristics of barriers are presented in Table 4.

Cross tabulation of demographics with common counseling barriers

The demographics of the respondents such as gender, work experience and work place were cross tabulated with different counseling variables. The association of gender with type of illness was significant with chi square value reported at 48.5, P value= 0.00 with strong effect size (Phi=0.5). The gender was also statistically associated (P less than 0.05) with nature of 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 effect, respectively. The demographic variable of work experience was significantly associated (P value=0.00) with frequency of counseling; chi square value 23.46 with 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

place was again statistically associated (P value=0.00) with; type of illnesses (X^2=82.82, phi=0.63), nature of medication (X^2=68.2, phi=0.57) and age group of patient having most difficulty in counseling (X^2=14.4, phi=0.26). Furthermore, the demographic variable of gender (P value= 0.03, chi square value=14.78 and phi value=0.26) and work place (P value= 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.

DISCUSSION

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 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 counseling. A total of 206 responses were collected from pharmacists working in retail and hospital pharmacies, out of which three fourth of the population was Saudi origin pharmacists. Although, gender wise the respondents were equal in number however majority of the pharmacists were seen working in hospital pharmacies with bachelor of pharmacy degree as highest qualification. It is worthy to mention here that the expatriates pharmacists are less then Saudi national pharmacists however the majority of retail pharmacists working 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 reported already in different literatures (21) (22). Similarly, though the female were in equal 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 (23) (21) (24) however this trend is changing recently and female have been granted permission to work in any organization. Still no female pharmacists were observed in retail pharmacies. With regard to experience, an overwhelming proportion of the pharmacists had an experience of >5 years. This huge amount of pharmacist is a self-supportive fact for the 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 due to low salaries and less job satisfaction thus they prefers to work in public sectors rather the private sectors (21) (23) (25). Regarding frequency of patient counseling, both male and female pharmacists were observed counseling the patient mostly (90% of the patients) within the age group of 18 to 45 years i.e. adults. Our findings are in line with a study reporting the same age group and frequency of counseling (90%) as published (26). The difficulty level

during counseling, reported by most of the pharmacists was sometimes (50% of the patients). Pharmacists working in retail pharmacy were observed counseling acute ill patients more as compared to hospital pharmacists where an overwhelming proportion of patients counseled 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 to visit a practitioner (26).

In addition, the nature of medications for which the patients were counseled, consisted of over the counter drugs (OTC) in retail and prescription only medications (POMs) in hospital pharmacies. Numerous studies have already reported a more patient counseling for OTC drugs in retail pharmacies. Mostly the patient visiting retail pharmacies have complain 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 reported that the patient even agree to pay for counseling by pharmacists regarding the OTC drug they receive and thus the consumer prefer pharmacists counseling for OTC drugs (27) (26). Regarding prescription only medications (POMs), the counseling was observed in hospital pharmacy only. The overwhelming majority of chronic ill patients being counseled by hospital pharmacists maybe considered as an evidence for the POMs counseling in hospital only. None of the studies have been reported regarding the counseling of POMs in hospital only.

With respect to the barriers observed most commonly during patient counseling, lack of education, lack of privacy and impatient behavior of patient were reported by retail pharmacists whereas time constraints of pharmacists and gender differences were reported by hospital pharmacists. Lack of education or low level of education is directly proportional to medication knowledge. Lesser the medication knowledge a patient have, the more difficult it is for a pharmacist to counsel a patient and communicate properly, as reported (28) (29). A study by Alkatheri reports, patient with lower level of knowledge receives less continuous counseling as compare to educated patients (28). The problem may be overcome through implementation of special communication protocols by pharmacist. For this some special professional subjects related to communication and patient counseling may be introduced at undergraduate level (30). Similarly, continuous professional development (30) as well as involvement of pharmacists in special trainings such as medication counseling program targeting teach back and plain language (31) can improve pharmacist-patient counseling skills. Lack of privacy was another barrier observed by retail pharmacist however none of the hospital pharmacist reported lack of privacy as a barrier in counseling at hospitals. Various

literatures have already highlighted this fact as a common barrier during counseling for retail pharmacies (32) (33) (34). For hospital pharmacies, mostly a proper counseling point exists 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).

Similarly, gender difference was also reported as a common barrier which was most probably expected in the study outcomes due to societal norms (6). However this finding is not in concordance with a previous study reported (35) which denies gender difference as a barrier 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 observed in our study that gender difference as a barrier in patient counseling was reported by female pharmacists only. Though time constraints of pharmacists, due to rush hours, more work load, working hours and shifts alongwith less job satisfaction have been reported in retail pharmacies as compared to hospital pharmacies (36) (37) (38) still hospital pharmacists reported time constraints of pharmacists as a common barrier. Further detailed and specific studies, related to work load, rush hours and time constraints of hospital pharmacists which may affect patient counseling, are required in this regard. Impatient behavior of patient was also reported by retail pharmacists as a barrier during patient counseling. According to a literature report, consumer waiting for a particular service is generally regarded as a negative experience and may result in frustration and impatience behavior of the consumer (39) (40). In addition, most of the consumers overestimate the duration of their waiting time which leads to a decreased service evaluation (40) (41) (42) (43). The problem of impatient behavior may be overcome by reducing patient distraction during waiting time. Hence pharmacists may engage and enlighten the consumers with different activities during their wait (42) which may improve consumer patience as well as service evaluation (42) (40).

CONCLUSION

In this study some real barriers were observed for patient counseling. Though it is hard to eradicate all the barriers at once or just focusing the pharmacists, yet various important barriers may be resolved on behalf of pharmacists. Engaging pharmacist and providing them continuous professional development programs as well patient counseling training may enhance pharmacist-patient counseling session. On behalf of organization, providing a private area for confidential discussion alongwith enriching the consumer waiting area to be more functional such as inclusion of an aquarium, newspaper, kids play area and coffee

machine etc. may help reduce patient frustration and impatient behavior. This may lead to an enhanced service evaluation as well as achieving a successful outcome for the PCM.

CONFLICT OF INTEREST

No conflict of interest exists among authors.

Bibliography

1. Marcolongo, R.; Ané, A. Therapeutic patient education: time for pharmacists. Eur J Hospital Pharma. 2012;19(3):311-312.
2. El-Hajj, M.; AL-Saeed, H.; Khaja, M. Qatar pharmacists' understanding, attitudes, practice and perceived barriers related to providing pharmaceutical care. Int J Clin Pharma. 2016;38(2):330-343.
3. Rabi, S.; Dahdal, W. Implementation of a pharmacist resident medication reconciliation program. Pharma Edu. 2007;7(4):351-357.
4. Marcum Z.; Gellad, W. Medication Adherence to Multidrug Regimens. Clinics in Geriatric Medicine. 2012;28(2):287-300.
5. Taitel, M.; Jiang, Rudkin.; DuChane, Duncang. The impact of pharmacist face-to-face counseling to improve medication adherence among patients initiating statin therapy. Pat Pref Adher. 2012;323.
6. Albekairy, A. Pharmacists' Perceived Barriers to Patient Counseling. J Appl Pharmac Sci. 2014;4(1):70.
7. Palaian, S.; Prabhu, M.; Shankar, P. Patient counseling by pharmacist-a focus on chronic illness. Pak J Pharm Sci. 2006;19(1):65-72.
8. Wado, T.; Gunasekaran T.; Dhanaraju, M. Pharmacist-patient communication barriers in dispensing practice: a descriptive study in Adama Hospital Medical College, Adama City, Oromia regional state, Ethiopia. J Pharmac Health Ser Res. (4);, 2015, Vol. 6;.
9. Schommer, J. Patients' Expectations and Knowledge of Patient Counseling Services that Are Available from Pharmacists. Amer J Pharmac Edu. 1997;61(4):402-406.
10. Goldstone, L.; Saldana, S.; Werremeyer, A. Pharmacist provision of patient medication education groups. Amer J Health-System Pharma. 2015;72(6):487-492.
11. Alotaibi, H.; Shivanandappa, T.; Nagarethinam S. Contribution of community pharmacists in educating the asthma patients. Saudi Pharmac J. 2016;24(6):685-688.
12. Acheampong, F.; Anto B. Perceived barriers to pharmacist engagement in adverse drug event prevention activities in Ghana using semi-structured interview. BMC Health Ser Res. 2015;15(1):361.
13. Schnipper, J.; Kirwin, J.; Cotugno, M.; Wahlstrom, S.; Brown, B.; Tarvin, E. Role of Pharmacist Counseling in Preventing Adverse Drug Events After Hospitalization. Arch Inter Med. 2006;166(5):565.
14. ASHP guidelines on pharmacist-conducted patient education and counseling. Amer Soc Health-System Pharmacists. 1997;54(4):431-434.
15. Ngoh, L. Health literacy: A barrier to pharmacist–patient communication and medication adherence. J Amer Pharmacists Ass. 2009;49(5):e132-e149.

31316. Rayes, I.; Hassali, M.; Abduelkarem, A. Perception of community pharmacists toward their current
314 professional role in the healthcare system of Dubai, United Arab Emirates. Saudi Pharmac J.
315 2015;23(3):235-240.
31617. Cooper-Patrick, L.; Gallo, J.; Gonzales, J. Race, Gender, and Partnership in the Patient-Physician
317 Relationship. JAMA. 1999;282(6):583.
31818. Shapiro, J.; Hollingshead, J.; Morrison, E. Primary care resident, faculty, and patient views of
319 barriers to cultural competence, and the skills needed to overcome them. Med Edu. 2002;36(8):749-
320 759.
32119. Scheerder, G.; De-Coster, I.; Van-Audenhove, C. Pharmacists' Role in Depression Care: A Survey of
322 Attitudes, Current Practices, and Barriers. Psych Ser. 2008;59(10):1155-1160.
32320. Statistical Yearbook 1436 (2014/2015). Ministry of Health, K.S.A.
324 http://www.moh.gov.sa/en/ministry/statistics/book/pages/default.aspx.
32521. Bawazir, S.A. ATTITUDE OF COMMUNITY PHARMACISTS IN SAUDI ARABIa TOWARDS
326 ADVERSE DRUG REACTION REPORTING. Saudi Pharmac J. 2006;14(1).
32722. Ahmad, R.; Naqvi, A.A.; Ahmad, N.; Baraka, M.; Mastour, M.; Al-Sharedah, S.; Al-Ghamdi, S.; Al-
328 Rabae, G. Awareness, Perception, Attitude, and Knowledge Regarding Complementary and
329 Alternative Medicines (CAMs) Among the Pharmacy. and Medical Students of a Public University
330 in Saudi Arabia. Arch Pharma Pract 2017;8:51-63. : s.n.
33123. http://www.arabnews.com/pharmacy-chain-says-%E2%80%98no%E2%80%99-hiring-women.
33224. Suleiman, A.K. Stress and job satisfaction among pharmacists in Riyadh, Saudi Arabia. Saudi J Med
333 Med Sci. 2015;(3):213-9.
33425. Najjar, Tawfeeg A.O.A Survey on community pharmacies in Riyadh, Saudi Arabia. Saudi Pharmac
335 J: 9 (2); 113-118.
33626. Katajavuori, N.M.; Valtonen, S.P.; Pietila, K.M. Myth behind patient counselling: A patient
337 counsellin study of Non-prescription medicines in Finland. J Soc Admin Pharma. 2002;19(4):129-
338 136.
33927. Gore, P.R.; Madhavan, S. Consumers' preference and willingness to pay for pharmacist counselling
340 for non-prescription medicines. J Clin Pharma therapuetics. 1994;19(1):17-25.
34128. Alkatheri, A.; Albekairy, A. Does the patients' educational level and previous counseling affect their
342 medication knowledge?. Ann Thor Med. 2013; 8:105-108.
34329. Ngoh, L.N. Health literacy: A barrier to pharmacist–patient communication and medication
344 adherence. J Amer Pharmacists Ass. 2009; 49:132-149.
34530. Adepu, R.; Nagavi, B.G. Attitudes and Behaviors of Practicing Community Pharmacists Towards
346 Patient Counselling. Indian J Pharm Sci. 2009;71(3): 285–289.
34731. Hager, D.R.; Hartkopf, K.; Margolis, A.; Martin, B.A. Pharmacist behavior changes following a
348 medication counseling training program targeting teach-back and plain language. Inn pharmacy.
349 2016;7(1):8.
35032. Al-Arifi, M.N. Patients' perception, views and satisfaction with pharmacists' role as health care
351 provider in community pharmacy setting at Riyadh, Saudi Arabia. Saudi Pharmac J. 2012; 20:323-
352 330.
35333. El-Hajj, M.S.; Salem, S.; Mansoor, H. Public's attitudes towards community pharmacy in Qatar: a
354 pilot study. Pat Pref Adh. 2011;5.
35534. Pohjanoksa-Mäntylä, M.K.; Antila, J.; Eerikäinen, S.; Enäkoski, M.; Hannuksela, O.; Pietilä, K.;
356 Airaksinen, M. Utilization of a community pharmacy-operated national drug information call center
357 in Finland. Res Social Adm Pharm. 2008; 4:144-152.
35835. Hussain, S.; Hussain A.S.;Hussain, K.; Asif, M.A.;Khalil, M.W.; Abdel-Rahman, D.; Charara, R.;
359 Alsuwaidi, S.; AlKhani, R. Pharmacist–patient counselling in Dubai: assessment and reflection on
360 patient satisfaction. Eur J Hospital Pharma: Sci Prac. 2013;20:241-247. : s.n.

36136. Hassell, K.; Seston, E.M.; Schafheutle, E.I.; Wagner, A.; Eden, M. Workload in community
362 pharmacies in the UK and its impact on patient safety and pharmacists' well-being: a review of the
363 evidence. Health Soc care. 2011; 6(19): 561-574. : s.n.
36437. Malone, DC.; Jacob, A.; Skrepnek, G.H; Murphy, J.E.; Armstrong, E.P.P.; Grizzle, A.J.; Rehfeld,
365 R.A.; Woosley, R.L. Pharmacist Workload and Pharmacy Characteristics Associated With the. Disp
366 Potentially Clinically Important Drug-Drug Interactions. 2007;45(5): 456-462. : s.n.
36738. Gidman, W. Increasing community pharmacy workloads in England: causes and consequences. Int J
368 Clin Pharma. 2011;(6)33:512.
36939. Mobach, M.P. Consumer behaviour in the waiting area. Pharm World Sci. 2007;29(1): 3–6.
37040. Hornik, J. Subjective versus objective time measures: a note on the perception of time in consumer
371 behavior. J Consum Res.1984; 11: 615–618.
37241. Larson, R. Perspectives on queues: social justice and the psychology of queueing. Oper Res. 1987;
373 35: 895–905.
37442. Katz, K.; Larson, B.; Larson, R. Prescriptions for the waiting-in-line blues: entertain, enlighten, and
375 engage. Sloan Manage Rev. 1991; 32: 44–53.
376
377

378

379 **Table 1: Respondents Demographics characteristics**

Variable	No (N)	%age
Gender		
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

380

381

Table 2: Characteristics of patients counseled more

Variable	No (N)	%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

Table 5: Demographics vs Common barriers

Cross tabulation		N=206 Observed (Expected count)				*P*-value
Gender	**Which age group of patient you counsel the most?**					
		Children (2 to 8 Y)	**Teens (9 to 17 Y)**	**Adult (18 to 45 Y)**	**Geriatrics (> 45 Y)**	
	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)	
Gender	**In which type of illness you counsel the patients mostly?**					
		Acute ill patients		**Chronic ill patients**		
	Male	60 (35.9)		40 (64.1)		0.00
	Female	14 (38.1)		92 (67.9)		
Gender	**Which nature of medications you counsel the patients mostly?**					
		POMs	**OTC**	**Both**		
	Male	48 (59.2)	48 (38.3)	4 (1.9)		0.00
	Female	74 (62.8)	32 (41.2)	0 (2.1)		
Gender	**In which age group patients you observed the most difficulty while counseling?**					
		Children (2 to 8 Y)	**Teens (9 to 17 Y)**	**Adult (18 to 45 Y)**	**Geriatrics (> 45 Y)**	
	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)	
Gender	**What is the frequency of counseling the patients?**					
		Mostly (90%)	**Sometimes (50%)**	**Rarely (30%)**		0.01
	Male	66 (64.1)	24 (30.1)	10 (5.8)		

	Female	66 (67.9)	38 (31.9)		2 (6.2)	
	Which age group of patient you counsel the most?					
Work experience in years		**Children (2 to 8 Y)**	**Teens (9 to 17 Y)**	**Adult (18 to 45 Y)**	**Geriatrics (> 45 Y)**	> 0.05
	1 to 2 Y	2 (1.4)	0 (0.2)	18 (14.4)	0 (4.1)	
	2 to 5 Y	2 (2.7)	0 (0.4)	30 (28.7)	8 (8.2)	
	>5 Y	10 (9.9)	2 (1.4)	100 (105)	34 (29.8)	
Work experience in years	**In which type of illness you counsel the patients mostly?**					
		Acute ill patients		**Chronic ill patients**		> 0.05
	1 to 2 Y	10 (7.2)		10 (12.8)		
	2 to 5 Y	10 (14.4)		30 (25.6)		
	>5 Y	54 (52.4)		92 (93.6)		
Work experience in years	**Which type of medications you counsel the patients mostly?**					
		POMs	**OTC**	**Both**		> 0.05
	1 to 2 Y	14 (11.8)	6 (7.8)	0 (0.4)		
	2 to 5 Y	26 (23.7)	14 (15.5)	0 (0.8)		
	>5 Y	82 (86.5)	60 (56.7)	4 (2.8)		
Work experience in years	**In which age group patients you observed the most difficulty while counseling?**					
		Children (2 to 8 Y)	**Teens (9 to 17 Y)**	**Adult (18 to 45 Y)**	**Geriatrics (> 45 Y)**	> 0.05
	1 to 2 Y	2 (2.3)	2 (1.7)	4 (2.9)	12 (13)	
	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?**					

experience in years		**Mostly (90%)**	**Sometimes (50%)**	**Rarely (30%)**	
	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)	
	>5 Y	90 (93.6)	52 (44)	4 (8.5)	

Work place	**Which age group of patient you counsel the most?**					
		Children (2 to 8 Y)	**Teens (9 to 17 Y)**	**Adult (18 to 45 Y)**	**Geriatrics (>45 Y)**	
	Retail Pharmacy	6 (3.8)	0 (0.5)	48 (40.2)	2 (11.4)	0.00
	Hospital Pharmacy	8 (10.2)	2 (1.5)	100 (108)	40 (30.6)	

Work place	**In which type of illness you counsel the patients mostly?**			
		Acute ill patients	**Chronic ill patients**	
	Retail Pharmacy	48 (20.1)	8 (35.9)	0.00
	Hospital Pharmacy	26 (54)	124 (96.1)	

Work place	**Which type of medications you counsel the patients mostly?**				
		POMs	**OTC**	**Both**	
	Retail Pharmacy	8 (33.2)	44 (21.7)	4 (1.1)	0.00
	Hospital Pharmacy	114 (89)	36 (58.3)	0 (2.9)	

Work place	**In which age group patients you observed the most difficulty while counseling?**					
		Children (2 to 8 Y)	**Teens (9 to 17 Y)**	**Adult (18 to 45 Y)**	**Geriatrics (> 45 Y)**	
	Retail Pharmacy	14 (6.5)	6 (4.9)	6 (8.2)	30 (36.4)	0.00
	Hospital Pharmacy	10 (17.5)	12 (13.1)	24 (21.8)	104 (97.6)	

Work place	**What is the frequency of counseling the patients?**				
		Mostly (90%)	**Sometimes (50%)**	**Rarely (30%)**	> 0.05

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

388

389 **Table 6: Common barriers observed during counseling**

Gender	**What are the most common Barriers to Patient counseling?**									
		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**	***P*-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)	
Work experience	**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
	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)	

390

391