Research Article

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The practice of counseling in pharmacy: patients' perspectives

Abstract

Aim: The objective of the study was to assess pharmacists' counseling practices from the patient perspective using the United States Pharmacopeia (USP) Medication Counseling Behavior Guidelines (MCBG) questionnaire.

Methods: This was a cross-sectional study conducted over 4 months in the outpatients section of the pharmacy department in two tertiary care hospitals: King Abdulaziz Medical City, Riyadh, and King Fahad Medical City. Participants were randomly selected to complete the USP-MCBG questionnaire, and gave their full consent to the data collector. USP-MCBG questionnaire is an interactive approach between the patient and the pharmacist, which takes into account the patient's special needs, beliefs and perceptions about medication use .The questionnaire included 33 items with a two-point response scale. The questionnaire was divided into four sections corresponding to the four stages of the medication counseling process.

Results: During the study period, 520 subjects were enrolled and of these, 486 responded to our questionnaire (response rate: 93%). The study population was gender balanced; most respondents (88%) were Saudi nationals, and 49% reported having at least high school education. There were no differences between the socio-demographic profiles of participants at the two study sites.

The overall mean USP-MCBG score of satisfaction was 3.18±0.11 (highest score is 5). Within subsections of the questionnaire, 'Management of treatment' scored the highest (1.14±0.05) and 'Communication' scored the lowest (0.35±0.03). In terms of medication counseling, more than >80% of patients had a positive perception and were satisfied with the performance of outpatient pharmacists. At almost all stages of the counseling process, there was a slightly inversely proportional relationship between patient age and satisfaction with pharmacist performance.

Conclusion: Using the USP-MCB guidelines, patients' perception of and satisfaction with pharmacists counseling in the outpatient setting was positive. Greater effort is needed to ensure effective counseling services in particular subpopulations, such as in the elderly. In general, patients were more satisfied with pharmacist counseling pertinent to "management of treatment", however, they were less satisfied regarding the pharmacists' way of communication

Keywords: assessment, patient counseling, pharmacists, perspective

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Introduction

Continuous improvement of quality and safety in patient care has become imperative. Patient education about medication is an essential component of the practice of pharmaceutical care.[1] In this context, counseling is 'a face-to-face interaction between the pharmacist and the patient or caregiver'.[2] Patient counseling should include an assessment of the patient's understanding and comprehension of the appropriate use of their medication. It should also include an assessment of the patient's awareness of how to use the information given by the pharmacist in order to ensure more positive outcomes of the prescribed medication.[3] This approach of patient education was endorsed by The American Society of Health System Pharmacists (ASHP) which proposes four steps to effective patient counseling: (1) establishing caring relationships; (2) assessing the patient's knowledge, attitude, physical and mental capability; (3) providing visual aids in addition to oral information; and (4) verifying patients' understanding.

According to the United States Pharmacopeia (USP) Medication Counseling Behavior Guidelines (MCBG), medication counseling is an interactive approach between the patient and the pharmacist, which takes into account the patient's special needs, beliefs and perceptions about medication use.[4,5] USP is an official, non-profit, public health organization that monitors and ensures the safety and quality standards of medicine. USP developed the MCBG, which defines the main concepts of patient counseling.[6] This guideline gives a comprehensive review of the main components of counseling, and has been used as a tool to evaluate the counseling process.[6]

Effective medication counseling has a significant effect on patients' compliance with the treatment plan.[7] without sufficient knowledge, patients cannot efficiently manage their own care. Consequently, failing to adhere to treatment instructions commonly leads to serious negative outcomes[8] such as disease progression, lowered quality of life and death, in addition to increased health care costs. Medication counselling before patient discharge from the hospital significantly reduces the adverse drug reactions after discharge.[9] Previously published studies of pharmacy practice have addressed the value of the pharmacist's advice to the patient as part of their treatment[9]. A

survey of 500 Malaysia patients was conducted to assess the extent of pharmacists' involvement in patient education and addressed types and items of instructions provided to patients by their pharmacists. The patients' satisfaction with the pharmacist counseling was 72%. The most often communicated instruction given by pharmacists was dosing information.[10]

Another study conducted in Dubai, United Arab Emirates,[11] aimed to evaluate the outpatient pharmacists counseling practice and to assess the patients' perceptions of their pharmacist using USP-MCB guidelines. The authors reported that almost 42% of the study participants did not receive counseling from their pharmacists although the patients were believed that they need it. Of those received counseling, 80.7% were highly satisfied with the pharmacist counseling performance.

There have been few studies conducted in Saudi Arabia addressing medication counseling in pharmacy.[12,13] Thirty five percent of people who were surveyed in community pharmacy setting reported that medications counselling by pharmacist improved their compliance with prescribed medication and forty three percent of them appreciate the role of pharmacist in solving their medication-related problems.[12] In contrast, another study conducted in Riyadh , Saudi Arabia[14] to evaluate the counseling practice in community pharmacies found deficiencies in dispensing practice and medication counseling. Authors provided recommendation to stakeholders and policy makers to work toward improving the current dispensing practice in community pharmac.[14] Clinical pharmacists have an important role in pain management, anti-coagulation therapy, hyperlipidemia as well as provide education in diabetic care, and asthma patients.[15] Also clinical pharmacists provide through Medication Therapy Management services by guiding, identifying and monitoring drug related issues faced by the patients. [15]

Studies to evaluate pharmacists' counseling practice in tertiary care outpatient setting in Saudi Arabia are lacking. Therefore, we conducted this study in tertiary hospitals aiming to provide information about pharmacists' compliance with medication counseling in accordance to the USP Medication Counseling Behavior Guidelines and to evaluate the patients' perception of pharmacist counseling performance.

Methods

Using the USP-MCBG, a cross-sectional study was designed to evaluate the pharmacist counseling practice and to assess patients' perspectives of the counseling they received from pharmacists regarding their medications.[4,5]

Study sites

The study was conducted in Riyadh, Saudi Arabia, between June and October 2016, in the outpatient section of the pharmacy departments of two tertiary care hospitals: King Abdulaziz Medical City (KAMC; 1000 beds), and King Fahad Medical City main hospital (KFMC; 459 beds). Both study sites are tertiary, teaching and Joint Commission International (JCI) accredited governmental hospitals located in Riyadh city, Saudi Arabia. KAMC provides health services mainly to Saudi National Guard (NG) members, nevertheless, large number of non-NG patients are referred to the hospital and receive health care similar to that of NG patients. On the other hand, KFMC is a Ministry of Health (MOH) institution provides health care to referred patients from other MOH primary hospitals.

Outpatient pharmacy of both hospitals consists of one pharmacy

place and outer separated male and female waiting area with several dispensing desks/windows that do not offer complete patient privacy. Approximately 110 pharmacists and 60 pharmacy technicians in KAMC, and 34 pharmacists and 25 pharmacy technicians in KFMC provide high standard medications filling, dispensing and counseling. In both site, the person authorized to dispense medications and communicate medications information with the patient is only a pharmacist who have completed bachelor or doctor of pharmacy degree, i.e. the pharmacy technicians are excluded from this privilege.

Data collection

Patients eligible for inclusion in this study were all those picking up filled prescriptions from the outpatient pharmacy, who were Arabic speakers, literate and aged 18 years and over. A total of 520 subjects were recruited for the study. Data were gathered on 3 days per week, morning and afternoon, over a period of 4 months. Participants gave their consent to the data collector before being randomly selected to fill out the questionnaire. The whole process lasted fewer than 30 minutes. The USP-MCBG was used to assess the counseling delivered by pharmacists on individual medications. It is a flexible tool that can be changed in several ways without diminishing its credibility or stability. The questionnaire was translated into Arabic and validated by carrying out a pilot test on a sample of 20 participants before and after translation.

The questionnaire

The questions (Appendix1) used in the study were divided into two parts: (1) participants' socio-demographic information, and (2) patients' perception of the medication counseling they received.

The second part of the questionnaire included 33 items with a two-point response scale (Yes/No). The medication counseling process was divided into four stages:

a. **Needs assessment:** This section addresses medication information transfer, during which the pharmacist provides the patient with basic, brief information about the safety and proper use of the medication.

b. **Precautions and warnings:** This part concerns about medication information exchange, during which the pharmacist provides information, and responds to the patient's questions and concerns about medication side effects, drug interactions, safety, and precautions.

c. **Management of treatment:** This section concerns about medication education, during which the pharmacist provides the patient with detailed information about appropriate use of the medication in an interactive manner.

d. **Communication:** This section addresses medication counseling, during which the patient has an open, detailed discussion with the pharmacist regarding any medication-related problems.

Ethical statement

The study was approved by the research ethics committee of King Abdullah International Medical Research Center, and conducted in accordance with the International Conference on Harmonization Good Clinical Practice Guideline. The data collector obtained permission from pharmacists and pharmacy administration to approach their patients after their prescriptions were dispensed so that patients could complete the questionnaire

Data analysis

a) Assuming a compliance of 50%, type one error of 0.05 and precision of 5%, the optimal required sample size was calculated to be 520.

b) Data were entered into a Microsoft Excel spreadsheet, coded, and cross-checked for accuracy. Thereafter, data were analyzed using SPSS version 22.0, and the internal consistency of the questionnaire was determined by a pilot study.

c) Data were presented as mean ±SD for all quantitative variables, and as percentages and frequencies for the categorical variables. The chi-square test was used to assess statistical significance between the results of different questions. P-values less than 0.05 were considered statically significant.

Results

Of the 520 eligible subjects who were approached to take part in the study, 486 responded to our questionnaire, giving a response rate of 93%. Analysis of the socio-demographic data collected (Table 1) revealed that the study population was gender balanced, predominantly of Saudi origin (88%), and 49% of respondents had at least completed high-school level of education. There were no significant differences between the socio-demographic profiles of participants at the two sites.

Table 1 Demographic characteristics of the study cohort (n=486)

Demographic characteristic	Category	Number	percentage
Gender	Male	261	53.7
	Female	225	46.3
Age	18 - 27	136	27.98
	28 - 37	121	24.89
	38 - 47	190	39.09
	48 - 57	38	7.81
	≥57	1	0.21
Nationality	Saudi	426	87.7
	Non-Saudi	60	12.3
Education level	Elementary	55	11.3
	Intermediate	116	23.9
	High school	239	49.2
	University	66	13.6
	Post Graduate	10	2.1
Hospital	King Abdul Aziz Medical City	246	50.6
	King Fahad Medical City	240	49.4

The Cronbach's alpha score for all 33 questionnaire items was 0.74. The overall mean score of satisfaction was 3.18±0.11 (5 indicates most satisfied and 1 indicate least satisfied). Within subsections of the questionnaire, 'Management of treatment' scored the highest (1.14±0.05) and 'Communication' scored the lowest (0.35±0.03) (Table 2).

Table 2 Patients' perception analysis

Overall scores	Statistics
Needs assessment score	0.79±0.04
Precaution & warning score	0.90±0.04
Management & treatment score	1.14±0.05
Communication score	0.35±0.03
Overall score	3.18±0.11

Needs assessment

Participants' overall perception of their pharmacist's assessment of their needs was generally positive (>80%) despite a slight inverse relationship between patients' ages and their satisfaction levels. Our study shows that respondents' views did not significantly differ (p>0.05) between genders or among people of different education levels. There was, however, a statistically significant difference (p < 0.001) between different age groups, where group age (38-47) show highest number of satisfaction level.

Precautions and warnings

Participants' overall satisfaction with this stage of the medication counseling process was positive (>80%). There was a slight inverse relationship between participants' ages and their satisfaction with the pharmacists' counseling performance. There was also a statistically significant (p=0.001) difference between patients of different educational levels in terms of their perception of the pharmacist's explanation of side effects. People with elementary level of education and lower reported less (≤80%) appreciation of pharmacist counseling regarding the medication side effects, whereas more educated people reported higher (>90%) appreciation. No significant difference (p >0.05) was found between genders or different age groups.

Management of treatment

The results of our survey reveal that the patients are generally satisfied with pharmacists' counseling performance pertinent to "management of treatment". In fact, they reported higher satisfaction levels in this respect when compared with other stages of counseling process. Satisfaction percentages range from 80-95% among all groups of different genders, ages or educational levels. No significant difference (p >0.05) was found between the responses of patients of different genders, ages or educational levels.

Communication

Approximately 87% of the males and 95% of the females answered 'Yes' (p=0.002) to a question about whether or not they thought the pharmacist provided accurate information about their medications. In addition, 95% of the males and 89% of the females (p=0.012) reported that the pharmacist told them at least name and indication of their prescribed medications. Although majority of the patients acknowledged that the pharmacist told them this basic medication information, they, nevertheless gave the least satisfaction levels to the pharmacists' style of communication. No significant differences (p >0.05) were found between patients of different ages or educational levels.

Discussion

This study investigates the patients' perception of pharmacists' counseling practice in outpatient setting using USP-MCBG questionnaire. This study has an excellent response rate when it

is compared with similar studies that were conducted in Riyadh and Alhasah, Easter region of Saudi Arabia[16] (93%, 85%, 66.3% respectively). Factors contributing to this high response rate could be that it was easy to access and was quick to complete.

In our study, despite some differences among patients with different age groups or educational levels, participants generally appreciate the pharmacists' assessment of their health needs, and they acknowledge the good pharmacists' counseling regarding medication side effects and treatment plan. In addition, majority of patients acknowledge that the pharmacists communicated the basic information about their prescribed   medications such as medication name and indication of its use. However, the way of the pharmacist's communication with the patients scored was the lowest among all four stages of the USP-MCBG for medication counseling process. This observation could be due to the participants' limited awareness of their rights as patients to receive the information regarding their medications in a structured counseling by the pharmacist.

Communicating is an inherited skill, whereas, effective communication with the patients can be learned and practiced. It definitely can be affected by the person's age, gender, educational level and background. In this study, we found that the pharmacists generally met the patients' needs in pharmacotherapy and knowledge regarding the medications. However, the patients gave the least satisfaction level to the style of their pharmacists' communication compared to other stages of counseling process, which indicates the need for improvement in patient-pharmacist communication to ensure effective counseling.

Countries such as the United States (USA) have already developed rules and regulations to mandate medications' counseling by the pharmacist upon medications dispensing to the patient. Therefore, Pharmacy schools in USA have included courses of pharmacy law and communication skills to their academic curricula[17] in order to help the graduated pharmacists to meet the government regulations and to fulfill their liability through delivering effective medication counseling. Pharmacy education and practice in Saudi Arabia are described to be similar to that in USA.[18] Seeking national and international accreditation, colleges of pharmacy in Saudi Arabia have recently introduced social and behavioral courses such as pharmacy communication course to their curricula, which may improve communication skills of the graduated pharmacists.[18]

US pharmacists in community pharmacy offered some form of patient education to almost 70% of the patients pursuant to the implemented government regulations. In our study, higher percentage of patients reported receiving some type of education from the pharmacist. Different settings, community pharmacy vs. hospital outpatient pharmacy, may be an explanation of the better counseling rate observed in our study.

Although the positive overall satisfaction (>80%) of our patients, some important components of ASHP's effective patient counseling steps were not fully met; for example, assessing of patient's educational, physical and mental capability in addition to providing visual aids, which may explain the different satisfaction level between patients of different educational levels.

When compared to other study that was conducted in community pharmacy in Riyadh in 2012,[11] findings of our survey show better patient counseling by pharmacist from patient prospective. Our participants also were more appreciated to the patient education sessions carried by pharmacist regarding the medications-related

problems (80% vs. 43%). Large difference in counseling practice rate was also noted between our study and another study conducted in community pharmacy in Riyadh.[13] The rate of counseling offered by the pharmacists to simulated patients in this study was only 3% and increased to 43 % when the patient asks for more information.[13] In contrast, at least 90% of the participants of our study reported that the pharmacist offered them some type of counseling regarding their medication without being asked to so. Unlike our finding in this study, In Alahsah survey[17] of patients in outpatient pharmacy, nearly two-third of the patients reported that they received "poor communication" from the pharmacist. In addition, this study found variable satisfaction levels among group with different age and gender.

Our study findings are consistent with those of the previous study conducted in Dubai.[11] We found similar patients satisfaction level with the pharmacist counseling practice. However, in Dubai study, men, older patients, and patient with low educational level reported higher level of satisfaction compared to others categories. In contrast, we found no differences between patients of different characteristics except of statistically non-significant trending down of satisfactions level with increased age.

It is usual to observe people with advanced age report lower satisfaction with educational session that does not consider their specific characteristic. From our study and other study[11] findings, we can conclude that elderly is a special group of people with special needs that health care providers should pay more effort to meet their needs in order to deliver an effective health care message. Actions to improve satisfaction of advanced age people may include creating a dedicated counseling room; establish training program for the pharmacists in addition to having visual and hearing aids available at the dispensing area.

In addition to the knowledge of pharmacotherapy, pharmacist should possess adequate verbal and non-verbal communication skills in order to be an effective counselor. Sharing objectives of the counseling with the patients and encouraging them to participate in counseling sessions is as important as telling facts about the medications.[6] Evidence from our findings and findings of other published study[6] found that the pharmacist, as health care provider, has vital role in improving patient health and ensuring quality and safety in patient care when using effective communication style.

In this study, we observed some barriers of effective patient counseling such as crowded waiting area, long waiting time, lack of privacy and patient illiteracy. Some other studies have cited that time restraints and patient motivation are the most frequent barriers encountered by pharmacists.[19–21] Lack of a dedicated counseling room and pharmacist motivation are another barriers[21,22] Availability of private counseling room found to be a significant predictor for good counseling practice.[22] Removing such barriers, implementing rules pertinent to patient education, in addition to offering a continuing pharmacists training program within the institution will ensure effective patient's counseling.

One limitation of this study is that it was conducted in tertiary, teaching, governmental hospitals, which may have higher standards of medication dispensing practice than primary, non-teaching or private hospitals. Therefore, findings of our study may not reflect the actual nationwide practice. From our observations, practice of patient counseling upon medications dispensing in some smaller hospitals that are located in rural areas is completely non-exist which may indicate the need for more effort from the health authority to impose rules aiming to improve patient education. Another limitation of this

study was excluding of illiterate people, which may generate selection bias. Hence, the sample may not reflect the actual population if the number of excluded illiterate people is high.

Future direction

Future research should focus on a nationwide practice of pharmacy in different settings. Another potential research area is to investigate the effect of recent pharmacy schools curricula modifications on pharmacist practice in outpatient and community settings. As well as provide students with effective communication skills to improve patient comprehension of their condition and optimal use of their medications.

Conclusion

Practice of patient counseling by pharmacists in outpatient pharmacy setting was found to be satisfactory. Despite the fact that majority of surveyed patients in this study generally appreciated the pharmacist performance, the pharmacists' style of communication scored the lowest within subsections of the questionnaire. Moreover, there was an inverse proportion relationship between age and level of satisfaction across all stages of medications counseling process. These findings suggest the need for a continuous pharmacist development program that address verbal and nonverbal communication skills, in addition to improving the pharmacists' cultural-competency and age-competency skills.

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Conflict of interest

The authors have no conflicts of interest to declare.

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