

Community pharmacists' epilepsy counseling: A theory of planned behavior approach

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ABSTRACT

Background and Aims: Community pharmacists play a major role in healthcare. To improve the success in epilepsy treatment, community pharmacists' involvement is important. This study aimed to express the influencing factors of community pharmacists' counseling to patients with epilepsy.**Methods:** Semi-structured interviews were held with fifteen community pharmacists in the Theory of Planned Behavior framework. A directed content approach was performed to analyze the study results.**Results:** The participants emphasized that easy access to community pharmacists is worthy. Patients with epilepsy have various expectations from pharmacists. However, lack of communication was determined between community pharmacists and physicians. Irregular drug usage and getting inadequate and misleading patient information are highlighted as perceived major barriers/difficulties. All pharmacists have the intention to receive training on epilepsy.**Conclusion:** Improving communication between pharmacists and physicians may help to enhance collaborative work in epilepsy management and to increase treatment success. Moreover, vocational training may be organized to enhance pharmacists' counseling.**Keywords:** Community pharmacists, counseling, epilepsy, theory of planned behavior

INTRODUCTION

Epilepsy is a neurological disease that affects approximately 50 million people around the world (World Health Organization, 2019). Comorbidities such as depression, anxiety, migraine, and stroke are more common in patients with epilepsy (PWE) (Selassie et al., 2014; Keezer, Sisodiya, & Sander, 2016), and drug interaction risk is high between antiepileptics and other drugs (Bosak, Slowik, Iwańska, Lipińska, & Turaj, 2019). Epilepsy treatment may also include polytherapy to keep the disease under control (Park, Kim, & Lee, 2019). Adverse drug effects in PWE decrease the quality of life (Perucca & Gilliam, 2012; Micoulaud-Franchi, Bartolomei, Duncan, & McGonigal, 2017). Additionally, medication adherence is a substantial factor in the success of epilepsy management; however, patients are concerned about using these medicines and have poor adherence (Dayapoğlu, Turan, & Özer, 2021).

Previous studies indicate that pharmacists have various contributions to epilepsy management, such as drug-related issues, adherence, and education of patients (Koshy, 2012; Reis, Campos, Nagai, & Pereira, 2016). McAuley, Miller, Klatte, & Shneker (2009) exhibited that PWE desire to discuss more drug-related problems with their community pharmacists. Eshiet, Okonta, & Ukwe (2021) reported pharmacists' counseling improves the quality of life in epilepsy. Another point is that unmet healthcare needs are more common in PWE (Mahendran, Speechley, & Widjaja, 2017). In this context, PWE need more pharmacist counseling, and the pharmacist's role for patients with epilepsy and/or their relatives becomes important in epilepsy management. This study aims to put

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forth the factors that influence community pharmacists while counseling patients with epilepsy in the light of the Theory of Planned Behavior (TPB). To the best of the author's knowledge, this is the first study exploring the influencers of pharmacists' counseling to PWE in a qualitative approach based on TPB.

MATERIALS AND METHODS

Theoretical framework

In various studies, the TPB model has been used to examine the counseling of health professionals (Amin & Chewning, 2016; Lin, Fung, Nikoobakht, Burri, & Pakpour, 2017), and to predict the factors influencing pharmaceutical care (Rawy, Look, Amin, & Chewning, 2021). According to the TPB approach, attitude, subjective norms, and perceived behavioral control influence the intention of an individual to perform a behavior (Ajzen, 1991). The TPB framework has also been applied in studies related to epilepsy such as medication adherence in PWE (Lin, Updegraff, & Pakpour, 2016) and neurologists' attitudes, and barriers toward epilepsy surgery (Erba, Moja, Beghi, Messina, & Pupillo, 2012).

Study design and data collection

Izmir Katip Çelebi University Social Research Ethics Committee (No: 2020/09-04) approved the study. Fifteen interviews were performed in February 2021. The Consolidated Criteria for Reporting Qualitative Research (COREQ) was used for reporting (Tong, Sainsbury, & Craig, 2007). The interviews were conducted and transcribed verbatim by the researcher who has experience in qualitative research and community pharmacy and a Ph.D. degree.

The interview guide was constructed according to the TPB framework (Francis et al., 2004; Fishbein & Ajzen, 2010). The interview guide has seven questions, including attitude (importance/advantages of pharmacists counseling to PWE; factors affecting the successful management of epilepsy), subjective norms (approaches/expectations of physicians and PWE/patient relatives about pharmacist consultation), perceived behavioral control (difficulties/barriers while counseling PWE/patient relatives; any differences in giving counseling to PWE compared to other patients) constructs, and a question about willingness to take a vocational training, course, etc. on epilepsy in the future.

Purposive and snowball sampling methods were used. Attention was paid to balancing the demographics of pharmacists. Semi-structured interviews were held in Turkish and lasted approximately 15 minutes. None of the interviews were repeated. Community pharmacists practicing in Türkiye were informed about the study, and those who volunteered to participate indicated their available times. The interviews were held by calling the pharmacists at that time frame, and informed consent was obtained. The interviews were audio-recorded in a quiet environment with attention to privacy.

Data analysis

Data analysis was performed via directed content approach within the TPB framework. A directed content analysis uses a theory or research results for guidance and aims to validate or

expand the theory or framework (Hsieh & Shannon, 2005). The initial codes were identified according to the constructs of TPB. Interview data, English transcripts, and codes were checked several times for accuracy.

RESULTS

The demographic data are shown in Table 1. Eight female and seven male community pharmacists participated in the study. The experience in the profession ranges from 2 to 28 years. The majority of the participants have been working as a pharmacist for more than ten years. The pharmacies' locations were classified into three groups, as presented in Table 1.

Table 1. Demographic information of the participants

	n
Gender	
Female	8
Male	7
Experience in profession (year)	
<10	4
10-20	7
>20	4
Pharmacy location	
Neighborhood pharmacy	5
On-street	4
Near health center	6

Behavioral Beliefs/Attitudes

Most pharmacists (n=11) highlighted that informing patients, particularly on the regular use of epilepsy medications, contributes to controlling the disease.

P3: "Since regular use of medications by patients with epilepsy will prevent them from having seizures or other complications, in this sense, providing information to patients with epilepsy and telling them about their medication are essential for patient adherence."

P5: "Epilepsy medicines are specific medicines that require patients' 100% adherence with the treatment program. To achieve this adherence, the right explanation of the medicine, the right explanation of its use, what can happen when the missed dose is taken, or the treatment is interrupted without consulting the physician and pharmacist, that is to say, informing what kind of problems can happen shows the importance of pharmacist consultation here."

Four pharmacists expressed that PWE can consult community pharmacists easily. Two of them remarked,

P8: "Pharmacies are considered to be primary health care institutions. And they (patients) see pharmacies as the first place they visit outside the hospital and where they receive consultancy ser-

vices. And I think this makes a greater sense, especially in small places. ...they see it as a place where they can ask questions and get information more comfortably in a more friendly environment than that of a physician. Therefore, I think the counseling service that the pharmacy can provide is important for the patients."

P9: "...Our physicians are very busy ...in that sense, they (patients) sometimes do not have the opportunity to ask what they want. In general, these patients try to find out the details of their diseases from the pharmacist. At this point, I think it is vital."

The majority of pharmacists (n=13) indicated the importance of patient medication adherence. Pharmacists cited (n= 10) that the contribution of the relatives/family in epilepsy is noteworthy. A pharmacist noted,

P6: "It is necessary to ensure that medication adherence is complete, and in my opinion, it is necessary to try to provide familial support. In my opinion, the most important factor in the success of treatment is the proper, regular use of drugs with the correct dosage. This is the critical point of treatment. Family support is needed in this regard..."

Normative Beliefs/Subjective Norms

Two pharmacists stated that patients/their relatives do not have many expectations of them. A pharmacist attributed this to the fact that epilepsy requires expertise. The pharmacist indicated,

P8: "Epilepsy disease, medicines used in epilepsy disease, treatment of epilepsy disease is a subject that requires specialty. I guess the relatives of the patients see this with this eye, and I think they do not expect much consultancy service from the pharmacy. Because, until now, for example, apart from taking epilepsy medicines, we have not had a patient expectation or asking any information from us about his illness or medicines."

The rest of the pharmacists discussed that patients ask for almost everything about medicine. Besides, they need support about life challenges. A pharmacist shared,

P11: "...For example, when he/she goes to his/her physician and changes the dose, he/she comes to me and expects a lot while taking a medicine... For example, I realize that it is very important for the patient to be able to contact me when he/she has a problem with medication. ...even though things like this happen, for example, they feel the need to get support for the difficulties in the patient's life..."

In addition, it is emphasized that infant and children relatives ask mainly about the dosage of the medicine, particularly the dosage of medications in syrup forms. A pharmacist indicates,

P14: "In pediatric patients, the dosage can change constantly... Because as the child grows, he/she may need to take a different dosage every year. It needs to be more tightly controlled."

Seven pharmacists shared they do not have contact with physicians about epilepsy treatment. A pharmacist expressed, "I mean, frankly, we've never had any contact with a physician about it until today." Other pharmacists stated the expectations of physicians as informing patients about drug usage, drug interactions, and adverse effects. A pharmacist shared,

P11: "I think it may be to provide detailed information about the drug's usage, side effects, and follow it up. As I said, because physicians are very busy, unfortunately, they cannot follow up with each patient for the slightest dose change or the start of a new drug, especially in public hospitals, and I think they may be waiting for us to follow up."

Control Beliefs/ Perceived Behavioral Control

The pharmacists complained of several difficulties/barriers. Eight pharmacists cited irregular drug usage, and four pharmacists were concerned about getting inadequate and misleading information from patients/relatives.

P9: "So once we had a patient who fell to the ground and hit his head and bled while having a seizure. We tried to pay close attention, he fell very close to the pharmacy. We ask "if you are missing the dose?"; he says "no, I am taking it on time". But in the SSI (social security insurance) system, we see when the drugs should start and end, from the number of boxes and tablets or daily doses. You see that the patient's drug expiration time does not end on time, which means that he does not use it regularly. But when you ask, he doesn't give you information, he says no, he says that he uses his medicine regularly."

Four pharmacists identified generic drug substitution as an arduous process in PWE. A pharmacist indicated,

P2: "If the medicine is not on the market, the patient is in trouble. And he/she doesn't want a generic. For example, when an antibiotic is offered as a generic, it is not very important for him/her, but if it is an antiepileptic drug, then it becomes very difficult for him/her to accept even if you offer a generic."

Six pharmacists stated that there was no difference when counseling epilepsy patients compared to other patients. The rest of the participants pointed out some differences. A pharmacist remarked on the necessity of being more sensitive toward PWE.

P11: "I think there are differences. I think it is a disease that needs to be treated more sensitively. In other words, it is a process that requires a more detailed and healthier follow-up of consultancy... let's take a hypertension patient as an example, it is also a chronic disease, but after starting a medication and giving counseling, we see that it is very likely that the patient does not have a problem and adapts to the medicine, and maybe using it for years... But epilepsy patients are more sensitive. Maybe they also need more counseling because they don't know."

Another pharmacist underlined the bashfulness of PWE.

P9: "That is to say, other patients express their illness more clearly. For example, a patient with coronary artery disease is not ashamed of his/her illness when he/she tells about it or his/her life... but in epilepsy patients, abashment, embarrassment, hiding, abstaining from telling much are prevalent. That's why you have a little more difficulty because while questioning the patient, is he/she telling the truth, or is he/she hiding something? He/She says "I'm taking my medicine"; but you look through the system, it (the medicine) doesn't actually end in the time it should..."

Lastly, all pharmacists expressed their intention and desire to increase their knowledge about epilepsy in the future. It was underlined that epilepsy is a specific area, they have limited knowledge, and it needs to be updated. Two of the participants express,

P8: *"I think it is one of the areas where pharmacists are lacking, that is, one of the aspects lacking in terms of disease and drug information. But of course, these can be solved with vocational training."*

P15: *"Ever since I opened my pharmacy, I have realized that we do not have enough knowledge. We need to update it constantly."*

DISCUSSION

Pharmacists cited that ensuring regular usage of medications and patients' easy access to community pharmacists are substantial for epilepsy treatment. Additionally, according to pharmacists, patient adherence and support from family members/relatives influence the success of the treatment. The vast majority of the pharmacists indicated they are asked for almost everything, even for support in life challenges. Nearly half of the participants expressed that they are not in contact with physicians. Irregular drug usage, lack of and misleading information are cited as major difficulties/barriers in the consultation process. All pharmacists are willing to improve themselves with training in the future. Examining the factors influencing pharmacists' counseling on this issue will help expand the counseling process and healthcare services for PWE provided by community pharmacies.

Existing literature indicates that family support improves antiepileptic medication adherence (Yang, Hao, Yu, Xu, & Zhang, 2018). In line with this, the participants mainly underlined the necessity of adherence and the contribution of family/relatives.

Ma et al. (2019) exhibited that pharmacists positively impact medication adherence in pediatric PWE. Similarly, in the current study, the pharmacists expressed that many questions about pediatric dosage forms were asked.

In the current study, the pharmacists highlighted the bashfulness of PWE, and not being sufficiently informed or being misinformed complicates the counseling process. This situation may occur due to the social environment that PWE are faced with. PWE are exposed to social exclusion and discrimination (Shi, Liu, Wang, Li, & Zhang, 2021), and stigmatization in epilepsy is much more than other neurological diseases (Ak, Atakli, Yuksel, Guveli, & Sari, 2015). Besides, it is stated that PWE generally prefer a concealment strategy to deal with distressing situations in their lives (Shi et al., 2021). To provide effective counseling, it is necessary to ensure that patients give accurate and sufficient information about their treatment without hesitation. Moreover, psychological situations related to stigmatization, which is intensely seen in PWE, reduce help-seeking behaviors (Shi et al., 2021). As mentioned in the current study, the advantage of easy access to community pharmacies and pharmacists' sensitive behaviors may encourage patients to collaborate with pharmacists for epilepsy management. In ad-

dition, pharmacists indicated that patients have many expectations for almost everything related to medicines and support in life challenges. In the literature, availability and accessibility issues are expressed to be the two of the reasons for the unmet healthcare needs of PWE (Mahendran et al., 2017). By improving pharmacists' counseling behaviors and expanding their roles in epilepsy treatment, community pharmacies may play a central role and help to decrease the unmet healthcare needs of PWE. According to the findings of global research, there were diverse barriers to the generic substitution of antiseizure medications (Niyongere et al., 2022). Similarly, in the present study, the participants mentioned that the generic substitution of antiepileptics is undesired by PWE. Berg, Gross, Haskins, Zingaro, & Tomaszewski (2008) surveyed physicians and patients on this issue and concluded that they have efficacy concerns and relate breakthrough seizures with the generic substitution of antiepileptics.

Reducing communication gaps between healthcare providers is substantial for patient care (Amin & McKeirnan, 2022). It is a remarkable result that nearly half of the pharmacists stated that they had no communication with physicians. Parallel with this, from the physicians' perspective, insufficient communication was one of the barriers to building effective collaboration with pharmacists (Amin & McKeirnan, 2022). The communication and collaboration between physicians and pharmacists need to be improved.

The current study findings demonstrated that pharmacists are not sufficiently knowledgeable, and they all intend to enhance their knowledge on this issue. Parallel to this finding, in a study, community pharmacists expressed that they are not much more experienced with epilepsy and require more training (Bacci, Zaraa, Stergachis, Simic, & White, 2021). Ngoh (2009) reported that pharmacists could cope with patients' poor health literacy and improve medication adherence by collaborating with patients and healthcare professionals. Improving community pharmacists' knowledge will contribute to health outcomes. Pharmacists intend to promote their knowledge and skills in the management of epilepsy. The involvement of community pharmacists in epilepsy treatment in communication with physicians could reduce the burden on physicians and hospitals and facilitate the patient's access to health services.

CONCLUSION

The findings of this study show that PWE ask various questions to pharmacists and need support not only about epilepsy, but also about life issues. In order to optimize healthcare resources, community pharmacists may take more roles in epilepsy management. Further involvement of pharmacists in epilepsy management may help create strong bonds between pharmacists and patients and overcome the barriers to getting misleading and insufficient information. Having complete and accurate information may enhance pharmacists' counseling of PWE. Pharmacists are open to having more training on epilepsy, and vocational training may be organized. Another issue is that there is a communication gap between pharmacists and physicians. Therefore, future studies can be performed to explore the underlying reasons for the lack of communication.

Ethics Committee Approval: This study was approved by the Izmir Katip Çelebi University Social Research Ethics Committee (No: 2020/09-04).

Peer-review: Externally peer-reviewed.

Informed Consent: Written consent was obtained from the participants.

Conflict of Interest: The author has no conflict of interest to declare

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