Experiences of self-medication among people: a qualitative meta-synthesis

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Abstract

Background Self-medication is one of the major health-related problems in the world, which causes many problems for people and health systems. No comprehensive qualitative meta-synthesis has been done to understand the perceptions and experiences of self-medication among people.

Objectives This study aimed to analyze, re-interpret, and synthesize the existing qualitative studies on perceptions and experiences of self-medication among people around the world.

Methods In this meta-synthesis, all published qualitative studies in PubMed, Scopus, CINAHL, and Web of Science databases were searched in May 2018. A total of 543 articles were screened in the primary stage and finally five articles that met the inclusion criteria were included in the meta-synthesis. The included studies were analyzed using Noblit & Hare approach.

Results Initially, 115 codes were identified. In the second stage, the codes were merged based on similarity and shared meanings. Finally, after checking by two authors, the following five themes were emerged: cost-effectiveness, affectivity, inefficiency of the healthcare system, previous experiences, and oversimplification.

Conclusion The findings of this first meta-synthesis provided a comprehensive understanding of the perceptions and experiences of self-medication around the world. The findings showed that the experiences of self-medication could be classified into personal, social, organizational, and cultural categories. These findings could help policymakers address these perceptions and experiences in effective health planning.

Keywords Self-medication · Meta-synthesis · Qualitative studies

Introduction

Self-medication is a common health problem, which has affected many societies [1]. Self-medication has been defined as using drugs without consultation and prescription by physicians to treat self-diagnosed symptoms or illnesses [2]. In this regard, individuals use medications based on advice from their friends, relatives, or family members. [3] Self-medication can lead to side effects, such as microbial resistance, toxicity, and delayed or no response to treatment [1].

The rate of self-medication has been reported to be up to 90% in developing countries [1]. In fact, self-medication is a major health problem that affects healthcare costs and imposes drug costs per capita on societies [1, 4]. Studies have shown that many factors stimulated the use of self-medication in prevention or treatment of symptoms and diseases [1, 4, 5]. Accordingly, cultural, political, and environmental factors caused an increase in the rate of self-medication [4]. High healthcare costs, transportation costs, insurance-related problems, and early access to drugs were also effective in increasing the rate of self-medication [1, 5–7]. Many studies have reported an increased rate of self-medication in a defined general population [1, 8, 9] as well as in physicians and medical students [10]. In this context, the majority of quantitative studies have only focused on the rate of self-medication, while qualitative ones have focused on the nature of self-medication and its effective factors [4, 6, 11]. Yet, several quantitative and qualitative studies have been conducted to identify the causes and experiences of self-medication around the world [1–7]. Since the nature of quantitative findings differs from that of qualitative findings, the present study seeks to provide a

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comprehensive understanding of the qualitative studies performed on the perceptions and experiences of self-medication. Considering the importance of self-medication as a common health problem and the need for identification of individuals' perceptions and experiences about this phenomenon, the present study as the first meta-synthesis of qualitative studies aims to analyze, re-interpret, and synthesize the existing qualitative studies on perceptions and experiences of self-medication among people around the world.

Method

This meta-synthesis aimed to analyze, re-interpret, and synthesize the existing qualitative studies on perceptions and experiences of self-medication among people around the world. Meta-synthesis is a research approach used to collect evidence about a specific phenomenon from multiple studies in order to achieve a greater insight about that phenomenon [12].

The research questions for the present study included: “What are the experiences of people with self-medication?”, “What are the perceptions of people about self-medication?”, and “What are the associated factors with self-medication?”. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) checklist was followed [13]. Based on the research questions, the initial search began systematically in PubMed, Scopus, CINAHL, and Web of Science databases in May 2018 using the following keywords: ‘Self-medication’ OR ‘self-treatment’; ‘qualitative study’ OR ‘qualitative research’; AND ‘associated factor’ OR ‘predisposing factor’. The studies reference lists were also assessed to ensure that all relevant studies were included. The searched studies were managed using Endnote X7 software, and the duplicate studies were deleted. The characteristics of the included studies have been presented in Table 1.

Full text qualitative studies focusing on the perceptions and experiences of people about self-medication were included in this study. However, editorials, commentaries, letters to editors, cross-sectional and interventional studies, those that did

not describe self-medication and its related factors, and those that did not use qualitative designs were excluded.

The relevant studies were evaluated using the critical appraisal skill program checklist [14] and the results have been shown in Table 2. In this respect, the studies were assessed based on methodological quality, sampling, reporting, and rigor. In so doing, all relevant papers were carefully studied and the required information was extracted and summarized.

To ensure rigor, all three researchers were involved in analyzing the qualitative data and the final meta-synthesis. The studies were analyzed using Noblit & Hare approach [15], which consisted of three steps. In the first step, after carefully reading and getting familiar with the study, the main categories or themes were extracted by two researchers. In the second step, the concepts, themes, and categories were evaluated. In this step, the initial data were merged and the new classifications were established. In the final step of analysis, new interpretations were provided based on the new merged themes and their subcategories.

This work was carried out as a part of an approved research project (93093) by Fasa University of Medical Sciences, Fasa, Iran. The general and specific standards for publication ethics were used in this study. The citation and correct referencing of the reviewed studies as well as all rules related to publication ethics were respected, as well.

Results

In the first step, 543 article were searched through the above-mentioned databases and 139 duplicate articles were deleted. Thus, 404 articles were screened based on titles, abstracts, and research questions. In this step, 368 unrelated articles were excluded. Then, based on full texts, 36 articles were reviewed by two researchers and five articles were finally included [4, 6, 16–18] as shown in Fig. 1. Based on Table 2, a total of 99 participants were interviewed in these studies.

After evaluation of the articles, the primary codes were identified. In the next step, all primary codes were merged

Table 1 Characteristics of the reviewed studies

Author(s)	Country	Design	Participants	Aim	Analysis Method	Setting
Beyene et al.,	Ethiopia	Mixed study	Nine key informants	To assess self-medication practice and associated factors among pregnant women.	Thematic analysis	Addis Ababa
Loyola et al.,	Brazil	Qualitative	Twenty-nine	To identifying the contextual elements of self-medication.	Content analysis	The town of Bambuí
Le et al.,	Vietnam	Qualitative	Ten	To understand factors influencing self-medication.	Content analysis	Ha Tay province
Mortazavi et al.,	Iran	Qualitative	Twenty one	To describe the practice of self-medication and its related factors among elderly people	Content analysis	Tehran
Wen et al.,	China	Qualitative	Thirty	To understand the factors influencing common self-medication behavior	Qualitative analysis with ATLAS software	Fuzhou

Table 2 Quality assessment of included studies

Author	Question 1	Question 2	Question 3	Question 4	Question 5	Question 6	Question 7	Question 8	Question 9	Question 10
Beyene et al.,	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Loyola et al.,	Yes	Yes	Yes	No	Can't Tell	Yes	Can't Tell	Yes	Yes	Yes
Le et al	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mortazavi et al.,	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Wen et al.,	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

based on similarity and meanings. Finally, five new main themes, including cost-effectiveness, affectivity, inefficiency of the healthcare system, previous experiences, and oversimplification, were extracted.

Cost-effectiveness

The individuals undergoing self-treatment mentioned the cost-effectiveness of the method as one of the reasons. Some subjects also regarded the need for immediate treatment [16], time saving [17], and cost [6] as the main reasons for choosing self-treatment. They believed that the method would reduce their costs and prevent waste of time.

Time and cost saving

From the patients' viewpoints, long-term waiting to receive medical services at clinics or physicians' offices [18] as well as the overcrowding of these places [16] were the major challenges. Therefore, they applied self-treatment. In addition, the

high costs of medical services and referral to physicians [16] caused them to practice self-treatment.

"... I personally go to the pharmacy and buy everything I want. By doing so, I do not need to pay for physicians' services and save the costs ..." [16].

Easy access to medication

Unlike the time-consuming process of accessing hard-to-reach medications in the healthcare system, the patients did self-treatment and considered the method as a convenient way to access drugs [17]. The patients believed that it was easier to access medication than to refer to clinics even in small villages [18]. Therefore, they preferred self-treatment.

"... Getting medication from a pharmacy is far easier than going to the doctor ..." [4].

Fig. 1 Flow chart of studies selection

Affectivity

One of the strong and common motives of all subjects for applying self-treatment was being under the influence of others. Recommendations from friends, family members, peers, and even non-physician staff of the treatment team were among the factors involved in applying self-treatment [4, 6, 17, 18].

Recommendations from friends and peers

Many people with a history of self-treatment mentioned that the reason for applying the method was receiving recommendations from their friends [4] and family members [17]. In this regard, neighbors, friends, and family members had encouraged the subjects toward self-treatment according to their experiences [6, 16].

“... I heard from my friends about the drug. They said that the drug was good for the disease. I also used the drug ...” [6].

Recommendations from non-physician staff of the treatment team

Pharmacists' recommendation was another reason for the participants' affectivity and self-treatment practices [4, 18]. In this context, patients attempted self-treatment due to their trust in pharmacists and according to recommendations received from them.

“... I go to the pharmacy and take medications according to the pharmacist's recommendation; it helps my baby get better ...” [18].

Inefficiency of the healthcare system

Weak information about the complications of self-treatment, failure to meet expectations after referring to healthcare centers, and problems with healthcare teams were mentioned by patients as the reasons for self-treatment.

Weak information system

Many individuals with self-treatment history mentioned inadequate education about self-treatment complications [17] and weak information as their reasons for applying self-treatment [16]. They believed that they attempted self-treatment due to lack of awareness about the side effects of drugs and self-treatment [16, 17].

“... The doctor gave me a bag of drugs but didn't explain anything about them; I got confused ...” [16].

Discrepancy between facts and expectations

Some members of the healthcare team mentioned that patients' failure to meet their expectations at state medical centers was a reason for their application of self-treatment [18]. They believed that standard instructions and insufficient medication at state medical centers caused patients' expectations to remain unfulfilled, which led to self-treatment [18].

“... I took my child to a state medical center. They told me that they didn't have drugs for respiratory infections and only had drugs for diarrhea ...” [18].

Patients' communication problems with the healthcare team

The subjects applying self-treatment mentioned the medical team's inappropriate behaviors as one of the reasons for self-treatment and not referring to receive healthcare services [18]. They believed that the communication gap between the patients and the treatment team [17], mistrust in physicians [16], and fear from going to the doctor [16] were the reasons for self-treatment.

“... I really don't trust in what the doctors tell me ...” [4].

Previous experiences

The subjects with self-treatment history regarded their previous experiences about diseases and drug use to be effective in re-application of self-treatment. They believed that these previous experiences would facilitate the subsequent self-treatment attempts [6].

Previous experience of the same disease

Individuals applying self-treatment referred to their previous experiences [6] with similar symptoms as well as familiarity with the illness. The similar symptoms of the current illness to those of the previous one encouraged them to apply self-treatment [18].

“... Pregnant mothers take medications from pharmacies with regard to their previous experiences and rely on them ...” [17].

Oversimplification

Individuals applied self-treatment since they perceived that their current problem was mild and not serious. Perception of the mild illness [18] and temporal nature of the disease [4] made the patients not seek for healthcare services and undergo self-treatment.

“... When the problem is mild, you do not need to visit the doctor. For example, cold, headache, and knee pain are not serious illnesses and I can apply self-treatment ...” [16].

Discussion

This study aimed to systematically review and combine the findings of qualitative studies on the perceptions and experiences of people with the history of self-medication. This study was the first qualitative meta-synthesis on self-treatment. After reviewing and combining the findings of the extracted studies, the main categories were classified into five domains, namely cost-effectiveness, affectivity, inefficiency of the healthcare system, previous experiences, and oversimplification.

The evidence found in this meta-synthesis showed that individuals applied self-treatment because of its cost-effectiveness. The results of the studies conducted by Beyene et al. [17] in Ethiopia, Mortazavi et al. [16] in Iran, and Wen et al. [6] in China revealed that individuals were reluctant to seek for medical advice since they would like to save time and money. Similarly, Jafari et al. [19] reported that 82% of individuals underwent self-treatment for the sake of time saving and 45.5% applied self-treatment to save the costs. Azami-Aghdash et al. [1] also conducted a meta-analysis and introduced cost and time savings as effective factors in self-treatment. Many other studies have also indicated high costs of visiting a doctor [16], over-crowdedness of private offices and clinics [16], long waiting times for services [18], and availability of drugs [20] as the reasons for self-treatment. In the same line, Aljadbey et al. [21] stated that time saving was one of the most common reasons for self-medication in Saudi Arabia.

Being affected by other people (i.e., affectivity) was another main category derived from the findings of various studies. Individuals who practiced self-treatment reported that their friends, families, and peers' recommendations were among the effective factors encouraging self-treatment. The results of various studies indicated that the recommendations made by family [17], friends and neighbors [4], family members [16, 22], peers [6], and other healthcare workers [3] were the major factors affecting self-treatment. In the study by Azami-Aghdash et al. [1], the recommendations of others accounted for 35.9% of self-treatment cases. Jafari et al. [19] also stated

that 64.6% of the patients underwent self-treatment because of the recommendations made by others (friends, neighbors, and family members). Similarly, Yusuff et al. [23] showed that mothers-in-law and relatives (41.3%) were the most common sources of advice regarding self-medication.

According to the findings of this meta-synthesis, inefficiency of the healthcare system and patients' and their families' dissatisfaction were important categories extracted from the previous studies. These individuals considered weak information system [16] and lack of adequate education about self-treatment complications [17] as effective factors in self-treatment. In addition, the communication gap between the patients and the healthcare team as well as the health team's inappropriate behaviors mostly stimulated self-treatment among individuals [4, 18]. Moreover, the results of the study by Li et al. [18] revealed that patients applied self-treatment because of their unmet expectations as well as lack of medications in state centers. Jorge E. Machado-Alba et al. [24] also reported negative opinions about care or the health system as the factors associated with self-medication in Colombia. Furthermore, Beyene et al. [17] disclosed that inadequate education about the complications of self-treatment and the communication gap between the patients and the healthcare team were effective in self-treatment. Additionally, patients' lack of trust in physicians was noted as an effective factor in this regard [5]. Mortazavi et al. [16] suggested that the elderly and their families underwent self-treatment due to their lack of trust in physicians. Similar results were also obtained by Azami-Aghdasi et al. [1] and Jafari et al. [19].

Based on the findings of the present study, individuals' previous experiences played an important role in self-treatment. Accordingly, individuals were inclined to apply self-treatment because of their familiarity with the disease and medications as well as the similar symptoms of a disease to those of the previous illnesses [3, 25, 26]. Jafari et al. [19] showed that previous experiences of diseases accounted for about 73% of self-treatment cases among the elderly. Azami-Aghdash et al. [1] also demonstrated that previous experiences with regard to taking similar medications were responsible for 51.4% of self-treatment cases. In the same vein, Wen et al. [6] indicated that previous experiences of diseases or similar symptoms (positive or negative experiences) influenced the self-treatment measures. In the study by Mamo et al. [27] also, more than half of the participants stated that they practiced self-medication because of their prior experiences.

Oversimplification of the disease and its symptoms was another important finding in the current study. Accordingly, individuals applied self-treatment due to the fact that they had not taken the diseases seriously. In this regard, Loyola et al. [4] revealed that the individuals' oversimplification of the disease and their feelings of its temporary nature played a vital role in self-treatment. Furthermore, Beyene et al. [17] in Ethiopia considered individuals' perceptions of mild illnesses as a

reason for self-treatment. In another study, minor ailments were related to a higher likelihood of self-medication [7]. In the study by Jafari et al. [19], this factor accounted for 77.8% of self-treatment cases. The findings of the meta-analysis performed by Azami-Aghdash et al. [1] also demonstrated that the highest percentage (63.7%) of the factors affecting self-treatment was related to simple symptoms of the disease. According to these findings, individuals are more likely to undergo self-treatment if they perceive the disease or its symptoms as mild. Moreover, Allotey et al. [28] showed that the use of over the counter medications for treatment of minor symptoms and diseases was widespread among children.

Conclusion

This meta-synthesis provided a full understanding of self-medication, which would help policymakers in healthcare systems to effectively tackle with such a health problem. The study findings showed that self-treatment contained a variety of individual, cultural, social, and organizational domains, which should be addressed by healthcare policymakers. Sufficient training and communication regarding self-treatment complications, access to healthcare services, and emphasis on mutual communications with patients can largely reduce health problems. Moreover, based on the above-mentioned domains of self-medication, it would be very helpful to conduct further studies to collect health professionals' and policymakers' views with regard to self-medication.

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Authors' contributions MNK designed the review. ZhF, MKM and contributed to searching and data collection. ZhF and MNK analyzed the qualitative data. ZhF, MKM and MNK wrote the manuscript. ZhF, MKM and MNK read and approved the final manuscript.

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Compliance with ethical standards

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