Patient's Beliefs about Adherence to Medication toward Hypertension: a Qualitative Study

Arash Najimi¹, Firoozeh Mostafavi¹, Gholamreza Sharifirad² and Parastoo Golshiri³

¹Department of Health education and Health promotion, School of Health, Isfahan University of Medical Sciences, Isfahan, Iran.
²Department of Public Health, Faculty of Health, Qom University of Medical Sciences, Qom, Iran
³Department of Community Medicine, School of Medicine, Isfahan University of Medical Sciences, Isfahan, Iran
Correspondence to Email: f_mostafavi@yahoo.com

ABSTRACT

Introduction: As beliefs of patients with hypertension can have significant differences among different people, therefore numerous researchers concluded that beliefs associated with adherence to treatment in different populations should be studied by objective methods, and then beneficial interventions should be developed. Hence, the present survey was carried out to test patient's beliefs about adherence to drug therapy toward hypertension.

Methods: A qualitative study was conducted on 18 patients with hypertension using content analysis method. Purposive sampling technique was run and also continued until data saturation. Semi-structured interview was considered as the main method of data collection. To analysis, qualitative content analysis and constant comparative analysis were employed.

Results: After exploring and separation of basic concepts, 914 primary codes were extracted from interviews. Classes were created based on codes and similarities, and also after several review and summarization. Inner meanings of classes were identified as primary themes through more reviews and comparison of classes. Given the nature, these conceptual and abstract themes were named that as follow: 1) attitude toward disease, 2) attitude about drug, and 3) religious beliefs.

Conclusion: The current findings revealed that patients' beliefs about adherence to treatment had three dimensions. These results appeared to be useful for health managers and planners to develop and intervene in the important area for facilitating adherence to treatment as the most critical factor in controlling hypertension.

KEYWORDS: Hypertension, Beliefs, Patient, Qualitative Study.

INTRODUCTION

High prevalence of hypertension and its close relationship with cardiovascular diseases has been caused that hypertension considered as one of the most important challenges across the world especially in the developing countries. According to published statistics, 7.5 million deaths (12.8% of total deaths) and 57 million years of life lost due to disability worldwide are attributed to hypertension [1]. Despite the availability of effective numerous drugs for hypertension, reports of hypertension control are very disappointing that challenges...
public health status across the world. It is estimated that 50% of patients who received blood pressure medication approximately interrupted treatment process within one year [2]. Limited number of patients using hypertension medications and also failure to achieve an acceptable level of blood pressure control persuaded researchers to focus on adherence to medication. In several surveys, poor adherence to medication is listed as a major barrier for achieving health outcomes; moreover, in these studies, non-compliance are confirmed as one of the major factors in the failure to achieve targeted blood pressure, treatment-resistant hypertension and sudden loss of control [3]. There are many reasons for non-adherence to drug therapy of hypertension, and also documents are mentioned the likely impacts of patient, service providers and its systems in non-adherence. At a theoretical level, different theories and models are used to explain the behavior of adherence to treatment that presented that patient belief has been noticed as one of the most important predictors of adherence behavior [4, 5]. Despite the importance of these beliefs in adherence of patients with hypertension, investigations maintain that these beliefs have barely been considered in Iranian society. Since the beliefs associated with the consumption of drugs in patients with hypertension may have significant differences between people, so many scholars concluded that patients' beliefs in different societies should be studied using objective methods, and then effective interventions should be developed. Studies also indicated the necessity of qualitative surveys to facilitate the identification of determinants tailored to the needs of patients due to complexity of the adherence to treatment [6, 7]. Therefore, it is required to measure the beliefs in line with medication adherence in a process with holistic and quality approach and in a real environment. Then, the present protocol was implemented to identify beliefs related to medication adherence in patients with hypertension in a qualitative study.

Materials and Methods
A qualitative study was conducted using content analysis method on Health Centers of Isfahan University of Medical Science (Iran). To select samples, purposeful sampling technique was used and continued to data saturation. Inclusion criteria of patients were as follow: 1) a definitive diagnosis of the disease by a doctor, 2) having record in Health Center, 3) having a desire to participate in the study, and 4) lack of dementia. Participants with a history of hypertension of fifteen years was selected and helped also to choose the next participant. After the emergence of the primary classes, the next subject was selected based on this question that how much she/he can help to more clear the emerging classes? This technique continued until data saturation. In this study, data saturation was achieved after sixteen interviewing and also the primary classes formed. Despite this, two other interviews were conducted to achieve greater certainty; however, no further information was reached for more coding and also forming new classes. In final, eighteen participants were interviewed. Researcher attended to the research environment after obtaining the necessary license, and selected samples according to study goal and inclusion criteria. Informed consent was also obtained from participants and also assured that they were free to exclude from the study at any time. Interviews were individually run according to the environmental factors, time and patients' condition (tolerance) as well as their tendency in one to two sessions (each session 30-45 minutes), and in a quiet environment, suitable time and place that participants were comfortable. Interviews were written at the earliest opportunity and transferred to the analysis software. Interviews were also interviewed in several times. Participants were selected with maximum diversity in terms of duration, age, gender, marital status, education and occupation. The main methods of data collection were deep and semi-structured interviews using open questions that are prevalently using in the qualitative studies,
nowadays. Interviewer was firstly started interviews using general questions after receiving demographic questions. The next questions were asked based on information provided by participants to clear study concept. In addition, deep questions were asked associated with responses, as well. Data collection and analysis was done in five stages including: 1) being familiar with data for researcher, 2) production of initial codes of data, 3) search to find themes by reviewing the various codes extracted in the previous steps, 4) review of themes and their re-comparison to ensure the accuracy, and 5) define and name of themes. Data were analyzed using continuous comparison method that is known as a technique to increase data validity. All phrases and words of participants were written fully and word by word, and content analysis and coding were consequently employed. Therefore, researchers sank completely in the data to achieve a new understanding or insight. The data analysis was started with repeated reading of text for immersion in them and to find an overall insight; in the next step, phrases were reviewed word by word to extract codes that is a continues process from extracting codes to naming them. To facilitate the process of the study, qualitative data analysis software (MAXQDA Plus 2010 v10.4.16.1 Multilingual) was used. Four criteria were used for reliability of the study comprising acceptability, transmissibility, similarity, and verifiability [8]. One of the best ways to build validity is long-term involvement with theme that our researcher was took part in the study. To approve the validity of data and codes as well as their correction, review was conducted by participants, such that each interview after coding was returned to participants to ensure the accuracy of codes and data interpretations. External check was also carried out in the current survey, to achieve this, some parts of the interview with relevant codes and classes were sent for some observers to explore analysis process and confirm the validity of results. Using technique of sampling with maximum diversity contributing to suitability or transferability of findings to others was applied. Likewise, for verifiability and accountability of the study, researcher was accurately recorded and reported all process of survey to provide more follow-up investigations for others. This probe was confirmed by ethics committee of Isfahan University of Medical Science.

RESULTS
In total, from eighteen interviews, 1620 primary level codes were extracted without overlap that in final, 914 primary codes were remained by considering of overlap and their integration (to encode more accurately and facilitate the process of research). Beliefs of patients were included three concept "attitude toward disease," "attitude toward medication" and "religious beliefs" indicating more abstract phenomenon than beliefs of patients. Attitude towards disease was beliefs pre and post knowledge of the disease. These attitudes can be attributed to causes of hypertension, understanding disease risk and attitudes towards associated factors with control of hypertension. Results showed that attitude of patients regarding causes of disease play an important role in reacting of patients about treatment. The major belief of patients was identifying the causes of mental illness as the reason of disease such that cited trying to solve the psychological factors as an option of his illness treatment. A participant mentioned that: "I realized that I have hypertension that it was because of a lot of stress, in next, stress and severe nervous breakdown was begun" (P 5).
Some patients were also believed to be susceptible to the disease because of their genetic background and believed psychological factor as the reason of the disease. Behaviors and reactions of these patients showed more consistency. A patient said that "my mother and also other member of family had hypertension, it started close to the age of 50 years, I was ready" (P 6).
Understanding disease risk was another important factor of patients' attitudes toward hypertension. Patients those considered hypertension as a new disease, had high risk perception that may be increased their adherence to medication. A patient reported that: "I know that I will die if do not continue the cure process" (P 15).

Besides the perception of disease severity, fear of disease complications was an important factor that may affect on patient's perception of disease risk and attitude toward treatment. A subject presented that: "hypertension can be very dangerous if I do not be cautious. I am very afraid of disablement, and I do all my routine works" (P 14).

Patients had different attitudes toward factors associated with control of blood pressure that were effective in the adherence to the treatment process. Another supportive attitude was belief about hypertension control and not definite treatment. This attitude had a substantial role in referring patients and follow-up. A participant maintains that: "It can be very important in medication adherence if I accept that hypertension is permanently controllable but is not curable" (P 1). This belief caused more endeavor of patients to control hypertension. Participants said about this: "It is always with you, because it has no treatment, I must control, I must not despair, for this reason I always are aware of drug consumption" (P 7).

Patients not only have attitude toward their disease, but also have attitudes regarding medications that may be general or specific attitudes about drugs. The public attitudes included general beliefs of patients on the drugs that consisted of efficiency of foreign medicines, traditional treatments and lack of efficacy. A patient said that Iranian drugs are not effective and the foreign drugs are definitely more beneficial" (P 11).

Negative attitudes toward drugs in some patients caused severe anxiety and uncertainty in medication orders. Some patients also felt that their bodies were not compatible with medication, and made them sick; although these phrases reported by persons not their direct experiences. A participant believed that: "I cannot accept medicine, because, although it may be useful for some organ of body, but may be harmful for another organ" (P 12).

Traditional treatments were one of the dominant beliefs of patients that persuaded them to follow the treatment; however, these treatments were used in combined with drug treatments. Patients were also believed in the effectiveness of drug therapy. A patient reported that: "I consumed herbal drugs but I consumed more frequently synthetic drugs. Because it has faster and more accurate effects" (P 9).

Attitude of patients about specific drugs in hypertension had also an important role in the drug orders and compliance. Some of patients expressed that this belief had a vital role in their life and non-disappointment. A sample explained that: "blood pressure medications are more effective than many drugs. I know that these drugs absolutely control hypertension and reduce my fear. It is very effective when you feel relaxed. I am not discouraged or afraid" (P 10).

Religious beliefs and adherences of patients also contributed significantly for accepting hypertension and adherence to treatment. Patients, who were believed in religious beliefs, had low resistance, thought that pain was a result of their fate, and also knew treatment as a necessity and donated by god. Participants said that: "we believed that whatever God wants, God wants certainly to be patient. Say that God gives both pain and treatment "(P 1).

"A person must be cautious, it is corrected that god test humans by disease, however humans should not expect to die. God provides treatment that we must follow that" (P 15).

**DISCUSSION**

Participants revealed that based on environmental and personal situation; there were numerous beliefs in terms of endeavor in adherence to treatment. Since cited by patients, attitude toward disease and drug as well as religious beliefs
played an important role in the medication adherence.

In total, each situation that forms a remarkable change in the person life can create different beliefs. Meanwhile, individuals before involvement with this change had usually some beliefs about it. Understanding of disease risk was one of the effective beliefs on adherence to treatment. We can introduce understanding of disease risk as a basic belief, start stage for medication adherence, and also as a factor creating negative reactions. This stage is one of the most critical stages of exposure that can challenge many of patients. Perception and attitude toward disease risk, as mentioned at present and others, appeared to be effective in patient's behavior about disease and medication adherence [9, 10]. Patient's belief regarding importance and harmfulness of disease is important in creating motivation and behavior change. Brown presented that patients are more likely motivated to receive further information and experiences and also to make more changes in their lifestyles when they are more sensitive regarding disease [11].

Grams also hypothesized that fear is a prevalent response affecting patients negatively and positively [12]. At present, some of participants indicated that perceived fear of disease created positive behavioral changes, learning and new experiences. In a study conducted by Albright (2001), attitude and patient's concern also reported as one of four factors associated with self-care behaviors of patients [13]. It seems that importance of disease and patients beliefs about that play significant role in patient's concern regarding disease.

High concern of patient requires his/her effort to achieve balance and concern relief that can likely justify patient's effort for increasing medication adherence. Although this endeavor occurs when patient not only perceive disease risk but also understand diseases controllability; otherwise, high perception of disease risk without patient belief about diseases controllability may result in patient passivity and many of mental health problems[14-16]. Labmert et al. indicated the importance of attitude of patients regarding adherence to treatment and vital role of patient's belief about lack of efficacy or side effects of drug in adherence to drug treatment that is in relevance with our findings [17]. The patient's belief about hypertension medications can be affected by efficacy and effectiveness of drugs as a whole [18]. Gascón et al. in a qualitative study revealed that majority of patients had not the proper attitude toward hypertension medications and also believed in ineffectiveness of drugs. Researchers noted that these beliefs can significantly contribute to the lack of acceptance and adherence to drug treatment [19].

The patient's religious beliefs that can appear with different themes play an important role in beginning the process of adherence to treatment. Patients presented that religious help, trust in God, prayer were factors that could lead to peace of mind and improve their mental health, and in final, help them to comply with disease and adherence to treatment. In line with the current study, similar surveys pointed that religious beliefs play an important role in persuading patients to accept and manage disease, and also has a significant relationship with quality of life and medication adherence [20, 21]. In this study, patients said that religious beliefs provide them with great force to accept the disease and deal with problems. Mackenzie believed that religion creates a positive attitude towards the world, and supports person in front of adverse events of life such as disease, and also hopes individuals to better life through providing more motivation that may finally increases tolerance and acceptance of unchangeable situations [22].

According to studies, belief in God and supreme power is effective in reducing stress and improving physical and mental health. Bahrami et al. believed that religious beliefs can play an important role in different situations because
religion has a positive value in life and protection from stress as well as compatibility with different life situations [23]. Several investigations showed that religious beliefs help patients to purify your mind and focus on the problem and make decisions about it [24, 25]. These beliefs can strengthen coping strategies against the disease. In Islamic insight, trust is one of the key strategies to overcome problems. Belief in God can increase patient's endurance in adversity and problems and decrease stress caused by disease exposure [26]. Finally, the current findings expressed that attitude toward disease and drug and religious beliefs are the most remarkable beliefs in the medication adherence of hypertension. The present results can use for planning effective interventions to reduce aforementioned barriers and increase adherence to treatment among Iranian patients with hypertension.

REFERENCES