ORIGINAL ARTICLE

Living with Hypertension: A Qualitative Research

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Abstract

Background: Hypertension affects many aspects of the patients' life. Factors such as attitudes, beliefs and experiences, and social and cultural conditions of patients have effective roles in hypertension treatment process. The aim of this research was to explore perspectives and experiences of patients with hypertension while living with this disease.

Methods: This is a qualitative research using content analysis approach. 27 hypertensive patients who referred to hospitals affiliated to Tehran University of Medical Sciences were selected based on purposive sampling, and semi-structured interviews were carried out. Graneheim and Lundman's approach was used for analysis of data and Lincoln and Guba's criteria were used to confirm the trustworthiness of the study's findings

Results: Experiences of the participants were divided into three main categories as follows: (1) disease shadow; (2) dual understanding of the effect of drug therapy consisting of two sub-categories known as ''perceived benefits,'' ''negative consequences''; and (3) facing the disease that includes the two subcategories of ''Compatibility'' and ''Negligence and denial''.

Conclusion: Based on the findings, patients with hypertension had experienced many physical, psychological, social, familial and spiritual problems due to the disease and their cultural context. These patients obtained positive experiences following the compatibility with hypertension. Comprehensive planning tailored to the cultural, social context and their beliefs is necessary to solve problems in these patients.

Keywords: Hypertension, Qualitative research, Experience

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Introduction

Hypertension is a silent disease and is almost without obvious symptoms in its early stages.[1] Patients are healthy at this stage and have good performance.[2] Clinical symptoms and subsequent problems arise after vascular changes[l] which affect many aspects of the lives of the patients.[3] This disease significantly damages many organs of the body as an independent risk factor[4] and causes problems such as cerebrovascular disease, coronary disease, heart failure, chronic renal failure, vascular disease,[5,6] and eye problems.[7] The negative effects of hypertension on psychological aspects of these patients in addition to shortcomings in the abilities of the person[8] and its chronic and progressive course lead to reactions such as anxiety and depression in them.[9]

Studies have shown that identifying and controlling blood pressure causes can help to prevent development of this disease and its complications.[10,11] The World Health Organization reported that prevention, care and treatment of hypertension are among the key points in promoting public health.[12] Since hypertension is usually a lifelong illness, it requires continued treatment.[13] Multiple medications are often prescribed to control hypertension which increase the risk of drug interactions and side effects.[14] However, multifaceted compliance is required in addition to medication to control hypertension and achieve appropriate therapeutic purposes.[15] These patients usually do not comply with treatment approaches and their blood pressure is not well controlled,[16] so a medical institution in the United States has named hypertension as neglected disease due to patients' failure to comply with treatment guidelines and lack of proper control.[17]

The results of a systematic review on the qualitative research revealed that in different ethnicities, causes of high blood pressure or aggravation factors are different. Therefore, the perspectives and experiences of patients should be profoundly examined. In this systematic review, it was concluded that in the patients' views, the lack of attention of the health team toward the high blood pressure is one of the key obstacles to the success of health programs in these patients.[18] Studies that have examined the perspectives and experiences of patients with hypertension obtained different conclusions as to its causes including the factors such as genetics, race, generation status,[19] nationality, attitudes, beliefs,[18] cultural, social, environmental, and economic subjects.[20] These factors have a significant role in the process of hypertension treatment and patient adherence to treatment regimens.[21] Therefore, recognition of these factors from the perspective of patients and based on their experiences will lead to more precise understanding of the disease which can lead to production of knowledge in this field[22] and help healthcare professionals in effective interventions in the control and treatment of hypertension.[23] Accordingly, qualitative studies can be conducted for a true understanding of the behaviors, lifestyles, knowledge, attitudes, feelings, beliefs, values and experiences of these patients.[24]

Results of the evaluations of researchers of the present research showed that there was no research in this area in Iran and limited researches of other countries cannot be generalized due to cultural, social and economic differences. Thus, the present qualitative research aimed at exploring the perspectives and experiences of living with the disease in hypertensive patients.

Materials and Methods

This is a qualitative research using the conventional content analysis approach.

Settings and Participants

This study was conducted from August 2015 to April 2016. Participants in this study included 27 patients with hypertension who referred to medical centers affiliated to Tehran University of Medical Sciences. Purposive sampling was used with maximum diversity (depending on the age, gender, education,

marital status and duration).

Inclusion criteria were willingness to participate in the study, ability to share experiences, fluency in Persian language, alertness and orientation, diagnosed with hypertension for at least two years and age older than 18 years. The exclusion criteria of the study were having cognitive impairment, mental illness confirmed by a physician or the individual patient. Sampling continued until data saturation.

Data Collection

The main method of data collection in this research was deep semi-structured interviews. The researcher explained the objective of the study and research questions for each participant. Interview was conducted at the due time and place based on the participant's comfort. The participants agreed to participate in the study and signed informed consent. Interviews were conducted in a private room. Each interview started with general questions such as "What experiences have you had after hypertension?" and "What types of effects has hypertension had on your life?"

Participants were asked to express their understanding after being hypertensive. The interview continued to obtain a deep understanding of the studied subject. Interviews were recorded using a digital voice recorder. At the end of each interview, they were written word by word and analyzed. Duration of the interview sessions was between 45 and 90 minutes based on tolerance and interest of the participants to describe their experiences. In the second session, the interview was carried out in the case of necessity.

Data Analysis

A content analysis method was used to analyze the data, in accordance with Granehim and Lundman;[25] the interviews were reviewed several times to obtain a sense of the whole. Then, the first author extracted units of analysis. The text was divided into condensed meaning units that were abstracted and labeled with a code. Various codes were then compared based on the differences and similarities and sorted into three categories and four subcategories, which made up the manifest content. The tentative categories were discussed by three researchers and revised. Finally, the underlying meaning, or the latent content of the categories, was formulated into themes. We tried to have the maximum homogeneity in the categories and maximum heterogeneity between categories.

Data Trustworthiness

Measures proposed by Guba and Lincoln[25] were used to ensure the validity and accuracy of the data. Data credibility was done using continuous data comparison. Prolonged engagements with participants and devoting sufficient time to collect the data helped us to have better understanding of their experiences.

Dependability of data was done using member check method. Weekly meetings of the research team were held and discussions were carried out about the collected information for dependability of data. Also, three of the experts had very close cooperation with the research team during the analysis and interpretation of the data in qualitative research (peer review). Confirmability of data was obtained using systematic collection of data and maintaining documentations related to the research. Sampling with maximum diversity was carried out for data transferability; in this way that samples of both gender were selected with different ages, education level and jobs and from multiple clinical centers affiliated to Tehran University of Medical Sciences.

Ethical Considerations

The present research is the result of a nursing doctoral thesis of Tehran University of Medical Sciences which was approved in Research Ethics Committee of Tehran University of Medical Sciences with the code of IR.TUMS.REC.1394.1497. Objectives and methods used in the study were fully explained to the participants. All participants signed informed consent before entering

the study. They were also informed about the confidentiality of the contexts and were ensured about anonymity in the study. They were told that this study was voluntary and there is the possibility to withdraw at any stage of the study without any consequences for them. Time and place of interviews were determined with the agreement of the participants and based on their preferences.

Results

The participants' age range was 28-74 (with an average of 52.6±1.1). A total of 27 individuals were interviewed, among whom 15 were women and 26 were married. Other specifications of the participants are shown in the Table 1.

Table 1: The participants' characteristics

Condition		N (%)
Gender	Male	12 (55.6)
	Female	15 (44.4)
Level of Education	Illiterate	7 (25.9)
	Below Diploma	15 (55.6)
	Academic	5 (18.5)
Occupation	Employee	6 (22.2)
	Retired	3 (11.1)
	Self employed	6 (22.2)
	Housewife	12 (44.5)
Duration of hypertension	years 2-5	9 (33.3)
	years 5-10	8 (29.6)
	More than 10 years	10 (37.1)

Three main categories of "disease shadow", "dual understanding of the effect of drug therapy", and "facing the disease" were extracted from data analysis which were the result of experiences of patients living with this disease (Table 2). The meanings of each of these categories have been provided using direct quotes of the participants below.

Table 2: The main categories and primary categories extracted from the participants' experience

Main category	Primary categories
disease shadow	Physical Mental spiritual Social family
Dual understanding of the effect of drug therapy	Perceived benefits Negative consequences
Facing the disease	Compatibility Negligence and denial

Disease Shadow

According to the participants, hypertension had affected all aspects of their health (physical, mental, social, family and spiritual). Understanding hypertension was dependent on clinical symptoms and their severity. All participants had experienced one or more symptoms of hypertension during the course of the disease. This symptom was temporarily perceived in many participants; they believed that hypertension was a common disease, and even some individuals who were recently diagnosed with hypertension did not believe that hypertension was a disease. However, all patients were concerned about possibility of recurrence of the symptoms of hypertension. Hypertension has caused many complications such as myocardial infarction, stroke and kidney failure in a number of participants. Experiences of one of the participants were as follows:

"*… I had headaches and dizziness and my face would turn red; I referred to a doctor and he said my blood pressure is too high. I had a very high blood pressure a few years ago. It caused stroke and kidney failure …*" (64 year old woman, married).

Some participants had experienced problems such as reduced physical activity and nutritional constraints after being hypertensive and its symptoms. Most of the participants who had experienced such problems were women. Hypertension caused sleep problems such as nightmares, waking and sleep deprivation in a number of participants. One of the patients expressed about experiencing sleep disturbances:

"*… I experienced sleep disturbances when I had high blood pressure. I could not sleep well and had nightmares; ... my high blood pressure has been controlled since I was administered drugs and I can sleep better now…*" (74 year old woman, married).

Understanding the psychological

experience of the disease was among the points mentioned by participants; they referred to problems such as sexual dysfunction, anxiety and spiritual.

Many participants had seen devastating effects of diseases related to blood pressure in their family and first degree relatives. These participants believed that their high blood pressure was hereditary and were afraid and concerned about the future of their own health and their children. On the other hand, this concern has caused these participants to follow up their disease and complete their treatment. Respondents who had suffered from hypertension complications had experienced this fear and concern more. Some of the patients who had suffered hypertension at an early age had a sense of shock, depression and fear.

Some of the male participants had experienced decreased libido and sexual function due to hypertension which had led to disturbance in interpersonal relations with their wives. None of the participants had shared their sexual problem with their doctor while this problem was causing concern for them. Experiences of one of the participants were as follows:

"*…ever since I have high blood pressure, I have become more impatient towards sexual relations; I do not like it anymore, especially when my blood pressure is high …*" (45 year old man, married).

Some of the participants also stated that hypertension has had negative effect on their spiritual experiences. They believed hypertension was preventing them from doing some of the religious practices.

"*… Ever since I have high blood pressure, ... I cannot even take fast, or go to mosque like before, or worship …*" (45 year old man, married).

Another experience of the participants after being hypertensive was social and family problems such as financial difficulties, feelings of inadequacy, defective interpersonal relationships and disruption of family relationships.

Participants had experienced different financial problems after hypertension. Financial problems were not related to the cost of the disease in the majority of participants because they were under insurance and did not pay for the treatment. Most of these problems were related to feelings of inadequacy in income which had emerged after s hypertension and development of its symptoms in participants. The experience of one of the participants was:

"*…Hypertension makes people sluggard; you do not want to wok ... it makes people economically weak but again I am thankful for having Insurance; otherwise, I should have paid a lot of money for my disease …*" (53 year old man, married).

Defective interpersonal relationships and impaired family relationships were among the experiences of participants after the onset of hypertension. Participants had experienced these problems especially after occurrence and exacerbation of the symptoms. Among them, mostly older men were aggressive towards their families and others. However, some participants felt remorse after reduction of hypertension symptoms and tried to improve their personal relationships, especially with their families. Experiences of one of the participants were as follows:

"*…hypertension has gone on my nerves; I have become aggressive toward my family. I immediately feel sorry when I snap and then I try to settle the problem …*" (55 years old man, married).

Dual Understanding of the Effect of Drug Therapy

Patients reported two types of experience of living with hypertension at this level; some referred to positive effects of medication and some believed in negative effects of medication.

Perceived Benefits

Experiences of positive effects of medication were expressed by participants in the form of the sense of being able to control

the disease, satisfaction and being healthy. They were all trying to regularly use the prescribed medicines. These positive effects were felt more after taking blood pressure medications in the participants suffering from complications of hypertension or severe signs and symptoms of hypertension. They had accepted medicines as the most important part of hypertension's treatment. Experiences of one of the participants were as follows:

"*…My doctor prescribed medicine for high blood pressure; I feel a lot better since using them; my blood pressure is being controlled better... I regularly use my medicines*…" (41 year old woman, married).

Negative Consequences

Some of the participants had experienced negative consequences such as drug side effects and a sense of drug dependence after using prescribed antihypertensive drugs. These consequences occurred mostly in those who had become hypertensive recently or those who did not have severe symptoms of hypertension. Some of these participants completely gave up blood pressure medication due to side effects such as nausea, weakness and pain in their stomach. Not using medication or discontinuing it due to the feeling of dependence on drugs were more prevalent in younger people. Experiences of one of the participants were as follows:

"… *Hypertension pills had disturbed my sleeping ... I visited a doctor and he said it was because of my hypertension pills... I started using medicines a little less on my own; I am afraid of being addicted to medicines*…" (49 year old woman, married).

Facing the Disease

Participants reported two types of experience of living with hypertension in facing their disease. Some expressed the experience of compatibility and others expressed the experience of indifference and neglect. Some of the participants believed that they should use proper strategies to control and cope with their disease to have a quality life, but some others tried to reject their disease.

Compatibility

Participants used the help of their family, modifications of lifestyle behaviors (such as diet, exercise, cessation of smoking) and spiritualties after becoming hypertensive and becoming aware of it in order to manage their blood pressure, all showing compatibility with the disease and its control.

All participants expressed the experience of being supported by their families. These supports were in the form of relaxing, financial aid, proper cooking, providing information about the disease, and reminding the medications. Among these, most of the supports were psychological. These supports were more for older people and from their wife and children. Experiences of one of the participants were as follows:

"*…my daughter checks my blood pressure regularly and gives me my medicines* …" (64 year old woman, married).

The highest modifications of lifestyle behaviors and adherence to them were mentioned by the participants who had suffered from big events such as heart attack, stroke and kidney failure following being hypertensive or patients who had experienced the need to have a medical emergency following extremely high blood pressure. These patients believed that they can control not only their blood pressure but also other diseases with it by modification of health-related behaviors. Female participants more adhered to healthy diet and not smoking; in contrast, men had experienced more regular sport activities. One of the participants stated:

"*…Ever since I realized how dangerous high blood pressure is, I tried to comply with ... I can exercise whenever I can* …" (57 year old man, married).

Some participants relied on God to protect their health. Even if they had extremely high blood pressure, they felt they did not have a serious problem because they are protected by God. Some others believe that God supports

them in blood pressure control and provides them with peace. All the subjects believed in the positive role of spirituality in blood pressure control. However, female patients, especially the elderly women used their spiritual experiences more in controlling their blood pressure. Experiences of one of the participants were as follows:

"*… I always rely on Imams and God when I have high blood pressure, … I feel calm when I am praying; it reduces my blood pressure* …" (39 year old woman, married).

Negligence and Denial

A small number of participants were oblivious in the fight against their blood pressure disease and this disease had a low value in their perspective. This negligence was more in patients who afflicted with hypertension in recent years or participants who had not experienced persistent symptoms due to hypertension. These patients were mostly male. They did not believe in high blood pressure as a serious and dangerous illness. Experiences of one of the participants were as follows:

"*…I think I haven't worked hard enough for myself; when I found out I have high blood pressure, I did not follow my diet; … I did not think that blood pressure is important …*" (47 year old woman, married).

Some of the participants used herbs such as lemon juice, vinegar, and sour tea to lower their blood pressure instead of taking prescribed medicines. This experience was more common in older patients. The important point was that most of these people used non-pharmacological methods to control their high blood pressure as opposed to the advice of their physicians. These patients stated that this treatment method with herbs had been in their culture from the past. They believed more in advice of their friends and family elders more than medical advice. One of the participants said:

"*… I use lemon juice and green tea when I have high blood pressure; … I consulted with a cardiologist who said pill was much better, but I think herbal medicines are much better than medical drugs …*" (39 year old woman, married).

Discussion

The findings of this study showed that experience of these patients was in three areas of disease control, dual understanding of the impact of drugs, and dealing with the disease. High blood pressure affects all aspects of daily life. All participants in this study had experienced one or more than one chronic symptoms of blood pressure. They believed that blood pressure and these symptoms had had negative effect on their daily life activities, such as reduced physical activity and dietary restriction. Patients with hypertension have no symptoms in the early stages and can normally do their activities of daily living and their daily lives are affected and disturbed after chronic experiencing symptoms of hypertension.[3] Most of the participants in qualitative studies about evaluation of experiences of hypertensive patients have complained about signs and symptoms of hypertension and problems with daily life activities. Some of these patients have experienced a good impression despite high blood pressure and its symptoms.[26-28] Unlike the results of these studies where patients were feeling good despite having high blood pressure symptoms, all patients in our study were concerned about the possibility of recurrence of the symptoms of high blood pressure. Factors such as patients' attitudes and their social and cultural conditions have a role in the process of acceptance and treatment of hypertension by patients.[21]

In this study, based on psychological experiences, the participants had experienced problems such as fear and anxiety, decreased libido and sexual function disorder and spirituality. The participants' fear and concern were more related to blood pressure complications which had made them follow up their patients and complete their treatment.

The results of a qualitative study on hypertension patients showed that fear and

concern were experienced as a common sentiment among the participants. Patients who had directly or indirectly experienced complications of high blood pressure mostly experienced fear and anxiety and were concerned about high blood pressure.[28] Other similar non-Iranian studies also showed that patients had experienced a kind of fear and concern of complications of high blood pressure; this is in line with the results of our study.[28-30] Fear and concern do not always have negative effects and can force the patients to do positive health behaviors.[31]

Feelings and emotions have different values and interpretation in different cultures.[28] The major difference between our study and these qualitative studies[28-30] was the fact that one of the concerns experienced by participants in our study was hereditary behavior of disease and the risk of hypertension for their children which has not been referred to in these studies. The results of our study also referred to the experience of patients with hypertension in the field of spiritual and sexual dysfunction which may be due to more in-depth interviews in the present study and cultural and religious differences of these patients.

One of the main concepts of this study was the patients' social experiences. Participants had experienced the financial burden of the disease, impaired interpersonal relationships, and family relationships disruption following hypertension. The results of a qualitative study showed that all participants had experienced different financial difficulties associated with hypertension which had forced them to rely on helps from the government, family and friends.[28] Economic problems are a major hurdle for patients to access appropriate health services and adherence to drug therapy.[32] Results of foreign qualitative studies showed that hypertensive patients experienced some degrees of financial problems following treatment of hypertension and its complications; they often do not follow up the treatment due to financial problems.[30,32] Unlike the results of these foreign studies, financial difficulties were not related to the cost of disease in most participants in the present study and most of these problems were related to feelings of inadequacy in income which had emerged in participants after developing symptoms of hypertension. People are covered by medical insurance in Iran's health system and primary health care services are available at a low cost and the patient can receive medication and health services at low costs. Patients with high blood pressure usually experience poor interpersonal relationships and no sense of purpose about the future.[31] The results of a qualitative study showed that the participants had also experienced impairment of relationships with the family (parents and children), friends and relatives.[30] In Iran, families have a close relationship with each other due to the cultural context of the region and family members help the relatives with disease.[33] The important point is that the participants in our study experienced regret after having problems with family and tried to remedy and improve this relationship. These patients had experienced a better relationship with their family when they had lower blood pressure which has not been referred to in foreign studies.[28,30] Some of the participants had experienced the positive effects of drug therapy in this study and some others referred to negative consequences of using blood pressure drugs. The results of a qualitative study showed that some of the patients had ignored the doctor's orders and used drugs only at the time of the occurrence of the symptoms of blood pressure due to fear of dependence and its complications; this led to emergence of complications such as cardiovascular or cerebrovascular diseases.[26] In another qualitative study, it was shown that hypertension patients felt they were healed with taking medication and reducing the symptoms of high blood pressure. In addition, most of these patients had stopped taking medication without consulting their doctor due to reduction of the symptoms of high blood pressure.[18] The experience of drug therapy for hypertension is varied and depends on such factors as previous experience of drug treatment of the patient and his/her

family members, the general attitude to drug treatment, and the level of medical knowledge and confidence in the health care system.[29] In our study, most patients experienced a regular intake of prescribed medications and following their doctor's orders while most patients in the above studies[26,18] did not take drugs or took drugs irregularly and arbitrarily. These findings could reflect the positive attitude of the participants in our study towards blood pressure drugs. The findings of the this study showed that many patients relied on their families' help, modification of lifestyle behaviors (diet, exercise, cessation of smoking), spirituality, and raising awareness to manage their blood pressure. This finding showed the importance of blood pressure control and prevention of its complications among participants in our study. The results of a study on hypertension patients showed that most patients with hypertension were able to reduce their blood pressure by changing their lifestyle and this was a cost-effective and safe way.[34] It was shown in qualitative studies conducted on patients with high blood pressure that participants actively followed up, controlled and treated their high blood pressure.[35,36] These results are in line with those of our study except that the participants in our study used spirituality and family assistance as original and effective strategies to manage high blood pressure while these cases had not been referred to the above studies.[35,36] This finding can be due to the differences in cultural, theological and social context of Iran with other countries. In this regard, results have shown that lifestyle of hypertension patients and management of this disease are different on the basis of ethnic groups and cultural context of each region and these differences sometimes create barriers to manage hypertension.[26,37]

In this study, few participants were oblivious to their blood pressure so that they did not try to modify their lifestyle. Researches have shown that patients with hypertension are asymptomatic in the early stages or have temporary symptoms. Many patients do not consider high blood pressure as a disease and do not pay much attention to it.[16,26] Traditional beliefs and assumptions (based on personal experiences) of patients sometimes makes them not accept medical treatment or stop it and do not change their improper behaviors until severe complications caused by high blood pressure.[26] Findings showed most patients with hypertension did not change their lifestyle correctly not only when they were free of symptoms, but also after disease complications.[28] Similar results were reported in in other qualitative studies[26,18] which are in line with our study.

In our study, lack of using hypertension drugs was more seen in patients who were recently diagnosed with high blood pressure. One of the reasons for it can be the fact that high blood pressure is a silent disease and has almost no obvious symptoms and serious complications in its early stages. These patients do not believe in using drugs to control blood pressure at the beginning of the disease. The results of a qualitative study showed that the attitude of patients with hypertension toward medication will change with time. They show resistance to drugs at first and then look at drugs as a savior and after it as a natural thing to use drug.[29]

This study explored how a sample of Iranian patients with hypertension realized their condition and the strategies they employed in managing it. The qualitative exploration allows an understanding of the patients' perspectives and contributes to an understanding of why treatment and control may fail in this group.

One limitation of this study was that the participants with many years of hypertension had problems in remembering and sharing their experiences and their relatives were used to overcome this limitation. Lack of similar studies in Iran was among other limitations of this study to compare with data of this study.

Conclusion

Based on the findings, patients with hypertension suffered many problems in different aspects of

health such as physical, psychological, social, familial and spiritual due to their disease and cultural context. Also, the use of blood pressure medications led to both positive and negative experiences in these patients. These patients cope with their disease based on their cultural context and beliefs and were able to gain positive experiences in the control and treatment of hypertension following it. Comprehensive planning appropriate with these patients' cultural and social context and their beliefs are required to solve these problems. It is recommended that further researches should be done on hypertensive patients in other cultures in order to determine more dimensions of these patients with regard to cultural differences.

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