



# Health Needs in Patients Suffering from Chronic Back Pain: A Qualitative Study

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## Abstract

**Background:** Chronic back pain is a disease many people suffer from it and they have different problems and needs.

**Objectives:** Due to the vague nature of these needs and lack of information in this regard, the present research was aimed to identify the needs of the patients suffering from chronic back pain.

**Methods:** This qualitative study was conducted using content analysis method. Here, 29 participants entered the study using a purposive sampling; they were interviewed one by one, face to face, and in a semi-structural mode. Gathering the data, transcribing the interviews, and analyzing them were performed simultaneously using Graneheim and Lundman method. First, codification and meaning similarities were revised and the subthemes were identified; then, in the second revision, the related subthemes were put in one category. The data were analyzed using the max Q software version 2007.

**Results:** Analyzing the results led to deriving four main themes and nine categories. The main themes were related to the needs of the patients suffering from chronic back pain, including teaching and informing, religious-spiritual dimension, socio-economic dimension, and physical-psychological dimension.

**Conclusions:** This study provided a comprehensive understanding of the health-related needs of the patients suffering from chronic back pain in Iran. According to the obtained criteria from this study, identifying the needs, planning for them, and evaluating the measures taken for the patients suffering from chronic back pain will become possible.

**Keywords:** Health, Back Pain, Iran, Needs

## 1. Background

Chronic pains are among widespread problems affecting the people's lives and communities in different ways (1). Chronic back pain is one of the most epidemic types of chronic pains and disorders in the musculoskeletal system, and in industrial countries, 70% - 80% of the people experience this pain at least once in their lifetime. The majority of the patients suffering from acute back pain recover in six weeks and only 10% - 25% of the remaining are afflicted with chronic back pain. Different definitions are presented for chronic back pain, but all of them agree on the definition of pain in the lumbar region caused by problems in the disc between them, ligament around the vertebra and disc, spinal cord, nerves, and muscles that lasts more than three months (2, 3).

Different studies have revealed an increase in the incidence of chronic back pain and disabilities due to it all over the world (4-7). The access rate for back pain among

Americans has augmented in a way that has caused many financial, individual and social burdens. In addition, it imposes a high treatment expenditure on the health system and society (8-10). Also, the incidence of back pain is 27.18% in Iran and the people suffering from chronic back pain have more stress, depression, and psychological disorders (11, 12). Patients suffering from chronic back pain have various needs particular to them. Rapid tiredness of the spinal cord stabilizing muscles or changes in the call patterns for muscles around the back and abdomen during the organs' daily activities and movements have caused problems for these patients that are different from those of patients suffering from musculoskeletal system pains (13). In most cases, this pain vanishes after a couple of weeks, but in other cases, the problem remains for a longer time. Hence, it creates various problems and needs for involved patients. Therefore, because of limited knowledge in this field and with respect to the impressionability of the needs in the cultural context of a society and the need for deep

investigating this topic, as well as to identify health dimensions of patients suffering from chronic back pain, the use of qualitative research methods associated with naturalistic patterns in Iranian culture and context seems necessary.

## 2. Objectives

This study was conducted with the purpose of identifying the health care needs of the patients suffering from chronic back pain.

## 3. Methods

### 3.1. Design and Participants

This study was conducted qualitatively using conventional content-analysis method. The subjects were chosen from the patients referred to pain, orthopedic, and rheumatology clinics of Shiraz University of Medical Sciences, their companions who had the experience of providing care services to these patients, and also different specialists who worked on the pain. This sampling was done using a purposive method. The people who had the inclusion criteria and showed the willingness to interview entered the study and interviewed to determine the health needs of the patients. Sampling and interviews stopped when saturation occurred.

The inclusion criteria were diagnosis of chronic low back pain by a physician, at least 3 months of chronic low back pain, willingness to participate in the study, the ability to provide rich and sufficient information on the subject of the study, age 18 - 60 years, minimum reading and writing literacy, ability to speak and understand Persian language and being Iranian. Also, the exclusion criteria were having a life-threatening illness during the study period, the severe physical or mental event during the study period, and mental disorders. The specialists and family members taking care of them who were in touch with these patients and realized their needs were also interviewed. The interviews were done in individual sessions and continued until they reached the necessary information. In other words, as the interviews continued, no newer codes or categories were added. The required information was obtained from the first 27 interviews. Nonetheless, in order to reach more information, the interviews were continued until it reached 29.

In this study, 20 patients suffering from disc and spinal problems, fractures, orthopedic, and rheumatic problems; 2 family members taking care of their patients; and 7 specialists, including one pain therapist, two general physicians, one physiotherapist, one sports medicine specialist, one physical medicine specialist, and one psychiatric nurse participated.

### 3.2. Data Collection

In the present study, deep and semi-structural interviews were used, each one lasted 30 - 60 minutes. After obtaining written informed consent from the participants took part in the study and having discussions with the clinics' head, the interviews were done in a private and quiet room. The researcher provided the participants with the necessary information, and then permission for voice recording was obtained. The interview started with general questions such as "Describe your day when you are in pain". Gradually, the interviews reached deeper and more private parts. In order to expand the findings, probing questions such as "Provide examples", "Can you explain more", and "Do you mean..." and so on were used during the interviews. In addition to the main questions, personal information on age, gender, education, and occupation was also provided. All the conversations were recorded by voice recorder. After completing each interview, the researcher transcribed all parts, word by word. To ensure the accuracy of the transcribed words, the author listened to the recorded voice one more time and simultaneously the transcribed words were reviewed and encoded using conventional content analysis method; finally, the concepts were extracted.

### 3.3. Data Analysis

The data were analyzed according to Granhim and Laundman's method in 2004 with the following phases: (1) transcribing the interviews and reviewing them several times with the aim of reaching an accurate understanding of the whole written items, (2) extracting semantic units and categorizing them under semantic units, (3) summarizing and categorizing the semantic units and choosing an appropriate tag for them, (4) ordering subcategories based on comparing the similarities and differences in the subcategories, and 5. choosing an appropriate topic that has the capability of covering the categories (14).

### 3.4. Trustworthiness

To reach an assurance regarding the reliability of the findings, we used the way the participants were inspected, dipping, and the researcher's constant involvement with the data. Also, in order to make sure of the accuracy of the data, people who had the experience of conducting qualitative researches were asked to investigate the initial encodings of the categories and consequently, revised them several times. Variety in choosing the participants increased the reliability and validity of the data.

### 3.5. Ethical Consideration

For ethical considerations through the research process from data analysis till the end of analysis and findings report, the researcher emphasized conscious satisfaction, patients' anonymity, confidentiality of the information, the right to leave the participation at any optional time, and the ethical considerations. Also, the Ethics Committee of Shiraz University of Medical Sciences approved the study.

## 4. Results

From all the 29 interviews done, 1487 initial codes, four themes, and nine categories were obtained. Where the "teaching and informing" theme contained "lifestyle modification", "teaching self-relieving methods", "awareness of the disease, cure process, and cure services" categories, the "spiritual/religious dimension" theme had the "performing religious rituals", "enriching spirituality and alleviating the distress" categories, the "social/economic dimension" theme consisting of "financial problems", "social problems" categories, and the "physical/psychological dimension" theme, including "physical disorders" and "psychological disorders" (Table 1). The demographic information of the participants is presented in Table 2.

People's experiences regarding chronic back pain revealed four main needs, which are explained in the following sections.

**Table 1.** Categorization of the Themes

Themes	Subthemes
<b>Teaching and informing</b>	Lifestyle modification
	Teaching self-relieving methods
	Awareness of the disease, cure process, and services
<b>Spiritual/religious dimension</b>	Performing religious rituals
	Enriching spirituality and alleviating the distress
<b>Social/economic dimension</b>	Financial problems
	Social problems
<b>Physical/psychological dimension</b>	Physical disorders
	Psychological disorders

**Table 2.** Demographic Information of the Participants

Variables	Affluence
<b>Number of the patients</b>	20
<b>Mean age</b>	43.5 ± 1.09
<b>Number of children average</b>	2.45 ± 1.66
<b>Gender</b>	
Male	6
Female	14
<b>Disease field</b>	
Disc disorders	11
Orthopedic disorders	5
Rheumatology disorders	4
<b>Education</b>	
BA and higher	5
Diploma	6
Elementary	8
Illiterate	1
<b>Occupation</b>	
Employed (full time-part time)	2
Housekeeper	12
Retired	2
University student	2
Unemployed	2
<b>Marital status</b>	
Married	16
Single	4
Divorced or widowed	-
<b>Place of living</b>	
House without stairs	16
Apartment without elevator	3
Apartment with elevator	1
<b>Residence status</b>	
Personal territory	16
Rented house or apartment	3
Living with relatives	1

### 4.1. Teaching and Informing

Teaching needs are among the cases neglected by the treatment team in the process of curing and patients are just cured without receiving any necessary instructions about lifestyle modification, instructions for self-relieving methods, awareness of the disease, treatment process, and services. The patient number 10 said: "When I walk, I'm in pain, but I do not use any appliance. I do not know how to

do my daily affairs during the daytime. When I am at work, because of sitting at a desk for long hours, I feel a lot of pressure on my back, too." Here, it is obvious that the patient is in urgent need for receiving necessary instructions regarding lifestyle modification.

There was a need for instructions on self-relieving methods. In an analysis done on this dimension, two sub-categories of "self-relieving by distracting the thoughts" and "physical self-relieving" were detected. The need for learning self-relieving by distracting thoughts is one of the methods used, which help people control their pain by reading, watching TV, getting busy with house chores, etc.; however, people need to bear in mind that they can relieve their pain using other methods such as using vibrator, massage, and warm water shower as well. Some people also have benefited from both ways to control their pain. The patient number 5 said: "When I am in pain, this is myself who must relieve me. I massage my back constantly, read, or watch TV to get busy and forget the pain, but sometimes, I need to take pills to relieve my pain". The need to obtain information about the disease, treatment process, and services was another needs; the patient number 13 said: "I do not know anything about my disease. I am not even aware of the side effects of my drugs. I do not know what I should do when I suffer a sudden back spasm. I study in another city and my drugs are not available there. So, I do not know how to find my drugs when I am there". In these statements, the lack of extra information disturbs the patient and the lack of awareness about the disease nature, how to find drugs, and treatment measures that he intends to receive are among the items that the patients must definitely be informed about.

#### 4.2. Spiritual/Religious Dimension

Disability to perform religious and spiritual rituals is another need of patients that must be obviated; the patient number 17 stated "I do my prayers and fasting very hard. This year I could not take fast due to my pains and when I want to anoint my feet, I cannot do it because I feel a terrible back pain". The participant number 3 said: "I cannot say my prayers unless I sit at a table. I feel like going to the mosque or talk to a clergywoman who holds religious narrating gatherings. You know, this really calms me." Here, disability to perform religious rituals is one of the complaints of patients; nonetheless, on one hand, this is the trust in a power beyond worldly affairs that is referred to as one of the needs. Additionally, patients stated that performing religious rituals and trust in God had created a nice calmness and relief for them.

#### 4.3. Socio-Economical Dimension

In this study, disorders in social activities and relationships are considered the basic needs of the patients, and

back pain can affect the patients' activities and relationships negatively and therefore, seclude them. The patient number 14 pointed out: "I like to associate with my friends like I did before or travel with them, but I cannot." The patient number 2 stated "Pain has disturbed my education programs; hence, my GPA at university has decreased." In addition to having a negative effect on education, back pain makes the patient isolated his family and society and his individual roles.

Patients often complain about financial problems caused by high healthcare and treatment costs and believe that the treatments for this disease are very expensive. The patient number 11 said: "The disease has created many financial problems for my family and I. My father pays for all my expenses. I used to work in welding and carpentry shops before, but now I am fired for my pains."

The expenses related to different treatment modalities affect the patients' financial status and their families in terms of financial dimension and cause financial problems in such a way that many of patients give up the treatment process and prefers to tolerate the pain in order to avoid facing more financial problems.

#### 4.4. Physical-Psychological Dimension

This theme consists of two physical and psychological disorder categories; in the former case, disturbance in alimentation status, sleeping, excretion, and the musculoskeletal system are indicated; therefore, all of these factors have led to disorders in the quality of patient's life and creating complaints in them. The patient number 7 stated: "I wake up with agonizing pain in the morning. I cannot sleep till morning due to this acute pain. I wake up 4 - 5 times during night time." Here, the negative effect of pain on sleep is pointed out as it hinders the patient to fall asleep or even it wakes him up through the night. The patient number 22 stated: "I used to walk 30 - 40 minutes every day and I did not get tired at all, but now, I get tired very much when I go for a walk. This is the back pain that does not let me walk." This theme also emphasizes the psychological needs and problems of patients that appear in the form of anxiety, depression, and sexual disorders. In this regard, the patient number 15 said: "I feel really disappointed and I cannot enjoy my life; therefore, I have no hope in the future. I am constantly worried about what will happen to me in the future." This patient is experiencing severe depression disorders and anxiety due to his disease and therefore, he is preoccupied with a negative perspective over himself and his future.

The patient number 4 also stated: "I did not have sex for two months at all, and now, it is much less than before. Neither I nor my husband is satisfied with our sex at all. He is very careful and is always afraid of my back pain getting worse." From the statements of this patient, one can

realize how back pain has caused huge psychological problems for both herself and her husband. Chronic back pain usually has many individual and emotional effects on the couples' relationship and influences their sexual life.

## 5. Discussion

In the present study that is a part of the research with a combined approach towards patients' suffering from chronic back pain in Iran, the needs of these patients were determined and categorized in four main themes. One of the main realms of this research was teaching and informing in which the participants pointed their lifestyle modification, learning various kinds of self-pain relieving, and acquiring information about their disease, the treatment process, and services. These patients tend to know which lifestyle and what kind of behavior can decrease the hazards of this disease and in the same way improves their health (15).

Lifestyle was central to the activities related to teaching and improving health aiming at changing the people's behaviors towards a healthy lifestyle (16). In this regard, the results of a study by Hung et al. revealed that lifestyle is considered the first and most important treatment strategies in patients suffering from blood pressure (17). Furthermore, in a study conducted by Lovell et al. the significant role of teaching was controlling and relieving the pain. The most benefit of these instructions is reached when the therapist first determines the patient's instructional needs and then provides instructions proportional to those needs (18).

The results of different studies have shown that the treatment team and patient relationship play important roles in patients' satisfaction, continuing treatment process, and the team efficiency expenses as well. Moreover, because communicative skills are not explicitly included in Iran's official medical teaching program, the treatment team has possibly encountered deficits in communicating effectively, responding the questions, and satisfying the patients' needs (19). Agency for health care policy states that one of the effective treatments is using non-medical methods. In addition to having fewer side effects, these methods are cheaper compared with medical treatment methods (20). Reviewing the experiences mentioned in this study revealed that patients have learned to relieve their pains by taking painkillers more than trying other ways. In different studies, it is determined that the most common medications used to cure chronic pains are Aspirin, Ibuprofen, Piroxicam, and Naproxen, which are effective in mitigating pains (21). Other teaching needs of patients are awareness towards medicines and medical information. A study was conducted by Boyde et al. on learning needs of patients in

treatment context and health care services, such as teaching disease symptoms, determined augury and danger indices and medical information that is consistent with the present study (22).

Patients also mentioned spiritual health needs as their other needs. Some believe that without spiritual health, other health dimensions cannot have maximum functionality. Religious rituals like praying in holy places and invocation to God are all organized ways of expressing spirituality (23). These patients have problems in performing religious rituals due to neural muscular problems; therefore, they need to use the strategies and commandments provided by religion. Melloh et al. stated that the majority of patients want their religious spiritual needs to be satisfied and 96% of them believe that religious health is an important factor in health (24).

The results of the research by Abedi et al. showed that the nurses' lack of awareness regarding different kinds of care services and no clergyman present in all shifts to answer religious questions of patients (25). Socio-economical needs are another group of needs that the patients mentioned. Financial problems and the expenses related to medicine and treatments on the one hand, and unemployment and patients' having no income, on the other hand, increased the family's problems. Burden of taking care of a sick person is very heavy and involves economic problems (26). Another problem or need of the patients is psychophysiological disorders. For receiving appropriate cure response, first the psychological conditions should be modified, stresses should be decreased, and depression and negative thoughts should be investigated (27). Habibzadeh (28) and Totsika et al. (29) showed that identifying and taking measures to satisfy this group of problems helps people to have a more ideal psychological function. Another problem that could be considered psychological and is recognized as one of the patients' needs is patients' sexual disorders. Although pressure on the nerves responsible for innervations of genitourinary parts of the waist disc leads to a decrease in the sexual strength and feeling; psychological factors play an important role in creating sexual problems (30, 31). The physical need is another need of the patients. One of these physical needs is a disorder in the gastrointestinal system. Goldberg in his meta-analysis showed that using Omega3 is really effective in reducing the joints and musculoskeletal pains (32). Furthermore, van Hecke et al. showed that the lack of vitamin D is a reason for chronic joint and bone pain development. With respect to the effect of sunlight in producing these vitamins, a seasonal pattern at the beginning of pains is sometimes seen as chronic back pains are rather increased in the winter (1).

Another problem that patients struggle with is disorder in the excretory system. Patients have to include a lot

of fiber in their diet in order to prevent this problem, but sometimes they complain about it. Kim et al. (33) stated that back pain caused spasm in the abdominal and waistline muscles and it could intensify constipation in people (34). Patients also have reported problems related to their sleep and resting. Having regular enough sleep is an important factor in having a healthy body and soul (35). Various studies expressing sleep disorders associated with chronic back pain revealed that patients suffering from chronic back pain and neck pain with 42.22% incidence have the most sleep disorders (36, 37).

Smith and Haythornthwaite have pointed to the mutual nature of sleep and pain. In other words, pain disorders, sleep quality, and continuity and low quality sleep intensify the pain. Since neural centers responsible for regulating sleep and pain are situated in one single part, persistent pains cause changes in the functioning of the neural system that regulates sleep and pain; hence, they interfere with the patient's sleep (38). Musculoskeletal disorders are categorized as another group of challenges that patients deal with. Inability to do their daily affairs, inability to continue their jobs, decreased physical ability, etc. are problems found in this category. Regular exercise and having physical activity are effective factors in relieving pains, improving people's health condition, and increasing their quality of life (1). In this study, there were limitations as well. For example, the experts were faced with a lack of time to conduct the interviews and finally, the researcher referred to clinics several times to eliminate this limitation. Moreover, another problem was the lack of cooperation of the patients, their companions, and specialists. This problem was solved by explaining and justifying them. Another problem for patients was their difficulty sitting for 30 to 60 minutes; they were allowed to lie down on the bed available in the room if they need.

### 5.1. Conclusions

Dimensions obtained from this study express a wide spectrum of various physical, psychological, religious, and educational needs of the patients suffering from chronic back pain. According to these facts, offering health care services and treatment measures by experts and family members taking care of them seem to be necessary. In order to provide qualified and multilateral health care services for patients suffering from chronic back pain, designing a treatment guideline considering their disorders and developing a model for explaining how to take care of these patients are proposed.

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### Footnotes

**Authors' Contribution:** Farkhondeh Sharif, Ladan Zarshenas, Abbas Ebadi and Arash Farbood participated in study design, data collection, and data analysis. Khatereh Rostami participated in initial study design, data collection, and data analysis. All authors read and approved the final manuscript.

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