

Experience with Limb Trauma: A Thematic Analysis

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Abstract

Background: Today, trauma is considered as a major cause of temporary or permanent disabilities for millions of people. Any loss of ability has considerable effects on the quality of life. One of the most important causes of disability is limb trauma. However, the quality of life with limb trauma is relatively unexplored.

Objectives: The objective of this study was to explore the quality of life following limb trauma.

Methods: In this qualitative study a thematic analysis and purposive sample method was used to recruit 11 patients with a disability in the upper or lower limbs and a history of hospitalization caused by a traffic accident 6 months to 2 years earlier. Data were collected through semi-structured interviews continued until reaching saturation. The data analysis approach in this study was thematic analysis, which consists of a vigorous process of data familiarization, data coding, and theme development and revision. The trustworthiness of the results was ensured through constant comparisons, triangulation, member checks, and peer review.

Results: Based on the participants' experiences, three themes were conceptualized: existing with limitations, empowerment approaches in encountering disabilities, and seeking support.

Conclusions: The experience of living with limb disability was a limiting experience, and other person's activities and relations could aid participants in achieving empowerment through strengthening and seeking compensatory mechanisms. More attention to the problems of patients, and more research is recommended.

Keywords: Life, Patients, Limb Trauma, Physical Disability, Qualitative Study, Thematic Analysis

1. Background

Trauma accounts for approximately 12% of deaths worldwide and has caused temporary or permanent disabilities in millions of people (1, 2). Limb trauma is a leading cause of disability worldwide, with low-income countries suffering the greatest burden (3). It is estimated that one of the most important burdens is the economic burden (4, 5).

Iran is plagued by a growing number of traumatic injuries, especially those due to road traffic collisions (6, 7). Physicians and nurses provide care to injured patients during acute and chronic trauma and seek to promote patients' health to reach their maximum level of physical, mental, and social ability (8). Traumatic events have significant impacts on patients and their families. Road trauma costs more years of life lost than cancer or cardiovascular diseases (9).

While several studies on orthopedic trauma have focused on measures of complications, mortality, and costs, less attention has been paid to the subjective experiences following orthopedic trauma. The perceptions and expe-

riences of patients with a physical disability throughout life are complex and unique (10). Therefore, this study was aimed at understanding the life experiences of patients with limb trauma.

2. Objectives

The objective of this study was to explore the experience of life with limb trauma.

3. Methods

This qualitative study employed thematic analysis to examine themes within the data. This method emphasizes the organization and rich description of the data (4).

Eleven participants were selected through purposive sampling from two hospitals which are major Iranian referral centers for the treatment and rehabilitation of people injured in traffic accidents. The inclusion criteria of the study were patients injured in motorcycle or car accidents, a physical disability in the lower or upper limbs, ability to

understand and speak Persian, willingness to participate in the study, age 18 - 65 years, and the passage of a minimum of 6 months and maximum of 1 year since the traffic accident.

Patients were recruited from the orthopedic wards at the Imam Khomeini and Sina hospitals. The researcher visited the patients at the wards at a scheduled time arranged during a telephone call. Participants' consent to participate in the interview and study was also obtained during the telephone calls. The data were collected through deep, semi-structured, face-to-face interviews. The interview began with an open-ended question based on the major research question and continued with probing and follow-up questions about the life experiences of patients with limb trauma. Data were collected over 9 months from July 2013 to March 2014. Each interview lasted 35 - 45 minutes depending on the patient's ability to continue. The interviews were conducted in Persian by the first author and then translated into English. All the interviews were recorded with a digital voice recorder and transcribed verbatim. The major research questions were as follows: Would you talk about your limb injury caused by the traffic accident? What has the impact been on your life? What are the problems in your life? The participants were also asked probing questions during the interviews to clarify their answers.

The study proposal was approved by the ethics committee of the research council of the University of Welfare and Rehabilitation Sciences. Informed written consent was obtained from all participants, who were ensured of the confidentiality of their information.

The data collected from face-to-face interviews were transcribed by the principal investigator, who also noted initial thoughts and ideas in this essential stage in analysis (10). In addition, the recordings were listened to several times to ensure the accuracy of the transcription (4, 5).

The data analysis approach in this study was thematic analysis, which is a vigorous process of data familiarization, data coding, and theme development and revision. In the initial stage, the researcher carried out data familiarization and collection and next transcribed the data. Next, the researcher extracted codes from the data (applying short verbal descriptions to small amounts of data).

Based on the codes, the researcher attempted to identify key themes which integrated substantial sets of these codes. Regarding trustworthiness, credibility was ensured through constant comparisons, triangulation, member check, and peer review (4).

4. Results

Three main themes which express the experience of orthopedic trauma patients were extracted from the study results: existing limitations, empowerment approaches in handling disabilities, and seeking support (Table 1).

Table 1. Unit Meaning, Subtheme, and Theme

Unit Meaning	Sub-Theme	Theme
Inability to walk- Inability to perform activities of daily living	Physical limitations	
Desire to help others		
Dependence on wheelchair	Loss of individual autonomy	
Work disorder		
Intolerance of financial problems	Economic burden	1. Existing with limitations
Expensive private rehabilitation		
Changes of restrictions		
Dealing with self	Adaptation to new condition	
Acceptance of new status		
With God's help Gratitude to God	Spirituality	2- Empowerment approaches to disability
Enabling approach seeking necessary information for self-care		
Participation in treatment plan	Efforts to achieve self-care	
Better opportunities for faster recovery		
Participation in care		
Needs for therapeutic team in handling acute problems	Team support	3- Seeking support
Patient attempts to attain independence		
Support from peers	Peer support	
Information support from peers		

4.1. Being in Limitations

One of the important categories derived from the experiences of the study participants is being in limitations in daily activities and economical activities.

4.1.1. Physical Limitations

Participants experienced problems in everyday activities, such as walking. These mobility limitations resulted in isolation.

4.1.2. Loss of Individual Autonomy

Due to physical problems caused by the disability, some participants were dependent on others to fulfil their individual roles and responsibilities toward their families. These participants were deeply upset about it and missed their independence. Dependent on others to do their chores, is a burden. Patients recalled their activities and capabilities before their disability in comparison to their current weakness and loss of independence, which made them upset and intensified their feelings of dependency. One participant described losing independence in personal affairs.

4.1.3. Economic Burden

The economic burden was another important challenge for the participants in this study. The patients had insufficient economic resources for rehabilitation services, which caused them more loneliness.

The participants stated that treatment costs are not fully covered by insurance companies, so patients are financially responsible for the rehabilitation care.

4.2. Empowerment Approaches in Handling Disabilities

One of the main themes extracted from the interviews is empowerment approaches in handling disabilities. This theme consists of several main categories: adaption to the new situation, spirituality, and efforts to achieve self-care.

4.2.1. Adaptation to New Situation

Among the main themes derived from the experiences of the study participants was their gradual adaptation to the new situation and limits imposed by their bodily injury as they sought to return to normal conditions. The gradual reduction of the problems that patients encountered facilitated the adaptation process:

The personality traits and coping skills used played a significant role in their acceptance of their disability.

4.2.2. Spirituality

Spirituality was one theme extracted from the experiences of the participants in this research. Spirituality in patient care expedites the patient's return to normal.

4.2.3. Efforts to Achieve Self-Care

One outcome of effective rehabilitative care is increasing the patient's ability to perform everyday activities and to maintain their independence as much as possible. However, in this study, few patients were able to achieve great success in returning to a productive, independent life. A number of patients said that they were pleased when their father, mother or spouse finally admitted the patient's illness or disability and sought to support them in a return to an independent, productive life. Participants gradually regained the physical abilities necessary for independence and self-care activities.

Participants stated that giving them the maximum independence will aid in efforts to gain skills and abilities to take care of themselves and have a useful life. The patient's abilities and experiences of other patients and training provided by caregivers and clinicians, such as doctors, nurses, counselors, occupational therapists, and physiotherapists, were earned.

4.3. Seeking Support

One theme derived from the participants' experiences was support to return to normal life, divided into two sub-categories: team support and peer support.

4.3.1. Team Support

Participants experienced support as important as they sought to return to normal levels of individual function. Care providers, such as doctors, nurses, and physiotherapists, are considered an important factor in their return to society.

Numerous participants and their support team, especially experienced nurses, acknowledged their cooperation and mutual efforts to regain optimal health and balance. Participants tried different methods of support to admit their problems and return to normal life.

4.3.2. Peer Support

Participants reported that, when they met and talked with other victims, they felt less worried.

5. Discussion

Three main themes which express the experience structure of orthopedic trauma patients were extracted from the study results: existing with limitations, empowerment approaches in handling disabilities, and seeking support.

Injury can affect patients' familial, social, and psychological functions (6), and in this study, participants reported that various aspects of their family and personal

lives have undergone great changes. The results of the current study were supported by the findings of Russel Ogilvie (11).

Most participants with disability experienced the inability to resume their previous work and, for some, to perform the activities of daily living (11, 12). Disability caused by bone fracture resulted in job loss or inability to work, which led to or exacerbated pre-existing financial problems in families (13, 14) and strained family dynamics and interpersonal relationships with friends (8). A study that assessed the quality of life and functional independence of patients 6-12 months after hip fracture found that most patients still displayed some disability and had not returned to their pre-fracture lifestyle. These results are consistent with the findings of the present study (15). In other results of this study, patients with physical injuries required transfer to private hospitals for continuing treatment; however, the costs of physiotherapy treatment are extremely high, and studies suggest that treatment and post-discharge costs are imposed on patients and their families. Orthopedic patients, in particular, can incur many direct and indirect costs, including private rehabilitation and physiotherapy costs (13, 16).

Empowerment strategies for coping with disability emerged as another theme of participants' experiences. Efforts to achieve self-care have significant effects on quality of life because proper methods for coping with and adapting to disability could increase the possibility for rehabilitation (17, 18). Valizadeh's findings (16) suggest that patients feel more comfortable while using adaptation strategies. For instance, social support and cohesion are considered to be important factors in adapting and coping with acute and chronic somatic disability (19).

Spirituality was another aspect of adaptation experienced by study participants. In the literature, spirituality generally refers to love, sympathy, care, a relationship with God, and the relation between the body, mind, and spirit. Spirituality is also defined as energy and power effective at promoting health and good sense (20-23).

Seeking for support was also a theme of the life experiences of patients with limb trauma. Evidence indicates that peer support groups promote patient recovery and allow the opportunity for patients to learn from others who have had the same experiences (21). When patients visit and talk with other patients with limb trauma, they report feeling less concern and isolation. Sometimes, participants in support groups expand their friendships in these meetings (24). The results of another study showed that trauma survivors struggled greatly to return to normal life and needed to receive support and security from their healthcare team, especially nurses (25). Strong social support also is an important component in successful

adaptation by limb trauma patients (26). Participants in this study also experienced the need for social support in different dimensions of their life. These patients had experienced severe suffering due to disability, its outcomes, and a lack of adequate social protection in various areas. Strong social support plays an important role in adaptation with disability, protects patients against stress, and decreases the negative psychological results caused by physical disability (27).

5.1. Conclusion

In this study, the most important aspect of patients' lives was a gradual movement from limitations into effective adaptation to their particular life style and its attendant outcomes. More attention and research on the problems of patients with limb disability is recommended to understand their experiences and provide needed guidelines.

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Footnote

Authors' Contribution: The study theme and design were selected by Kian Norouzi Tabrizi, Hamid Reza Khankeh, Soheil Saadat, Fatemeh Pashaei Sabet, Alireza Bastami, and Heidar Ali Abedi. Fatemeh Pashaei Sabet and Alireza Bastami conducted the interviews with participants. Data analysis and interpretation were performed by Fatemeh Pashaei Sabet, Kian Norouzi Tabrizi, Hamid Reza Khankeh, Soheil Saadat, and Heidar Ali Abedi. A critical revision of the manuscript for important intellectual content was done by Fatemeh Pashaei Sabet, Kian Norouzi Tabrizi, Hamid Reza Khankeh, Soheil Saadat, and Heidar Ali Abedi. The study supervisors were Kian Norouzi Tabrizi, Hamid Reza Khankeh, Soheil Saadat, and Heidar Ali Abedi.

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