

Experiences of Encountering Physical Trauma Caused by Traffic Accidents: A Qualitative Study



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ABSTRACT

Background: Traffic accidents are the main cause of death and disability in the world and Iran. The injuries caused by traffic accidents may result in severe limitations and worst outcomes in various aspects of lives of traffic accident injured people and their families. Therefore, understanding their experiences is very important to design better programs with regard to their treatment and returning to the society. In this regard, we conducted this study with the aim of understanding and describing the experiences of encountering with physical trauma resulting from traffic accidents.

Materials and Methods: This study was conducted with qualitative research approach, using qualitative content analysis method. The study participants had a record of upper and or lower extremity injuries caused by traffic accidents of at least 3 months and at most 2 years after the accident. They were chosen by purposeful sampling method. Data were collected through semi-structured interviews and continued until data saturation. Data analysis was carried out using content analysis method.

Results: The study findings based on the experiences of participants were conceptualized in three main categories; experiencing some limitations, disturbances in performing professional duties, and family problems caused by trauma.

Conclusion: The study findings showed that injured people due to traffic accidents experience numerous constraints in different areas of their lives. Accordingly, proper interventions can be designed based on understanding these needs and experiences from participants' own words to alleviate these problems. Finally, the study results provide a new insight to the medical team to understand these patients and their real health problems in a more realistic way.

1. Introduction

Trauma is now recognized as one of the most common and important threats. Reviewing data from 2001 to 2005 from the National

Data Trauma Bank has shown that the majority of unintentional injuries, with the highest percentage (41.3%) is related to traffic accidents [1]. In recent decades, epidemiological studies have shown that the increasing rate of the mortality and disability due to multiple traumas is

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mainly caused by traffic accidents [2]. According to the World Health Organization studies in 2013, traffic accidents are the cause of 1.2 million deaths and about 20 to 50 million disabled people in the world [3]. The condition in Iran according to WHO in 2008 has been reported as 32 deaths per 100000 people while the world average rate is 13.8 deaths per 100000 [4]. In the 10 years leading to 2008, the death number caused by traffic accidents was 235000 people and the number of the injured people caused by traffic accidents was estimated as 30650000. The average hospitalization time due to the traffic injuries was 20 days and about 48% of the occupied beds in surgery wards belonged to this group [4].

The problems caused by traffic accidents are not only confined to social problem, but also extend to economic ones with disorders in life quality of the trauma victims and their families [5]. Traffic accident injured people may experience some limitations in their abilities compared to their conditions before the injury. The studies also indicate that many people may experience a significant level of functional limitations [6]. Aitken et al. (2007) reported that the functional limitations in the injured people may be developed in different areas, including physical functioning, social functioning, mental health, emotional role, and general health [7]. According to Franzen et al. (2006) study and WHO report (2013), the traffic accident injured people report various physiological and psychological issues which affect the quality of their lives [8].

Russell study (2008) on hospitalized trauma patients one year after their injury showed that 30% of the hospitalized patients had significant limitations in different aspects of functioning. About 77% of 48 hospitalized trauma patients had mild disability and 23% moderate disability [4]. Ogilvie (2012) reported that patients with life-threatening injuries had a lot of problems in returning to normal life and suffered a lot from agitation and crisis stages and physical and mental injuries and shocks [8]. Baba Mohammady study (2012) also showed that these traumatic injuries cause limitations in many aspects of patient's life, including physical, psychological, and social aspects and they become dependent on others in many issues [9].

Several studies indicate that hospital care and then home care need an interdisciplinary approach for patients' faster recovery and preparing them to return the society [10, 11]. Physicians and nurses provide the care for the injured patients in acute and chronic phases of trauma so that they can achieve their maximum level of the physical, psychological, and social abilities [12]. The

findings of Franzen et al. (2006) and Peden (2004) studies indicate that traffic accidents injured people face with many limitations such as difficulties in daily physical activities and occupational problems [7-13]. Therefore, encountering the traffic accident is a vague, multi-dimensional, subjective, and context-dependent experience. In addition, insufficient context knowledge and studies on injured ones' experiences in traffic accidents are available to understand and help planning for better care of these patients and provide appropriate solutions to health care centers and the relevant authorities. In this regard, the researchers conducted this study with a qualitative methodology to understand and describe the experience of victims of physical trauma caused by traffic accidents.

2. Materials and Methods

This study was conducted by using qualitative paradigm and qualitative content analysis approach to understand and describe the experience of victims of physical trauma resulting from the traffic accidents. Content analysis is one of several research methods in the analysis of textual data. In qualitative content analysis, three different approaches are used to interpret the content of the text related to the naturalistic paradigm. In this study, the conventional content analysis was used. The conventional content analysis is generally used in designing the study which aims at describing a phenomenon. This design is often appropriate when the theory or the available scholarly texts about a phenomenon is limited. The researchers avoid using the pre-assumed notions, instead, they allow the categories and terms be derived from the data [13].

Study participants

The study participants were recruited from two specialized hospitals and different wards of emergency, orthopedic, neurosurgery, and clinics affiliated to Tehran University of Medical Sciences. These two centers are among the main and important referral centers for traffic accident injured people and their treatment and rehabilitation all around Iran. The participants' inclusion criteria included all people with traffic accident injuries led to upper and lower extremity disabilities, ability to understand and speak Persian, willingness for participation in the study, and aged from 18 to 44 years (that according to the reports, the most probable traffic accidents occur in this age group) [3]. They should have a history of minimum 3 days of the hospitalization and at least 3 months to 2 years must passed from their traffic accident. The researcher referred to study samples after coordination by phone call and acquiring their permission for interview and participation in the study and making the scheduled

meetings. Given the fact that the patients were considered as the major key participants in this study, to obtain the maximum variability, we tried to choose the samples with various economic and socio-demographic situations such as age, marital status, education, occupation, and income.

Data collection

Data collection was done using deep semi-structure and face-to-face individual interviews. Semi-structured interviews started with an open-ended question on the basis of the research main questions and then gradually continued based on the data analysis, diligent, and in-depth questions about facilitating factors and the barriers on the traffic accident injuries rehabilitation care. Data collection lasted about 9 months, from July 2013 till March 2014. The average interview time was about 25-45 minutes depending on the patient's ability to continue the interview. The interviews were conducted in Persian by the first author. They were recorded on tape and taken down word by word after each interview session. The main questions were as follows: "Could you tell me about your traffic accident?" and "What issues have you faced with after your traffic accident disability?"

Ethical considerations

This study proposal was approved by Ethics Committee of University of Social Welfare and Rehabilitation Sciences. The purpose and the methodology of the study were comprehensively explained for the patients participating in the study. In addition, all participating patients could dissuade and leave the study without paying any fines and penalties and it was also allowed to record the interviews. The participating patients were assured that their information would remain confidential.

Study analysis

The content analysis approach was used to analyze the data. Content analysis is a technical research method, specializing in processing scientific data. Content analysis summarizes data and gives them structure and order. It is a technique in exploring the symbolic meaning of the messages and data. To analyze the data, the recorded interviews were transcribed verbatim and they were read for several times for gaining a common sense out of the data. The resulted texts from the interviews were divided into concepts that have been summarized. The abstract semantic units were labeled by coding. In the following, the codes were sorted out into categories and subcategories based on their similarities and differences.

Trustworthiness

Study precision is one of the most important factors in all stages of a qualitative research and leads to the reader's understanding of the researcher's events, effects, and activities [15]. In this study, validity was assessed by peer reviews. The data were independently coded and categorized by the authors. Then, the categories found from data analyses were compared with each other. Upon disagreement on any category, the discussion continued among the authors until they reached a common consensus. Members' checks had also been used so that the study participants were given a summary of the derived categories to confirm their experiences with the categories. A detailed analysis has been used from the early stages of the study and during data collection to achieve the reliability.

3. Results

Based on the study participants' experiences, three main categories of some limitations, disturbances in performing professional duties, and family problems caused by trauma were conceptualized.

Experiencing limitations

One of the main categories extracted from the participants' experiences in this study was facing with the physical disabilities caused by injuries which included two subcategories of limitations in daily activities and dependency.

Limitations in daily activities

One of the difficulties experienced by the participants was limitations in their daily activities such as walking which sometimes led to staying at home, loneliness, and social isolations. A number of the participants were affected even when talking about this issue:

"I was in bed for 3 months and had to be careful of bed-sore and had problems in changing position and movement. I was in bed for 4 months and then started to walk by using walker at home (silence)" (a 41-year-old male patient).

"My worst problem is disability in walking. At first, I could walk very slowly with the help of others and using a walker, but now I am sitting in the wheelchair... (Crying)" (a 40-year-old female patient).

"This is very important that physician, nurse, and physiotherapist tell me the truth, but not making me completely disappointed! We are going on with just a little

hope, otherwise tolerating so much difficulties, pain, numbness, and weakness is very difficult, that you cannot walk, is very hard!"

Dependency

A number of the participants, due to the physical problems caused by their diseases, got dependent on the family in performing their personal roles and duties and responsibilities toward their families and because of that they were deeply sad. They saw their independence lost and felt to be burden as they were dependent on others for doing their daily chores. The study patients by reminding the previous days before their disabilities and telling about their activities and abilities in those days, continuously compared their previous independence with the present weakness and dependency and this made them more sad and dependent on others.

One of the patients told us about the dependency:

"I get help in doing all my activities. Even my family helps me with my personal affairs." (participant number 4).

One of the participants also told:

"My worst problem is my disability in walking. At first, I could walk with walker very slowly, but now, I am sitting in a wheelchair. Others do all my works. Even my father gives me a shower. I feel really embarrassed" (participant number 3).

Disturbances in performing professional duties

"Disturbances in performing professional duties" was the other category extracted from the participants' experiences in this study. Physical problems and patients' disabilities caused impairment in performing their occupational responsibilities and some of the patients became dependent on their co-workers and colleagues to maintain their job and to keep on performing their duties at work place. The patients considered their colleagues' presence vital for keeping and continuing their occupation and faced problems without their presence. One of the participants, who had an accident 3 months ago and broke his lower and upper extremities, told: "With the problem happened to me and all the caused limitations, commuting to work has been very difficult for me and I have problems in walking and sitting" (participant number 3).

Depending on others in performing occupational responsibilities caused fear and worries in patients with regard to lose their jobs.

"Moving limitations was my obstacle in returning to my daily normal activities and job. I could not sit on the chair because my feet were inflated, and walking with cane was very difficult for me. So, it was difficult for me to do my job at that time" (participant number 7).

Family problems caused by trauma

One of the other concepts extracted was facing with "family problems caused by trauma" that got involved the patients and their families. The participants' experiences indicated that the physical and mental problems and sometimes patients' disabilities changed the roles of other members in the family, increased their responsibilities, and sometimes dissatisfaction of other family members.

"Since my spouse had an accident, all family's responsibilities and roles were changed. Everybody lost his or her duty. For example, I, myself, besides going to work, have to take the children to school, do the household chores, and manage everything because he cannot be like a normal person anymore and do his own tasks." (participant number 9).

The patients reported that how they faced changes in the roles and family responsibilities since the time of the illness development and their need to hemodialysis. They faced a lot of vast changes in their family and occupational responsibilities:

"My illness and its problems forced me not to perform my duty at work in the office. My colleagues usually do my works at the office" (participant number 3).

"In the beginning of my disability, I did not think of my family and life, I left everything. Dirty kitchen, I did not cook" (participant number 4).

The tensions and the problems due to traffic accident injuries caused caregivers to encounter problems in taking the other responsibilities and life roles. This problem affected the quality of life of the patients' families and at this stage, caused instability in the social and family relationships. The study participants had experienced a kind of family turmoil due to the patients' situation: "Because of my situation and since I could not do anything and I was totally lame, my husband did not come home often. My child was very little and needed care. In a word, I was so tormented" (participant number 8).

“At first, my family was shattered because of my situation. I even could not walk and do the household chores. My disability even affected my children’s studying. Everything was messy” (participant number 5).

4. Discussion

Based on the participants’ experiences, three main categories of limitations, impairments in performing occupational responsibilities, and family problems caused by trauma were conceptualized. The study results showed that the traffic accident injuries in the study participants caused different limitations in their lives and most participants experienced physical limitations. Basically, The nature of multiple traffic injuries in patients cause changes and limitations in their life routines, create a series of negative changes in patients such as physical ability limitations, control limitations, and changes in social and family roles [16, 17]. In Russel study (2008) on hospitalized trauma patients one year after the accident, it was shown that 30% of the patients had significant limitations in different aspects [4]. The study reported that physical, mental, and cognitive problems cause disorders in the quality of lives of the trauma patients and their families. Patients with various trauma due to traffic accidents may experience these short-term problems several months after the traffic accident [4] which are consistent with the findings of this study. Also, many studies refer to functional and performing deficiencies after traffic accidents that cause many disabilities in moving, daily life activities, and their dependencies on others [4, 17, 18].

Baba Mohammadi study participants (2012) experienced a series of negative changes such as physical limitations, control limitations, decrease in their status, and changes in various physical, social, and family roles [19, 20]. Patients with trauma injuries caused by traffic accidents may experience a limitation in their abilities compared to their activities before the injury. The research indicates that many people may experience a noticeable level of functional and performing limitations. Also Aitkin et al. (2007) reported that the functional limitations in the injured people may be seen in different areas such as physical and social functioning, mental health, emotional role, and general health [13-18]. Russel study (2008) which was about hospitalized trauma patients one year after the accident has shown that 30% of the hospitalized patients had significant limitations in different aspects of functioning and performing. Based on this study, 77% of the 48 hospitalized trauma patients had a mild disability and 23% had an average level of disability [13-20].

Family problems caused by trauma were among this study results so that family relationships, roles, and previous expectations due to the patient’s disability and physical limitations got impaired. The participants reported that they experienced a high dependency on their family for doing the smallest things and that is why the families had experienced a high pressure and affliction in taking care of the patients and having multiple roles. The study results agree with the results of Khan et al. (2012) and Russel et al. (2008) in which after traffic accident injuries, changes in the family and social roles, demands of the family, limitations in economic roles, and impairments in the career and marriage role have been reported [4-21].

Another main extracted concept in this study was the disorders in the occupational role. Sometimes physical problems and patients’ disabilities cause impairments in performing their career roles. Various studies indicate that the negative and long-term outcomes of traffic accident include the lack of success in returning to the work, and to the previous job [22-24]. The evidence indicates that about 70% to 90% of the traffic accident injured people with history of hospitalization, have problems in returning to their normal previous life and profession [4, 8, 13]. Also, Russel et al. (2008) and Mack et al. (2004) reported long-term effects in the injured people, including delay in their returning to the work and school [3-25].

The study results showed that traffic accidents in patients caused some changes and limitations in life routines and a series of negative changes like physical ability limitations, control limitations, a change in the family and social roles which demands a multi-dimensional attention in rehabilitation and help returning the patients to the society.

5. Conclusion

Based on the study results traffic accident injured people experience many limitations in different areas of their lives which necessitates a proper treatment based on their experience to alleviate these problems. At the end, these results will present a new insight to the health team to understand these patients and their real health problems in a more realistic way. The study results will help the health policymakers to step in promoting the health status and treating the traffic accident injured people.

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Conflict of Interest

The authors declared no conflict of interests.

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