

## Experiences of spinal cord injury patients during rehabilitation process at 7 west Windhoek Central Hospital, Khomas Region, Namibia

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**Abstract:** Road traffic crash is considered the most cause of spinal cord injury in African regions with 70% cases reported according to WHO. For many survivors, these accidents result in permanent life changing injuries such as spinal cord injuries. The aim of the study is to explore and describe experiences of spinal cord injury patients during rehabilitation process after spinal cord injury at Windhoek Central Hospital 7 west, Khomas Region, Namibia. A qualitative, explorative, descriptive and contextual design was followed. The data was collected through in-depth interviews. Data was analyzed according to Tesch's eight steps of data analysis that led to the formation of themes and sub themes. The steps entail a process of breaking down, examining, comparing and categorizing the raw data, this led to the formation of themes and sub- themes.

Measures to ensure trustworthiness, were used to ensure reliable and valid findings. Participants in this study reported a difference within themselves such as self-care and mobility following hospitalization, which they couldn't do on admission. They expressed gratitude from the healthcare workers who helped them and being patient with them during their vulnerable times. The above study showed that patients were able to help themselves following rehabilitation process.

**Keywords:** Gratitude, Mobility, Rehabilitation process, Self-care, Spinal Cord Injury

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### I. Introduction

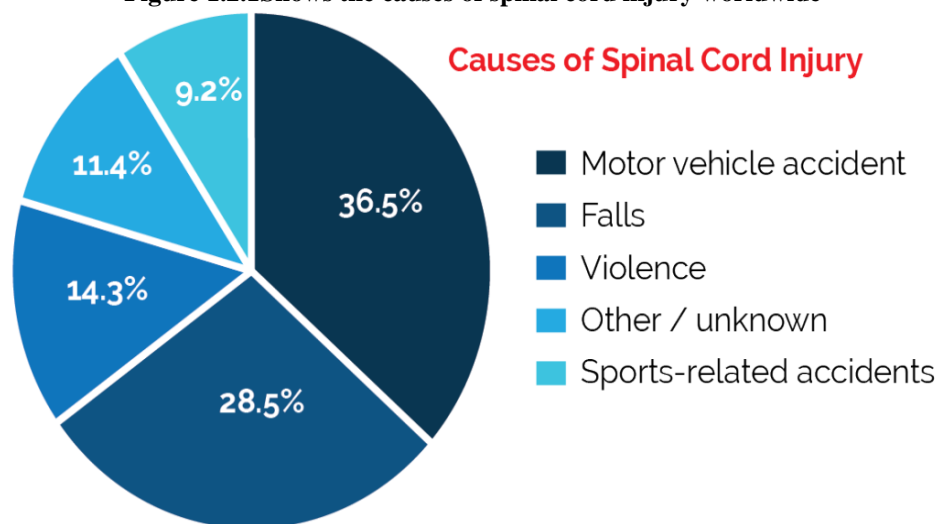
Spinal cord injury is the injury to the spinal cord which can occur through an accident or through medical treatment. Road traffic crash is considered the most cause of spinal cord injury in African regions with 70% cases reported according to World Health Organization (WHO). The spinal cord is responsible for carrying messages from the rest of the body to control movement of the body, these messages are also responsible for controlling other functions such as breathing and the ability to feel, touch or pressure. Treatment of spinal cord injuries can be divided into two stages: Acute and Rehabilitation. The acute phase begins at the time of injury and last until the patient is stabilized, the rehabilitation phase begins as soon as the patient is stabilized and ready to begin working toward his or her independence (Lawrence, Chin, 2017).

The main primary goal of spinal cord injury rehabilitation is prevention of secondary complication, maximization of physical functioning and reintegration into the community. Rehabilitation following spinal cord injury is more effectively undertaken with a multidisciplinary team based approach which involve: physical therapist which mainly focus on lower extremities function and on difficulties with mobility, occupational therapist which address upper extremity dysfunction and difficulties in activities of daily living, rehabilitation nurses which are concerned with the issues of bowel and bladder dysfunction and management of pressure ulcer/bedsores. Psychologists which deal with the emotional, behavior, family counselling of newly injured patient and with any potential cognitive dysfunction, while speech language pathologist address the issues of communication and swallowing (Michael, 2017).

WHO (2013) reported that around 500 000 people suffered spinal cord injury each year, and these people are 2 to 5 times more likely to die prematurely with worst survival rates in low and middle income countries. WHO's report on internationally perspective on spinal cord injury stated that males are most at risk of spinal cord injury between the age of 20-29 years and 70 years and older, while females are most at risk between the age of 15-19 and 60 years and older, and this gave a ratio of male to females as 2:1 among adults. Furthermore, WHO also stated that 90% causes of spinal cord injuries are due to trauma such as road traffic crashes, falls and violence. WHO also stated that Namibia is the top country in the world in terms of the number of deaths per 100 000 residents. Even though Africa accounts just 2% of registered vehicles, the continent is responsible for about 16% of annual global road deaths. A recent study about mortality from road crashes in 193

countries by Michael Sivak and Brandon Schoettle who head the University of Michigan's transportation research institute also indicated that in Namibia about 53% residents are more likely to die in a vehicle collision than from cancer or other diseases. In Namibia about 3044 people injured in 1772 car crashes on national roads across the country. Statistic revealed that 528 road crashes and 965 injuries for the past festive season indicated a reduction from the 645 crashes (18%), 1292 injuries (25%) and fatality (5%) recorded during the 2016/2017 festive season.

**Figure 1.2.1 Shows the causes of spinal cord injury worldwide**



## II. Materials and Methods

**Aim of the study:** The aim of the study is to explore and describe experiences of spinal cord injury patients during rehabilitation process after spinal cord injury.

**Objectives of the study was:** To explore the experience of spinal cord injury patients at 7West Windhoek Central Hospital Khomas Region. To describe the experience of spinal cord injury patients during rehabilitation process at 7 west Windhoek Central Hospital Khomas Region.

This study was carried out on patients going through rehabilitation process at 7 west Windhoek Central Hospital, Khomas region, Namibia on the 17 November 2018. A total of four adult's subjects (both male and females) of aged 20-45 years participated in this study.

**Study Design:** Qualitative, explorative, descriptive and contextual study.

**Study Location:** This study was done at Spinalis Department at 7 west Windhoek Central Hospital, Khomas Region, Namibia.

**Study Duration:** One day, 17 November 2018.

**Sample size:** Four patients.

**Sampling and Sample size calculation:** In this study purposeful sampling was used. Purposeful sampling is the sampling technique that qualitative researchers use to recruit participants who can provide in-depth and detailed information about the phenomenon under investigation. The technique is highly subjective in generating the qualifying criteria each participant must meet to be considered for the research study.

**Subjects & selection method:** Target population was patients who has been hospitalized for more than a week and more, between the ages of 20-45 years and were going through rehabilitation process due to spinal cord injury at Windhoek Central Hospital.

### **Inclusion criteria:**

1. All adult patients.
2. All sex.
3. Aged 20-45 years.
4. Suffered spinal cord injury.
5. Admitted 1 week and more and were going through rehabilitation process.

### **Exclusion criteria:**

1. All younger patients.
2. Newly admitted patients.

3. Patients who did not suffer spinal cord injury.
4. Patients not going through rehabilitation.
5. Patients not admitted at 7 west Windhoek Central Hospital.

**Procedure methodology:** Permission to collect data was obtained from the Ministry of Health and Social Services. Each participant was given an informed consent to sign before taking part in the recruitment. A semi-structured –in-depth interview was used to collect the data of recruited patients respectively. The patients were asked to share their experience in a face to face interview with the use of one central question ‘what is your experience during rehabilitation program’? Empathy, probing and clarification during data collection was used. Tesch’s method of data analyzing and transforming qualitative data into the research results was used. Topics that came up were allocated codes accordingly. Topics were turned into themes, which allowed same data to be grouped together. Four interviews were done and recorded, with the permission of the patients. Data was then transcribed verbatim Creswell, 2014).(Four (4) themes and five (5) sub- themes emerged from the interviews.

Trustworthiness in qualitative research is the way of ensuring data quality based on the model of Lincoln and Guba (1985). The model proposes four criteria for developing trustworthiness of qualitative study:

**Credibility** this ensure that there should be confident in the truth of the data and the interpretation. Credibility will enable the researcher to link the research study’s findings with reality in order to demonstrate the truth of the research study’s findings.

**Dependability** refers to the provision of evidence such that if it were to be repeated with the same or similar participants in the same or similar context, its finding would be similar. If the researcher doesn’t get the information needed, the same procedure can be repeated to determine the accuracy of the information.

**Confirmability** it is concerned with establishing whether the data represent the information provided by the participant and not the researcher’s biases or perceptions. The researcher will use a tape recording to record all information’s that participants says and document them down for confirmation.

**Transferability** refers to the ability to apply the findings in other contexts or to other participant. Transferability will provide the readers with evidence that the research study’s findings could be applicable to other situations, times and populations

**Statistical analysis:** Data’s was analyzed using deductive reasoning. The data about the patient’s experience were recorded, these data were then: translated, transcribed, and coded and then themes and sub-themes generated was done in line with Tesch’s method of data analysis (Creswell, 1998).

**Ethical considerations:** Ethical aspects such as confidentiality, respect, and freedom of participation were complied. Anonymity was maintained at all cost. Ethical consideration was insured through the following:

**Principle of Respect:** Participants was issued a consent form and that they had the right to decide whether or not to participate in the study. Participants were told that they have the right to withdraw at any time and that their decision will be respected.

**Principle of Beneficence:** Beneficence is a concept in research ethics which states that researchers should have the welfare of the research participant as a goal of any clinical trial or other research study. Patients has the right to protection from any discomfort and harm.

**Principle of Justice:** This principle was implied by making sure that all my participants has the right to fair selection and treatment. Respect to my participant’s right to privacy was ensured by making sure that all participant’s names will not be revealed to anyone, and that anonymity will be ensured by not using participant’s real names meaning that all participants will be given a code that will be used in steady of their real names. Confidentiality will be maintained by making sure that all information will not be shared with anyone.

**Principle of Autonomy:** Respect for autonomy is one of the fundamental guidelines of clinical ethics. Participation were informed that the study will be voluntary and participants could withdraw from the study without the risk of penalty or prejudicial treatment at any time. Participants were given the right to decide whether they wanted to participate or not. The decision of the participants was respected, if they are not willing to participate.

### III. Results

After the interview four (4) themes and five (5) sub-themes emerged from the interviews, which were presented in the table 4.1.

**Table 4.1: Themes and sub - themes of the participants’ experiences**

Themes	Sub-themes
4.3.1 Theme 1: Participants expressed huge <b>difference</b> within themselves.	4.3.1.1 Sub-theme: Self –care 4.3.1.2 Sub-theme : Mobility
4.3.2 Theme 2: Participants expressed <b>gratitude</b> from healthcare workers.	4.3.2.1 Sub-theme : Appreciation
4.3.3 Theme 3: Participant expressed <b>hope</b> after accident.	4.3.3.1 Sub-theme: To become independent in wheelchair user.
4.3.4 Theme 5: participant expressed <b>wish</b> for more materials.	4.3.4.1 Sub-theme: More equipment’s

The themes and sub-themes were discussed in detail below. The discussion of sub-themes was verified by direct quotation from the participants' and then supported with necessary literatures.

#### **4.3.1 Theme 1: Participant expressed huge difference within themselves**

Participants in this study expressed a huge difference within themselves following after hospitalization. The differences that were discussed are: self-care and mobility.

##### **4.3.1.1 Sub-theme: Self-care**

Self-care is any activity that we do deliberately in order to take care of our mental, emotional and physical health (Michael, 2016). Participants in this study expressed a huge difference within themselves and they learn how to take care of themselves, which is something they didn't use to do on their first admission. When participants were asked about their difference and experience, this is what they say:

“Ondeyamo kwali ihipenduka paife, ohependuka ame mwene. Noku shower okwali handikoshwa mara paife andi ikosho ame mwene, nombeteyange handiyale ame mwene (when I came I was unable to wake up myself, but now I can wake up by myself, I couldn't even shower myself but now I can shower myself, I can even make my bed up)” (p4).

Another participant was asked to say more about her difference experience and this is what she says:

“There were stuff I couldn't do and then the program helped me to gain independent on myself through physio” (p2).

Preeda (2014), stated that participants with spinal cord injury are commonly considered as being active and enthusiastic, which may drive their physical activities. However sensorimotor impairment following spinal cord injury hinder their ability to move safely, particularly in those with more functional deterioration.

##### **4.3.1.2 Sub-theme: Mobility**

Mobility is the ability to move or be moved freely and easily. Participants in this study expressed a huge difference within themselves such as the ability to move by themselves and the ability to use their limbs freely, which is something they didn't use to do when they got admitted. When participants were asked about their different experience this is what the participant says:

“Its mos that I could not move but now I can move it, when I was coming here I was that man nah nah my whole left arm was dead, my fingers, even my left arm was not working well, it was swelling down every places I could not put up a bit, I could not touch my nose, I could not touch my mouth, I could not breath my mouth with my right hand, now I can breathe my mouth and I can support my left arm to put it up and put it down in the place that I want” (p1).

When asked the same question, this is what another participant has to say about his different experience:

“Eshindeya omu kakwali handilinyenge, nokwenda kakwali handiende. Mala paife ohandi dulu okwenda ngoo kashona. omaoko nao kakwali hamadulu okulinyenga neenyala okukwata, mo kakwali hamelinyenge mala paife otamelinyenge. (When I came here, I was unable to move and walk at all, but now I can move a little bit. Arms was unable to move and hands to hold anything, but now they can move)” (p3).

Another participant was asked the same question and this is what she says:

“Eshindeyamo kakwali handidulu okudja kombete yange ame mwene, mara paife andidulu kudjako kombete ame mwene. Inima aishe oyo omondeyakwishivila omu eshi handiyi komadeo (When I came I was unable to get out of bed by myself, but now I can get out of bed by myself. All this thing I learned them here when I go for exercise)” (p4).

Another participant responded:

“My balance, my ability to sit on the wheelchair, I can get out of my bed all that. When I came here I couldn't do anything” (p2).

When participants were asked about their different experience, they expressed a huge difference within themselves following hospitalization, which they stated that they can now move their limbs and do other things themselves. Gorgey & Wadeet al., (2017) concluded that exoskeleton training may improve physical activity after spinal cord injury by increasing the number of steps and walking time with benefits of increasing energy expenditure and improving the profile of body composition.

#### **4.3.2 Theme 2: Participants expressed gratitude from healthcare workers**

Gratitude is a quality of being thankful to someone for their committed support. Participants in this study expressed gratitude towards the healthcare workers for their support. This is supported by the study by Oliver et al., (2013) who reported that people with spinal cord injury appreciated physiotherapy approach “making the most” of their residual function.

#### **4.3.2.1 Sub-theme: Appreciation**

According to Cambridge dictionary, appreciation is the act of recognizing or understanding that something is valuable and important. Participants in this study expressed a lot of appreciations for the support received from healthcare workers. When asked what they can say about what they liked most about the rehabilitation program, this is what one participant has to say:

“Aye, ame iinima aishe eyi nda ningilwa omu onda pandula shili. nava twikile komesho nomadeo avo, otava kondjo shili. Inavafya ounye nilonga yavo (No, everything they did for me here; I am truly thankful. They should continue with their exercise they are really trying. They should not become lazy with their work)” (p4).

Another participant responded:

“The people I was working with they are good and friendly. They were pushing me to become independent” (p2).

Another participant responded:

“Ondeya pandula shashi oteetukwafele. (I thank them because they are helping us)” (p3).

Participants in this study expressed a satisfaction towards the healthcare they received from healthcare workers. This is supported by the article by Lucke (2004) about a process of knowledge acquired and decision making, facilitators by nurses and therapist in special caring relationships with the person with spinal cord injury which resulted in outcomes of well-being, self-care, and autonomy in decision making, independence and hope, all of which contributed to the persons with spinal cord injury reintegration of self.

#### **4.3.3 Theme 3: Participants expressed hope after an accident**

According to Longman dictionary hope is the feeling of wanting something to happen and thinking that it could happen. In this study participant expressed hope after an accident such as hope to become independent in a wheelchair.

##### **4.3.3.1 Sub-theme: To become independent in a wheelchair**

According to Cambridge dictionary Independent is the way of not being influenced or controlled by others in matters of opinion, conduct etc. thinking or acting for oneself. Participant in this study expressed the need to become independent in a wheelchair. When interviewed about what they learned this is what one participant has responded:

“That sometimes is possible for you to achieve an independent life in a wheelchair. It’s not a myth like how people put it like if you are in a wheelchair than your life has come to an end” (p2).

Participant in this study expressed hope to become independent in a wheelchair after an accident. This is supported by the study of Laskiwski, (2013) who stated that hope in this context has been defined as knowing there is life that can be productive and meaningful after spinal cord injury. Each of the studies included in this review identified the need for rehabilitation of professionals to foster a hopeful vision of life with spinal cord injury patients, which should focus on capabilities rather than inabilities which support the findings of previous researchers.

#### **4.3.4 Theme 4: Participant expressed wish for more materials**

Webster (1828) defined wish as a strong desire or feeling of hope for something. Participant in this study expressed wish for more materials.

##### **4.3.4.1 Sub-theme: More equipment**

Equipment refer to a set of tools or other objects commonly used to achieve a particular objective. Participant in this study wish to get more equipment. When participants were asked if there’s anything that can be done to improve the program, one participant respondent:

“No, maybe to help with the equipment’s to assist people for instant physio equipment’s, more wheelchairs and that’s it” (p2).

Participant in this study expressed wish to get more equipment to be able to help themselves. In an article about assessing the influence of wheelchair technology on perception of participation in spinal cord injury by (Chave, 2004) found that wheelchairs are the most commonly cited factor limiting participation followed by physical impairment and physical environment. The wheelchair is the most important mobility device used by persons with SCI but is mostly associated with barriers.

## **IV. Discussion**

The aim of this study was to explore and describe the experiences of the spinal cord injury patients during rehabilitation process. Face to face interviews were conducted in order to attain the study’s aim and objectives. Different experiences of the patients were explored and described in objective 1 and 2.

### **5.2.1 Objective 1: To explore the experience of spinal cord injury patients at 7West Windhoek Central Hospital Khomas Region, Namibia.**

An in- depth individual interview was used to find out the patient's experience. Patients were asked to share their experiences in a face to face interview, with the use of one central question "what is your experience during rehabilitation program"? Four interviews were done and recorded, with the permission of the patients. Data was then transcribed verbatim (Creswell, 2014). Four (4) themes and five (5) sub- themes emerged from the interviews. The obtained data is described under objective 2.

### **5.2.2 Objective 2: To describe the experience of spinal cord injury patients during rehabilitation process at 7West Windhoek Central Hospital Khomas Region, Namibia.**

The experiences were described by analyzing data according to Tesch's steps of analyzing qualitative data. Themes and sub themes that were formed are discussed below:

Participants in this study expressed a huge difference within themselves following hospitalization. During analyzing of data, a different forms of differences were identified by the patients such as self-care and mobility, most patients stated that when they first came in the hospital, they were unable to take care of themselves. They dependent on the healthcare workers for support. Patients further stated that they were unable to go to the bathroom by themselves nor able to shower themselves and make their beds. Another difference that was identified was: mobility, most patients stated that when they first got admitted they were unable to move their bodies but now they can move their bodies by themselves and they are able to help themselves without their assistance .Some patients also stated that they were unable to get out of the bed by themselves nor move their limbs but now with the help of physio they can get out of bed themselves and they can also move their limbs such as the arms, hands and legs. Some stated that they were unable to walk but now they can walk slowly.

Most participant's expressed gratitude for the healthcare workers, they stated that they are very thankful for everything they have done for them. Some stated that people working with them are so good, this is supported by the study by Oliver et al, (2013) who reported that people with spinal cord injury appreciated physiotherapy approach "making the most" of their residual functions.

Participants in this study also expressed hope to become independent in a wheelchair after an accident. Participant stated that its possible for people to achieve an independent life in a wheelchair, it's not a myth like how people put it that if you are in a wheelchair than your life has come to an end. Meanwhile,Laskiowski, (2013)stated that hope in this context has been defined as knowing that, life can be productive and meaningful after spinal cord injury. Each of the studies included in this review identified the need for rehabilitation professionals to foster a hopeful vision of life with spinal cord injury patients, which should focus on capabilities rather than inabilities. In an article by Lucke (2004) about a process of knowledge acquired and decision making, facilitation by nurses and therapist in special caring relationships with the person with spinal cord injury resulted in outcomes of well-being, self-care, and autonomy in decision making, independence and hope, all of which contributed to the persons with spinal cord injury reintegration of self.

Participants concluded that for the program to be improved they wish to get more equipment's such as physio equipment's and wheelchairs to be able to help themselves. This is corresponding with an article by (Chave, 2004) who found that wheelchairs are the most commonly cited factor limiting participation followed by physical impairment and physical environment. The wheelchair is the most important mobility device used among persons with SCI but was stated by users as mostly associate with barriers.

## **V. Recommendations**

The recommendations below were made based on the study findings. They were made based on the management, research side and the contributions to body of knowledge.

**Management:** There should be establishment of another spinal cord rehabilitation at others hospitals outside Windhoek, this would allow patients that are from outside Windhoek not to stay away from their families for longer periods since this patient are required to stay in the hospital for 6 weeks or more before being discharge home.

**Further research:** It's recommended that there should be more research conducted on same topic but, in a different setting to further explore the experience of spinal cord injury patients during rehabilitation process.

**The contribution to the body of knowledge:** This study contributes to the insight of patients experiences; as a result, this study's findings will be used for any change that needs to be done regarding the patients with spinal cord injury.

## VI. Conclusions

Patients do improve gradually after going through rehabilitation process which involves different activities such as exercise. The attitudes of healthcare workers do play an important role in patient's recovery as it's their caring heart that do give patients hope that they can be themselves once again someday.

## References

- [1]. Brink H, W. R. (2012). *Fundamental of Research Methodology for Healthcare Professionals*. Cape Town: Juta.
- [2]. Chave, M. S. (2004, November). *Archives of Physical Medicine and Rehabilitation*. Assessing the influence of wheelchair technology on perception of participation in Spinal Cord Injury, 85(11), 1854-1858.
- [3]. Chen, S. C. (2005). Increase in Bone Mineral Density After Functional Electrical Stimulation Cycling in Spinal Cord Injury Patients.
- [4]. Creswell, N. (2014). *Spinal Cord Injury Rehabilitation*. pp 62-73. Australia
- [5]. Gorgey & Wade et al. (2017). *Experience of Robotic Exoskeleton*. Neurologic Physical Therapy. US. National Library of Medicine
- [6]. Lawrence, C., (2017). *Spinal Cord Injury*. State University of New York, Department of Neurosurgery. New York: Upstate Medical University.
- [7]. Lincoln & Guba (1985). *Quality of Life of Person with Complete Traumatic Spinal Cord Injuries*. Gaborone
- [8]. Lucke, K. T. (2004). *Physical Therapy*. 24(6), 247-253.
- [9]. Matthew, J. (2017). *Trauma: Spinal Cord Injury*. Department of Surgery, Madigan Army Medical Centre. Portland
- [10]. Michael, L. (2017). *Multidisciplinary Team Based Approach*. *European Journal of Trauma and Emergency*, 44(11).
- [11]. Oliver, M. .. (2013). *Walking into Darkness. The Experience of Spinal Cord Injury*. Basingstoke: Macmillan.
- [12]. Preeda, A. (2014). *Physical Therapy*. 94(5), 675-681.
- [13]. Namibian Statistic Agency (2016). *Road Accident Statistics*. Retrieved: <https://nsa.org.na>.
- [14]. WHO (2013). *Spinal Cord Injury*. Retrieved: <https://www.who.int/news-room/fact-sheets/detail/spinal-cord-injury>.

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