SOCIAL WORK

THE SCHOOL OF HUMAN AND COMMUNITY DEVELOPMENT (SHCD)

EXPERIENCES OF BRAIN INJURED INDIVIDUALS POST HOSPITALISATION AT HEADWAY-KHOMELELA

A report on a study project presented to

The Deaprtment of Social Work

School of Human and Community Development

Faculty of Humanities

University of the Witwatersrand

In partial fulfilment of the requirements

For the degree Bachelor of Social Work

by

Thomontle Mogashoa (student)

Laetitia Petersen (supervisor)

January, 2017

ACKNOWLEDGEMENTS

To God: Thank you for making the research process difficult as that taught me to be more patient and willing to put in the extra time.

To my supervisor: Thank you for your assistance but mostly thank you for your patience on me and your support during the research process. Thank you for your understanding and comments on every submission.

To the course coordinator: Thank you for the research seminars, they were worth it.

To the participants: As you are the ones that were most crucial for this study project, thank you so much for your voluntary participation.

To Headway management: Thank you for allowing me to conduct my research at your agency.

ABSTRACT

Headway-Khomelela offers services to those individuals who have experienced traumatic brain injuries post hospitalisation. There was a need to add to the database of Headway about the experiences their clientele went through post hospitalisation. The primary aim of this research report was to understand the post hospitalisation experiences of those individuals who have a brain injury. This included their coping strategies which they had to learn in order to make life easier for themselves on a day to day basis and the employment challenges which they are experiencing. The theoretical lens which was used is the biopsychosocial model. The methodological framework for this qualitative investigation was an exploratory research design. Ten participants were selected by using purposive sampling from those individuals who receive services from Headway-Khomelela. The research instrument was used was an interview schedule and semi structured interviews was used to collect the data. The data was analysed via thematic analysis. This research report has a potential of adding information to the Headway-Khomelela database as the database currently has very limited experience regarding these clients' experiences and difficulties in finding employment. It may also be of assistance to social workers with regard to understanding the challenges of the clientele of Headway-Khomelela post being hospitalised and perhaps aid interventions. The research study found that the participants valued the importance of rehabilitation and family role after the injury. This also included the physical challenges the participants experienced. The study was concluded that participants recommend rehabilitation as soon as a person is discharged from hospital and they should focus on recovery first.

- Keywords: Headway, brain injury, family support, rehabilitation, therapists, home exercising, coping strategies, employment challenges.

Table of Contents

ACKNOWLEDGEMENTS.......... i

ABSTRACT.......... ii

TABLE OF CONTENTS.......... iii

CHAPTER 1: INTRODUCTION 6

1.1 STATEMENT AND RATIONALE 6

1.2 CONTEXTUALISATION OF THE STUDY 7

1.3 PURPOSE OF THE STUDY 8

1.4 RESEARCH QUESTIONS 8

1.5 OBJECTIVES/AIMS 8

1.6 THEORETICAL FRAMEWORK 9

1.7 DEFINITION OF TERMS 9

Traumatic brain injury: 9

Coping: 9

Rehabilitation: 10

1.8 RESEARCH METHOD 10

1.9 LIMITATIONS 10

1.10 ORGANISATION OF THE REPORT 10

CHAPTER 2: LITERATURE REVIEW AND THEORETICAL FRAMEWORK 12

CHAPTER 3: METHODOLOGY 17

3.1 INTRODUCTION 17

3.2 RESEARCH QUESTIONS 17

3.3 AIMS AND OBJECTIVES 17

3.3 PARTICIPATION AND SELECTION 18

3.4 DESCRIPTION OF PARTICIPANTS 18

3.5 APPROACH AND DESIGN 19

3.6 INSTRUMENTATION 20

3.7 RESEARCH PROCESS 21

CHAPTER 4: RESULTS AND DISCUSSION 25

4.1 INTRODUCTION 25

4.2 PARTICIPANTS 25

4.3 RESULTS 26

4.3.1 Help from the family 26

4.3.2 Help from therapists 27

4.3.3 Social Isolation 28

4.3.5 Challenges 28

4.3.6 Employment 28

4. 4 DISCUSSION 29

4.5 CONCLUSION 31

CHAPTER 5: SUMMARY, CONCLUSION AND RECOMMENDATIONS 32

5.1 SUMMARY 32

5.2 CONCLUSION 33

5.3 RECOMMENDATIONS 33

REFERENCE LIST 34

APPENDICES 39

1. Ethics Clearance..
2. Consent Form..
3. Participation Information Sheet..
4. Interview Schedule..
5. Transcripts of interview..

CHAPTER 1: INTRODUCTION

Traumatic brain injury has become a problem in the world. According to Headway Gauteng (as cited by Crouch & Alers, 2014) in 2012 there were 89 000 people in South Africa per year that have a brain injury. This shows that a large number of people are involved in incidents that result in a brain injury. According to Naidoo (2013, p. 613) "a study in 2007 found injury-related mortality rates in SA to be 6 times higher, and the incidence of road traffic injuries to be double, that of the global rate". Though South Africa does not have a databank for traumatic brain injuries, studies show that the injury rate is high. This research report was conducted to understand the experiences brain injured people at Headway-Khomelela had post hospitalisation. This helped in knowing and understanding the role that family played in their recovery and also what helped them cope during their recovery process.

1.1 STATEMENT AND RATIONALE

The purpose of this study was to explore the post hospitalisation experiences of those individuals who have a brain injury and are receiving services from Headway-Khomelela.

Through observation at Headway-Khomelela it became clear that the people receiving services there had not shared with the agency about their experiences post hospitalisation. According to Brain Injury Association (2015) these experiences can include the memory and speech problems, physical limitation, and goal direction of the individual, support system and employment. These experiences form part of what people with a brain injury have to go through after being discharged from hospital. With a brain injury there are challenges that individuals go through during their recovery process. These challenges can lead to people with a brain injury not being able to go back to work.

According to Asher (as cited by Hardina, 2013) a database is important as it will have written information about the client including the skills they possess or tactical methods which were used to help the client or used by the client. When an organisation has a database it is easier for people to read about the clients and in this case read about the experiences they had post hospitalisation and there is a record of the information. These records help to understand the client better because there will be more documented information about them and what assisted them with the challenges they experienced post hospitalisation. There are no records that show that this information exists. This

information may help the organisation to understand the challenges, know what the clients are facing post hospitalisation and to help the clients with those challenges as part of the treatment plan or after focusing on the physical therapy.

This research is likely to contribute to the understanding of the day to day living of the participants post hospitalisation and how they were able to make life manageable for themselves. The similar coping strategies the participants used could be beneficial to another brain injured individual from Alexandra or that is new at Headway-Khomelela. This research will provide an understanding of the employment experiences they are having because it is difficult for them to find work. It will also contribute towards the Headway-Khomelela database because at the present time there is no existing research done on this. According to Artman and McMahon (2013, p. 13) “many individuals with traumatic brain injury (TBI) struggle with meeting work demands because of functional limitations, which are the residual symptoms directly related to the injury”. These functional limitations include cognitive impairments, communication and duration or intensity of the work. This research will show whether the reason for their unemployment is because of their brain injury or there are other factors contributing.

This research may contribute towards the gap of people not knowing about Headway-Khomelela and the services they provide. According to Headway Gauteng (as cited by Crouch & Alers, 2014) in 2012 there were 89 000 people in South Africa per year that have a brain injury. This shows that a large number of people are involved in incidents that result in a brain injury. The population of Alexandra estimates between 180 000 and 750 000 (The World Bank Group, 2001). With a large number of people living in Alexandra there are challenges which could make it difficult for a brain injured individual to cope. This can include poor access to the services such as Headway-Khomelela. Because of this research people will be aware of Headway and how it helped individuals with rehabilitation.

1.2 CONTEXTUALISATION OF THE STUDY

A traumatic brain injury is a major health problem that affects all societies worldwide. According to Maas, Stocchetti and Bullock (2008, p. 728) “it is the leading cause of mortality and disability among young individuals in high-income countries, and globally the incidence of TBI is rising sharply, mainly due to increasing motor-vehicle use in low-income and middle-income countries”. This proves that a brain injury causes many

disabilities in the world which can result to permanent or temporary whereby a person can recover. A brain injury is not something that a community can escape from.

Because of the limited data statistics that are available in South Africa it is not clear how many people currently have a brain injury as some people are not admitted to hospital. The incidences of the injuries have come from research studies that are conducted in a specific area. According to the National Institute for Occupational Health (2017) incidences are higher in Europe ranging from 91 per 100 000 while in South Africa it ranges from 316 per 100 000, the gender difference in South Africa being male to female ratio of 4:1. This shows that South Africa, as a developing country, has a higher number of people that are brain injured as compared to the European countries.

1.3 PURPOSE OF THE STUDY

This research will have relevant information that can be beneficial to another brain injured individual from Alexandra or that is new at Headway-Khomelela. It will also contribute towards the Headway-Khomelela database because at the present time there is no existing research done on this. This research will show that the reason for the participants' unemployment is because of their brain injury and other disabilities. Because of this research people will be aware of Headway and how it helped individuals with rehabilitation.

1.4 RESEARCH QUESTIONS

The main question for this research study is: What are the experiences of brain injured individuals post hospitalisation?

1. What coping strategies helped or are helping to manage with the brain injury?
   1.1 What has been the role of family or any other support structure during recovery?
2. What employment challenges are there for people with a brain injury?

1.5 OBJECTIVES/AIMS

The primary aim of this study is to explore experiences of brain injured people receiving services at Headway-Khomelela had post hospitalisation.

The objectives for this study include the following:

- To explore the different coping strategies brain injured people use post hospitalisation in order to improve their functioning after the injury.
- To highlight the support brain injured people received from family and friends during recovery/rehabilitation.
- To find out what challenges brain injured individuals' experience with regard to employment.

1.6 THEORETICAL FRAMEWORK

This research focused on the biopsychosocial model. According to Arlinghaus, Pastorek, Graham (2011, p. 55) "the biopsychosocial model integrates clinical data from three interrelated domains: 1) biological disturbances in brain function; 2) emotional and psychological reactions to impairments in cognition and disturbances of behaviour; and 3) disruptions of interpersonal relationships, family interactions, work capacities, and community participation". This type of model looks at an individual from all aspects. This research looked at the individual's personal challenges, the role of the family and work experience.

Brain injured individuals always expect to be able to return to their normal lives and do everything that they used to do before without considering their injury and how it has affected their lives. According to Tyerman and King (2008, p. 359) "rehabilitation after brain is about a gradual return to home life, to leisure activities and to work". A brain injured individual receiving rehabilitation after being hospitalised will increase their chances of gaining their independence back.

1.7 DEFINITION OF TERMS

Traumatic brain injury:

Crandall, (2016, p. 25) define it as occurring "when there is a blow or jolt to the head due to rapid acceleration or deceleration or a direct impact. It can also be cause by direct penetration injury of the brain".

Coping:

Coping is defined as "the behaviors and thoughts one uses in response to a situation perceived to be a stressor" Folkman & Moskowitz (as cited by Waasdorp, 2008, p. 91).

Rehabilitation:

According to the World Health Organisation (2017) rehabilitation is a process intended at making them to reach and maintain their physical, sensory, intellectual, psychological and social functional levels like before. It provides people with the tools to be independent again.

1.8 RESEARCH METHOD

The research approach that will be used is the qualitative approach. According to Creswell (2009, p. 4) "qualitative research is a means of exploring and understanding the meaning individuals or groups ascribe to a social or human problem". To understand the experiences of the participants the type of research design that will be used is multiple case studies. According to Creswell (2007, p.74) "the inquirer purposefully selects multiple cases to show different perspectives on the issue". This design seemed to be appropriate for this study because it allowed for a detailed collection of information from the participants by going into depth with the questions in order to understand the participants' experience. This design assisted in understanding the different experiences of the participants.

Ten participants were selected from Headway-Khomelela, three females and seven males. Their age ranges between 30-60 years. They were selected by using purposive sampling. The type of instrument for this study will be a semi-structured interview schedule with each participant.

1.9 LIMITATIONS

Due to the scope of this research study only a convenient sample was used. Another limitation is that the sample will be dominantly male as the agency has so many males in relation to females. This might not be able to represent the experiences of women sufficiently and rather represent from only a male perspective.

This research study focused of the experiences of people with brain injury at Headway-Khomelela by using the qualitative method. The next chapter will focus on the literature review and theoretical framework.

1.10 ORGANISATION OF THE REPORT

Each chapter of this report will focus on different topics. The following chapter, which is chapter 2, will focus on the literature review. This is where the literature and the

information about the topic will be discussed more into detail. Included in this chapter will be the theoretical framework. Chapter 3 will focus on the methodology of the research study. This will include a discussion aims and objectives, participants and selection criteria, methods used for collection of data and type of categorisation. Chapter 4 will focus on the results and discussions. Chapter 5 will focus on the conclusion and summary of the research study.

CHAPTER 2: LITERATURE REVIEW AND THEORETICAL FRAMEWORK

Traumatic brain injury has become one of the leading causes of morbidity and mortality in the whole world. According to Naidoo (2013, p. 613) “a study in 2007 found injury-related mortality rates in SA to be 6 times higher, and the incidence of road traffic injuries to be double, that of the global rate”. The rate of brain injured individuals in South Africa increases with each year as there are increasing road accidents reported. In South Africa there are organisations such as Headway Gauteng that is there to assist a brain injured individual to be able to gain their independence after the injury.

Headway Gauteng is an organisation dedicated to offering various support programmes to survivors of acquired brain injury and their families (Headway Gauteng, 2016). These programmes include counselling services, family support group, art and music facilitators, occupational therapists, physiotherapists, biokinetics and speech therapists. The organisation is divided into three different branches situated in Hyde Park, Alexandra and Soweto. Headway-Khomelela, which is in Alexandra, offers services to individuals that have experienced a traumatic brain injury (TBI) and live in Alexandra or close proximity to Alexandra.

As mentioned by Schiehser et al., (2015) a traumatic brain injury is a traumatically induced structural injury and/or physiologic disruption of brain function. This shows that there is a disturbance in the brain and this could be either a mild or severe disturbance. With the disturbance that happen to the brain there are impairments that could be temporary or permanent. This disturbance can lead to impairment to the physical, cognitive, perceptual, behavioural regulation and emotional functioning (Coetzer, 2006). The physical impairment implies that individual can have poor balance, weakness to their limbs and a problem with their speech. The perceptual impairment includes blurred vision and loss of sensation and cognitive impairment involves poor memory and poor concentration. Poor memory might cause anxiety and the individual might not be able to react to it appropriately, this relates to the emotion and behavioural regulation. Bloom, Cohen and Campbell (as cited by Prout and Fedewa, 2015, p. 377) stated that the causes of a TBI include motor vehicle accidents, falls, acts of violence and sports-related head traumas. Individuals with a brain injury can undergo rehabilitation post hospitalisation which will help with the process of healing. Rehabilitation, according to Khan, Baguley and Cameron

(as cited by Chua, Ng, Yap and Bok, 2007, p. 33), is defined as “a problem solving educational process aimed at reducing disability and handicap experienced as a result of disease or injury”. This shows that rehabilitation works towards making an individual recover to a similar level of functioning as they were before their injury. According to Mazaux and Richer (as cited by Andelic et al., 2012) rehabilitation has three phases which include: early rehabilitation at trauma hospitals, inpatient rehabilitation and post-acute community-based rehabilitation.

An individual can receive rehabilitation at different stages and for different reasons. For a brain injured individual the process can initially be either medical or physical in nature, psychological and social issues might become important on a later stage and eventually occupational or educational needs may be important (Coetzer, 2006). During the rehabilitation process the needs of the individual need to be met so that they can recover to a similar level of functioning as they previously were. As part of the rehabilitation process Headway-Khomelela offers counselling services, family support groups, group therapy and activity programmes that are supervised by trained therapists (Headway Gauteng, 2016). The counselling services are offered by the social workers and the psychologists. They also have occupational therapists, art therapists, speech therapists and biokinetics therapists that help with the rehabilitation of the individual. Therefore, Headway uses a multi-disciplinary approach for their clients because the team communicates and exchanges information about the client in order to help the client. From the point of injury until one recovers, people’s functioning is classified as either executive functioning or executive dysfunction. This is similar to high functioning and low functioning. Lezak (as cited by Coelho, Liles & Duffy, 1995, p. 471) stated that “executive functions comprise those mental capacities necessary for formulating goals, planning how to achieve them, and carrying out the plans effectively”. This is further explained by Headway UK (2016) as the abilities that include social behaviour, flexible thinking, and multi-tasking, controlling emotions and solving unusual problems. If an individual is having difficulties with their cognition, emotions and behaviour due to the brain injury that means that they will not be classified as being high functioning.

Lazarus and Folkman (as cited by Naswall, Hellgren and Sverke, p. 312) define coping as “constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person”. People learn coping strategies so that they are able to adapt to the change which they are

experiencing in their lives. There two types of coping strategies which an individual with a brain injury can use, namely the active or approach-oriented coping and avoidant coping. According to Levin, Shum and Chan (2014) problem-focused strategy focuses on the problem and how an individual can deal with it and emotion-focused strategy focuses on trying to control your emotional reaction towards a stressful event. An individual chooses how they cope with the injury and this can change through time.

As part of the coping mechanisms people with brain injuries reply on God as a coping mechanism. According to Pargament (as cited by Gurung, 2014, p. 172) "in his books on religion and psychology, documents an array of cases in which religious coping is used as a coping mechanism and notes that our tendency to turn to God intensifies as situations become more crucial". This shows that people when they are experiencing a situation which they see no solution to or do not understand what to do next they turn to God to help them cope. People seek support and guidance from God in order to get through something that they are experiencing.

According to Spitz, Schönberger and Ponsford (2013) individuals with a brain injury rely more on emotion-focused coping strategies and less frequently use problem-focused strategies. An individual chooses how they cope with the injury and this can change through time. This research will show whether people receiving services at Headway-Khomelela uses the emotion-focused strategy more because this could be different due to their type of brain injury and the community they live in. Understanding their coping strategies is important because it will also bring up factors that influenced the strategy for an individual that lives in Alexandra. The factors include "the individual cognitive architecture and cognitive reserve already present before brain injury, the spared functional plasticity after brain injury, as well as the environment and practice conditions for learning adaptation strategies" (Zihl and Heywood, 2011, p. 10).These factors are considered when the individuals determine a coping strategy that would be successful for them. There are therapists such as psychologists, physiologists and social workers that can help the individual after being brain injured. This also includes the role of the family.

Individuals need the support of the family when going through a difficult time. Elbaum (2007, p. 275) mentioned that "the entire family system tends to focus, almost exclusively, on the needs of the person who is injured" which supported that the role of the family is needed. Though this is true, it also depends on the quality of the relationship before the

injury, commitment to the injured individual and other responsibilities the family has. According to Elbaum (2007, p. 275) "injuries are generally ill-timed and families are frequently ill-prepared for the time-length, uncertainty, and challenges of the post-injury process. Each family system goes through different challenges and with the participants it will also be different responses. With the challenges or benefits of the family there is also that challenge of employment.

Van Velzen, Bennekom, Edelaar, Sluiter and Frings-Dresen (2009) indicated that people with a brain injury are less likely to permanently return to work or their former work. This holds true for most of the clients receiving services from Headway-Khomelela as very few have been able to return to work. According to Weddell et al., (as cited by Giles & Clark-Wilson, 1999, p. 7) "only a small proportion of severely brain-injured adults were able to return to their former employment". Because of their cognitive impairments and for some physical disabilities as well it is not possible for them to return to doing the work they did before the brain injury and finding suitable work for them remains a problem.

According to Gosney, Harper and Conroy (2012, p. 571) "the role of a social worker in the multidisciplinary team brings social expertise, social care law and regulation clarity, community resources information, and access to them". This means that a social worker knows the background of the client or patient and their family; he or she will then ensure that any difficulties experienced and needs of the patient or client is recognised by the rest of the team.

Biopsychosocial model was used as a theoretical lens. The biopsychosocial model is defined as a model that "integrates useful aspects of both medical and social models of disability, addressing biological, individual, and societal perspectives on health" (Stebnicki & Marini, 2012, p. 408). The effects of this injury on the person's rehabilitation process, the psychological impact and the social impact will be explored. This model is important because the biological aspects to be considered are the brain injury that the individual has. The psychological aspects for the individual will refer to the emotions, cognitions, judgement. The social aspects refer to the environment they live in and the support they receive from the family and friends. Therefore, using this model will provide a comprehensive understanding of the brain injury on the individual's psychological and social wellbeing. Because a brain injury can affects the brain, this model also takes into account the effects the injury has from a cellular to organ system to person to family to

society. This model takes into account how the individual is reintegrated back into the society and how the society reacts to the individual. The reaction from the society plays a role in the recovery of the individual. This model, according to Wright, Zeeman and Biezaitis (2016, p. 2) "is not only the biomedical or social factors that are relevant, but rather the inclusion and interrelationship of all aspects of functioning for improved rehabilitation outcomes". This model does not have one specific view on the recovery of the individual but rather it looks at all the aspects that affect the person.

A traumatic brain injury can give individuals different disabilities. Because of the changes that they may have such as disability they need to learn to adapt and cope with the changes. This can happen through a change of attitude or support from the family. The next chapter will cover the methodology of the study.

Therefore with the information provided above, a person with a brain injury has to have support from family and society during their recovery. This also includes receiving therapy from psychologists, physiotherapists and occupational therapists to name a few. The next chapter will focus on the methodology of the study. The methodology will focus on the aims and objectives, approach and design, sample, instrumentation and research process.

CHAPTER 3: METHODOLOGY

3.1 INTRODUCTION

This chapter focuses on the methods that were used for this research study. This includes the research approach and design, the sample, instrumentation and the research process.

3.2 RESEARCH QUESTIONS

The main question for this research study is: What are the experiences of brain injured individuals post hospitalisation?

1. What coping strategies helped or are helping to manage with the brain injury?
   1.1 What has been the role of family or any other support structure during recovery?
2. What employment challenges are there for people with a brain injury?

These questions were the main questions for the report. Adding to these questions were questions that were used in the research instrument. These questions assisted in answering the research question.

The following questions were used in the research instrument:

1. Tell me about your experiences of rehabilitation services before coming to Headway-Khomelela.
2. What challenges have you experienced after being discharged from hospital?
3. How did you cope with the changes after the injury?
4. Please explain your family's role in helping you after the injury.
5. Who else helped you after your injury and how?
6. Tell me about your experiences to find employment after the brain injury.

3.3 AIMS AND OBJECTIVES

The primary aim of this study is to explore experiences of brain injured people receiving services at Headway-Khomelela had post hospitalisation.

The objectives for this study include the following:

- To explore the different coping strategies brain injured people use post hospitalisation in order to improve their functioning after the injury.

- To highlight the support brain injured people received from family and friends during recovery/rehabilitation.
- To find out what challenges brain injured individuals' experience with regard to employment.

3.3 PARTICIPATION AND SELECTION

Headway is divided into three branches and this research report focused on the population from one branch which was the Khomelela branch, Alexandra. The focus of this study was about the experiences of brain injured individuals at Headway-Khomelela, the Alexandra branch. The appropriateness of the population was important because they all come from the same community and they have experienced a similar injury.

Purposive sampling was used because "the sample is intentionally selected according to the needs of the study" (Boeije, 2010, p.35). According to LeCompte and Preissle (as cited by Merriam, 2009, p. 77) "in criterion-based sampling you create a list of the attributes essential to your study". The criterion is important because the participants selected need to be relevant for the research. The participant had to have been receiving services from Headway-Khomelela for more than three months and be willing to share their experience. The participant had to be aged between 30 – 60 years. The participant had to be high functioning according to Headway classification. Headway has classified all their services users as high or low functioning as according to comprehension and task fulfilment. The potential participants were approached and given information about what the research was about. Following that they chose whether they wanted to participant or not. Once they agree to participate they signed a consent form as their way of agreeing to be part of the study and to be audio recorded.

3.4 DESCRIPTION OF PARTICIPANTS

The participants included 10 participants (7 males and 3 females) from Headway-Khomelela which is situated in Alexandra, Johannesburg. Their ages ranges between 30-60 years, with the oldest being male and the youngest being female. Because of their injury they are all unemployed although some where previously employed before the injury. The participants have been at Headway for more than six months. They travel to Headway by means of public transport and they come on Wednesdays and some on Thursday. One participant is not a South African citizen while the rest are. All the participants are black but come from different cultures. None of the participants are currently on a wheel chair

but two of them are using a walking stick and walking frame. The table below provides a visual detail of the description of the participants.

Table 1: Description of participants

Description Factors	Sub-Category	Number of participants
1. Gender		
	Male	7
	Female	3
2. Previous Employment		
	Previously Employed	6
	Not Previously Employed	2
	Self-employed	2
3. Cultures		
	Zulu	2
	Shona	1
	Pedi	1
	Sotho	1
	Tswana	3
	Xhosa	2
1. Walking ability		
	Need support	2
	No support	8

3.5 APPROACH AND DESIGN

The research approach that was used for this research report is the qualitative approach. According to Creswell (2009, p. 4) "qualitative research is a means of exploring and understanding the meaning individuals or groups ascribe to a social or human problem". This approach assisted in providing a more in-depth detail of the experience, feelings and opinions of the participants. This approach helped to understand the experience of each individual that participates in the study. According to Denzin and Lincoln (2011, p.8) researchers "seek answers to questions that stress how social experience is created and given meaning". This approach used open-ended questions to allow the participants to

provide in-depth responses. The researcher was able to obtain more than one word answers from participants because the questions asked required a more detailed answer.

Guided by the need to know and understand the experiences of the participants the type of research design that was used is multiple case studies. According to Creswell (2007, p.74) "the inquirer purposefully selects multiple cases to show different perspectives on the issue". This design seemed to be appropriate for this study because it allowed for the researcher to collect detailed information from the participants by going into depth with the questions. This design also assisted in understanding the different experiences of the participants. A case study method can use either a small geographical area or a limited number of individuals as the participants. This research study was done at an organisation that is situated in Alexandra and only 10 participants were used. Therefore this research design was appropriate because as Taylor, Sinha and Ghoshal (2006, p.25) mentioned that "case study research is useful when the researcher is starting to investigate a new area in which there is little information available". Before this research report there was no research that has been done on the experiences of brain injured people post hospitalisation at Headway-Khomelela so this research design will provide as a source for future research with the detailed information gathered.

3.6 INSTRUMENTATION

This research was conducted by using a semi-structured interview schedule with each participant. This research instrument investigated the experiences of brain injured individuals post hospitalisation at Headway-Khomelela.

According to Ravitch and Carl (2016) a research instrument is a device that is used to develop and gather the data for a study. The type of instrument for this study will be a semi-structured interview schedule with each participant. There are advantages and disadvantages for this instrument. One of the advantages is "their flexibility in gathering information while maintaining a standard format" (Shapiro & Kratochwill, 2000, p. 237). The types of questions that are asked are important because they can make the respondent provide more details instead of one word responses. Another advantage is that "the researcher can give help and guidance, explaining questions and giving additional information where it's needed" (Walsh, 2001 p. 66). One of the disadvantages is that it is time consuming. Another disadvantage is that "it's very difficult to compare responses between respondents, because they may not have been asked exactly the same questions

and, as a result, can produce very different data" (Walsh, 2001, p.66). In semi-structured interviews the respondents usually give more information and some of that information is not usable.

An interview schedule (Appendix E) was used to guide the interviewer. Pre-testing the instrument will be done by interviewing two participants first. These two interviews were transcribed and coded before proceeding. This assisted with interview guide because there were questions that had to be included following the participants responses.

3.7 RESEARCH PROCESS

The data was collected through individual interviews. Although there were questions prepared for the interview session, they were there to guide the interviewer. According to Polkinghorne (2005, p. 138) "data originally generated in oral form (e.g., through interviews) are transformed into written texts through transcription". With qualitative strategies researchers are looking for a small number of people who have experiences of their research topic. In addition to the interview being done, the interview was audio recorded.

The length of each interview was approximately an hour for each participant. Other participants provided the researcher with short replies regardless of probing which made the interview length shorter. The average interview length was 35-40 minutes. This time frame provided enough time to have in-depth interview with the participants and all the questions were answered to the participant's best ability. As the participants are brain injured, the time frame changed during the interview so that information is gathered. The interviews were held at Headway-Khomelela in one of the counselling rooms.

Trustworthiness and rigour is important for qualitative research. There are four criteria that can be used for trustworthiness namely credibility, transferability, dependability and confirmability. Credibility is being able to use recognised research methods for the study, transferability is allowing comparison to be made between two different or similar contexts, dependability happens when you provide in-depth information so that the reader is able to thoroughly understand the research, and confirmability includes the researcher not being bias (Shenton, 2004).

It will be enhanced through participants checking if the data is interpreted and presented accurately. During each interview, the researcher clarified with the participants the data

that was gathered and a copy of the transcript will be available to the participant on request. To ensure credibility for this study “each person who is approached should be given opportunities to refuse to participate in the project so as to ensure that the data collection sessions involve only those who are genuinely willing to take part and prepared to offer data freely” (Shenton, 2004, p. 66). This means that participants should not be forced into participating because that may hinder with the honesty of the information provided. Participants in this research signed the consent form which mentions that they were not forced or influenced in any way to participate in the study. The consent forms were explained in detail to the participant before they signed. This was done to ensure that they understood what they were signing. The participant information sheet (Appendix D) does talk about the participant being able to withdraw from the study any time because this will not make them continue participating even when they are not comfortable and this enhances credibility of the study. Fortunately all the participants were willing to participate and they did not withdraw at any point.

According to Gasson (as cited by Morrow, 2005, p.252) transferability is “the extent to which the reader is able to generalize the findings of a study to her or his own context and addresses the core issue of “how far a researcher may make claims for a general application of their theory”. Transferability is possible because the data was fairly represented and no one participant was more represented than another.

Gasson (as cited by Morrow, 2005, p. 252) dependability refers to “the way which a study is conducted should be consistent across time, researchers and analysis techniques”. This means that if this same research study had to be conducted again at Headway-Khomelela using the same methods and participants, the results should be similar. This should be a way of showing consistency.

According to Baxter and Eyles (as cited by Anney, 2014, p. 279) confirmability refers to “to the degree to which the results of the inquiry could be confirmed or corroborated by other researchers”. Confirmability is possible because of the audit trail that will provide evidence and help with keeping record and being able to refer back to the raw data so that nothing is misinterpreted.

The data was analysed by using thematic analysis. This method assisted in finding concepts from the transcripts. Through that, themes were discovered because of the repeated words and phrases. According to Given (2008) thematic analysis is when the

researcher find repeated statements, words or phrases in the interview transcripts. This assisted with being able to identify concepts that are likely to help understand the experience of the participant. The transcripts or summary of the interview were used to find the different themes that emerged and this is called descriptive coding. The data that was gathered from the participants and transcribed was read repeatedly to ensure that the data is not misinterpreted. According to Morrow (2005, p. 256) "these repeated comprises the forays into the data ultimately lead the investigator to a deep understanding of all that data corpus (body of data) and how its parts interrelate". There were concepts and sentences which were said by different participants on the same question. This resulted in coding and grouping together what appeared to be similar. Through this process answers that were not repeated by anyone else were not excluded from the research study as those proved that people do not have the same experiences. The next step is the interpretive coding. According to King and Horrocks (2010, p. 154) "you do this by grouping together descriptive codes that seem to share common meaning, and creating an interpretive code". The final step is the overarching themes. This is when you focus more on the underlying meaning of each theme using all material that is relating to it. And during this stage you go back to the data collected and relate it to the themes. During this stage all the codes that shared similar meaning created a theme. This theme was the highlight that grouped different answers together.

According to Brink, van der Walt and van Rensburg (2006, p. 118) "having the research participants review, validate and verify the researcher's interpretations and conclusions, member checking" is an important technique to ensuring credibility of the data. During the interview session the researcher asked for clarity on certain answers so that there was no misinterpretation. After the data was collected the researcher has to confirm the information that was received with the participant to make sure that everything is not misinterpreted. This also ensures that the researcher records the correct information that has been gathered.

The participants were told about the research study and what it was about. On the day of the interview they were given a consent form for participation and for audio recording to sign. Before they signed it was explained to them. Participants were made aware of the recording of the interview session. There was no time length given to the participants therefore they answered at their own pace.

In conclusion this chapter focused on the research questions, aims and objectives, participation and selection, description of the participants. This was followed by the approach and design, instrumentation and research process. With every criteria that was discussed it was linked to what happened during the process of gathering the data and analysing it. The following chapter will focus on the results and the findings.

CHAPTER 4: RESULTS AND DISCUSSION

4.1 INTRODUCTION

This chapter focuses on the results of the research study. The results are discussed according to the objectives of the study. The chapter begins with the description of the participants.

4.2 PARTICIPANTS

Ten participants from Headway-Khomelela were involved in this research study. The ten participants comprised of seven males and three females and they are all black. Their ages ranges between 30-60 years. They are all from Alexandra Township. Two of the participants were assaulted, three had a stroke, and three were involved in accidents, and one was shot to the head. All of the participants are currently unemployed. Nine of them are South African citizens while only one is not. None of the participants are currently on a wheel chair but two of them are using a walking stick and walking frame. The table below will show the figures based on what is said above.

Table 2: Participants

Description Factors	Sub-Category	Number of participants
Gender		
	Male	7
	Female	3
Age Groups	30-35 years	5
	36-40 years	3
	41-45 years	1
	46-50 years	1
	51-55 years	0
	56-60 years	1
Type of injury	Stroke	4
	Assault	2
	Accidents	3

	Gun shot	1
Previous Employment		
	Previously Employed	6
	Not Previously Employed	2
	Self-employed	2
Walking		
	Walking frame	2
	No frame	8

4.3 RESULTS

The results will be given based on the themes that came up during the transcription.

4.3.1 Help from the family

The study revealed that all participants except for two relied on their family to help them cope with their injury. One relied on a carer and the other one relied on himself to cope. The assistance which the family members gave them helped the participants cope as they experienced challenges after being discharged from hospital.

For example one participant said that "*my younger sister and my mother are the ones that helped me*".

Another participant said that "*there is nothing as important as family and I don't think I would've survived if I didn't have family*".

This revealed that some participants saw family as a coping mechanism as they are always there to help. Though majority of the saw family an important coping mechanism participant ten said that "*one of my friends told me that if you don't accept you will delay your progress so I have to accept everything … all my family I did help a lot but as I get sick, since I was like that they couldn't help me*".

The study also revealed that the support of the family increases positivity towards recovery. This in turn speeds up the process of getting better. This shows that more participants use the emotion-focused strategy.

4.3.2 Help from therapists

The study showed that receiving therapy is an important strategy to cope with the brain injury. Seven of the ten participants received therapy services before coming to Headway-Khomelela and they say that it made coping easy.

For one participant mentioned that "*the therapy was helpful because they taught me how to do things*".

Participants would advise other people that have a brain injury to receive therapy as soon as possible not only to cope but also to speed up the recovery process. One participant mentioned that "*I did not receive therapy immediately because the place was far*". This shows that distance to the facilities is a barrier because they cannot afford to travel long distances.

Table 3: Support System

Support System	Number of Participants
Family	9
Carer	1
Therapists	10

4.3.3 Social Isolation

The study showed that all the participants did not immediately return to being as sociable as they were previously. They do not have as many friends as they used to previously. They refer to people receiving services at Headway-Khomelela as their friends. Six of the ten participants used to be popular in the community and they used to have many friends. But since their injury that has changed. Seven of the ten the participants say that now they do not have people they can call friends because they deserted them after the injury. Social isolation is also caused by how the community views people with brain injury.

For example one participant said "*I would say before my injury I had a lot of friends but now I have no one*".

Another example is when one participant said "*I did not like going out because people would stare at my trachea pipe because they were not used to seeing someone using it*".

The study also showed that for the participants the role of the family during their recovery and adapting back into society was important for them.

4.3.5 Challenges

The study showed that there are challenges that a person with a brain injury. The challenges the participants had were mainly physical as they could not do what they used to do before.

For example one participant said "*I could not do anything for myself and needed help to do everything*".

The challenges that they had were movement of limbs and speech mostly. The injury affected their memory and thinking as well. Through time others got improved because of the therapy.

Through therapy there has been an improvement. More participants have gained independence and are able to do things on their own. Three participants have a problem with their memory.

4.3.6 Employment

The third objective of the study was to find out what challenges brain injured individuals' experience with regard to employment. All ten participants are not employed. Seven of the

ten participants were previously employed before the injury. Two of the ten participants were self-employed. One participant was still in high school.

The study revealed that the participants are unlikely to go back to the same job position which they used to work because of their injury.

For example one participant said "*my problem is transport. Because the taxi will drop you off far from work and you have to work a distance before you get to work*".

This shows that factors such as distance to work contribute to the participants not being able to go back to work. All ten participants would like to find employment one day but they want to focus on getting better first before they find employment. Only one has tried to look for employment but he has never been called back. The other one participant said that "*I am ready to go back to work but the problem is my papers because I am not from here*". Being an immigrants and disabled seems to lower the chances of being employed.

Other participants had this to say: "*I want to learn how to use a computer first before I look for work*".

"*I want to improve my reading first. As from next month I might be attending classes to improve my reading*".

4. 4 DISCUSSION

This study showed the importance of therapy. All the participants agreed that as a brain injured individual one needs to seek therapeutic services as early as possible. This is to ensure that you do not delay the recovery process. But at times you find that even if you start therapy at an early stage, the recovery process is slow because of the severity of the injury. The participants found physiotherapy to be helpful because they were able to walk again. The more improvement they saw it was then that they decided to continue with therapy and not only sit at home.

The study showed that the participants had challenges mainly of speech, limited physical motor and memory. Though those were the main challenges, some participants found it challenging to be in public because of how society viewed them. For them it was frustrating that they could not do things they used to do before and for some relying on the assistance from the family made them focus more on being independent.

Table 3: Challenges after discharge

Challenges after discharge	Number of participants
Limited movement of hands/arms	9
Limited movements of legs	9
Limited speech	10
Loss of memory	8

Table 4: Challenges now

Challenges after discharge	Number of participants
Limited movement of hands/arms	5
Limited movements of legs	2
Limited speech	2
Loss of memory	3

The table above shows that with the assistance of therapy and being at Headway-Khomelela as compared to immediately when the participants were discharged, there has been recovery. This shows that for brain injured individuals there is a sense of recovery or rather gaining independence once people receive help from professionals such as therapists.

Furthermore, the participants used different coping strategies for their challenges. Others had the support of the family members and one focused on changing his bad habit. Other participants relied on God to cope with the injury. Individuals had to want to get better before the process starts. This includes their attitude towards the brain injury changing. Some participants expressed that it was hard to accept in the beginning but after accepting what has happened they started focusing on their recovery. This study showed that the

participants relied on a coping mechanism which they saw fit for them due to the circumstances they were in.

This study showed that the support of family is important. For the participant, they appreciated what their family members did for them. Some family members placed their lives on hold to focus on assisting one of their own. The participants emphasise the importance of family support because no one else besides family was there for them during their time of recovery. Having support from the family positively contributes to the recovery process of the participants. This support includes being able to do the necessary exercises with the family, family members teaching the participants new exercises and being able to do the exercises at home. Though because of distance one participant does not live with the family but she has support from a carer who has played the role of a family member. This goes to show that support does not only come from family but someone that you do not know can give you the necessary support. In addition there were no other people that helped the participants after their injury besides their family. Most of their friends left them immediately after the injury and only a few to none remained. Because of the little support that they received from the friends during their time of need, they no longer have people they consider as friends outside of Headway-Khomelela. This goes back to the biopsychosocial model where it says that this model integrates clinical data from disruptions of relationships, family interactions and community participation (Silver, McAllister and Yudofsky, 2011). A person's participation in the community is important because it is a place where they live in.

The research study showed that when the participants were discharged from hospital they found it difficult to integrate back into the society. Many of them lost their friends because they were not able to do anything for themselves. This resulted in them spending time indoors as they did not know how to act in public.

This study showed that the participants are not ready to return to work. This is because they feel that they have not yet recovered fully to be able to return to work. They do want to return eventually but they are not in a hurry. Their previous employers are not in contact with most of them which means that they cannot return to their previous work.

4.5 CONCLUSION

The findings of this study revealed that the people receiving services at Headway-Khomelela had challenges when they were initially discharged from hospital. Because of

the therapy they received overtime they adapted to the change of being brain injured and for some not being able to use a part of their body. The support of the family played a huge role in their recovery. The reason they have not started looking for work it is because they want to first focus on their recovery.

The next chapter will focus on the summary, conclusion and recommendation of the study.

CHAPTER 5: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 SUMMARY

The aim of this study was to explore experiences of brain injured people receiving services at Headway-Khomelela had post hospitalisation. The study sought to explore their experiences after being discharged from hospital. There were interviews that were conducted with ten participants that receive services at Headway-Khomelela. The majority of the participants were male, seven males and 3 females. They all live in Alexandra, Johannesburg. The collection of the data was not easy because of the limited timeframe but the researcher was able to conduct all ten interviews.

The interviewer used English and Tswana as the primary languages of communication because the participants were able to understand both languages. The participants were given an option to answer in any language which they preferred to use. For example one participant only replied in Sepedi.

The study revealed that participants believed that the sooner one receives therapy the better it will be for their recovery time. Participants that did not receive therapy immediately after being discharged from hospital wished that they did and would tell other people to receive therapy as soon as possible.

Family is important because their assistance makes life easier and also gives the injured individual support and positivity to life. The study showed that those with the support from the family were happy with the progress that they have made.

5.2 CONCLUSION

The understanding of the experiences that a brain injured individual goes through is important to know what they went through. Therefore this study forms as a basis for knowledge of their experiences in order to assist them properly. After all the findings of the study show what they would have loved to have done immediately after being discharged and what they view as important for recovery.

This study makes contribution to the understanding of the day to day living of the participants post hospitalisation and how they were able to make life manageable for themselves. This study may help the organisation to understand the challenges, know what the clients are facing post hospitalisation and to help the clients with those challenges as part of the treatment plan or after focusing on the physical therapy. It helped the researcher understand what the participants view as more important to do after being discharged and why.

The researcher concludes that based on what the participants said it is important to seek therapeutic services after being discharged. Included in that is having the support of your family. Finding work can be difficult but one needs to first focus on recovery.

5.3 RECOMMENDATIONS

It is recommended that research be done at other Headway branches to see if the results there will be similar to that of Alexandra. There should be more interventions with families so that they support their members.

REFERENCE LIST

Andelic, N., Bautz-Holter, E., Ronning, P., Olafsen, K., Sigurdardottir, S., Schanke, A., Schanke, A. K., Tornas, S., Sandhaug, M., & Roe, C. (2012). Does an Early Onset and Continuous Chain of Rehabilitation Improve the Long-Term Functional Outcome of Patients with Severe Traumatic Brain Injury. *Journal of Neurotrauma, 29*, 66-74. Doi: 10.1089/neu.2011.1811

Anney, V. N. (2014). *Ensuring the Quality of the Findings of Qualitative Research: Looking at Trustworthiness Criteria. Journal of Emerging Trends in Educational Research and Policy Studies, 5*, 272-281. Retrieved from http://jeteraps.scholarlinkresearch.com/articles/EnsuringtheQualityoftheFindingsofQualitativeResearchNEW.pdf

Arlinghaus, K. A., Pastorek, N. J., & Graham, D. P. (2011). Neuropsychiatric Assessment. In J. M. Silver, T. W. McAllister, & S. C. Yudofsky (Eds.), *Textbook of Traumatic Brain Injury* (2nd ed., pp. 55-71). Arlington: American Psychiatric Publishing Inc.

Artman, L. K., & McMahon, B. T. (2013). Functional Limitations in TBI and their Relationship to Job Maintenance Following Work Re-entry, *Journal of Vocational Rehabilitation, 39*, 13-21. Doi: 10.3233/JVR-130638Australian National Data Service. (2016). Ethics, Consent and Data Sharing. Retrieved from http://www.ands.org.au/guides/ethics-consent-and-data-sharing

Boeije, H. R. (2010). *Analysis in Qualitative Research*. London: SAGE Publications.

Brain Injury Association of America. (2015). Living with Brain Injury: Family & Caregivers. Retrieved from http://www.biausa.org/brain-injury-family-caregivers.htm.

Brink, H., van der Walt, C., & van Rensburg, G. (2006). *Fundamentals of Research Methodology for Health Care Professionals.* (2nd ed.). Cape Town: Juta & Co.

Chua, K. S., Ng, Y., Yap, S. G., & Bok, C. (2007). A Brief Review of Traumatic Brain Injury Rehabilitation. *Ann Acad Med Singapore*, *36,* 31-42. Retrieved from http://www.annals.edu.sg/PDF/36VolNo1Jan2007/V36N1p31.pdf

Coelho, C. A., Liles, B. Z., & Duffy, R. J. (1995). Impairments of discourse abilities and executive functions in traumatically brain-injured adults. *Brain Injury, 9,* 471-477. Doi: 10.3109/02699059509008206

Coetzer, R. (2006). *Traumatic Brain Injury Rehabilitation: A Psychotherapeutic Approach of Loss and Grief*. New York: Nova Science Publishers.

Crandall, M. (2016). Epidemiology of Traumatic Brain Injury. In F. S. Zollman (Ed.), *Manual of Traumatic Brain Injury: Assessment and Management* (2nd ed., pp. 25-28). New York: Demos Medical Publishing.

Creswell, J. W. (2007). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*. (2nd ed). California: SAGE Publications.

Creswell, J. W. (2009). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. California: SAGE Publications.

Crouch, R., & Alers, V. (Eds.). (2014). *Occupational Therapy in Psychiatry and Mental Health.* West Sussex: John Wiley & Sons.

Denzin, N. K. & Lincoln, S. Y. (Eds.). (2011). *the SAGE Handbook of Qualitative Research*. Thousand Oaks, California: SAGE Publications.

Elbaum, J. (2007). Acquired Brain Injury and the Family: Challenges and Interventions. In Elbaum, J. & Benson, D. (Eds.). *Acquired Brain Injury: An Integrative Neuro-Rehabilitation Approach (pp. 275-285).* New York, USA: Springer.

Giles, G. M., & Clark-Wilson, J. (Eds.). (1999).*Rehabilitation of the Severely Brain-injured Adult: A Practical Approach*. (2nd ed.). Cheltenham, UK: Stanley Thornes Ltd.

Given, L. M. (Ed.). (2008). *The SAGE Encyclopedia of Qualitative Research Methods*. California: SAGE Publications, Inc.

Gosney, M., Harper, A., & Conroy, S. (2012). *Oxford Desk Reference: Geriatric Medicine*. Oxford, UK: Oxford University Press.

Gurung, R. A. R. (2014). *Health Psychology: A Cultural Approach*. (3rd ed.). USA: Wadsworth Cengage Learning.

Hardina, D. (2013). *Interpersonal Social Work Skills for Community Practice.* New York: Springer Publishing Company.

Headway. (2016). Executive Dysfunction After Brain Injury. Retrieved from https://www.headway.org.uk/about-brain-injury/individuals/effects-of-brain-injury/executive-dysfunction/

King, N., & Horrocks, C. (2010). *Interviews in Qualitative Research*. London: SAGE Publications, Ltd.

Levin, H., Shum, D., & Chan, R. (Eds.). (2014). *Understanding Traumatic Brain Injury: Current research and future*. USA: Oxford University Press.

Maas, A. I., Stocchetti, N., & Bullock, R. (2008). Moderate and Severe Traumatic Brain Injury in Adults. *Lancet Neurol, 7,* 728-741.

Merriam, S. B. (2009). *Qualitative Research: A Guide to Design and Implementation*. San Francisco, CA: Jossey-Bass.

Morrow, S. L. (2005). Quality and Trustworthiness in Qualitative Research in Counseling Psychology. *Journal of Counseling Psychology, 52*, 250-260. Doi: 10.1037/0022-0167.52.2.250

Naidoo, D. (2013). Traumatic Brain Injury: The South African Landscape. *South African Medical Journal, 103*, 613-614.

Naswall, K., Hellgren, J., & Sverke, M. (Eds.). (2007). *The Individual in the Changing Working Life*. Cambridge: Cambridge University Press.

National Institute for Occupational Health. (2017). *Traumatic Brain Injury (head Injuries)- World Head Injury Awareness.* Retrieved from http://www.nioh.ac.za/?page=topical&id=13&rid=214

Polkinghorne, D. E. (2005). Language and Meaning: Data Collection in Qualitative Research. *Journal of Counseling Psychology, 52,* 137-145. doi: 0.1037/0022-0167.52.2.137

Prout, H. T., & Fedewa, A. L. (2015). *Counselling and Psychotherapy with Children and Adolescents: Theory and Practice for School and Clinical Setting*. New Jersey:

Ravitch, S. M. & Carl, N. M. (2016). *Qualitative Research: Bridging the Conceptual, Theoretical, and Methodological*. Thousand Oaks, California: SAGE Publications. John Wiley & Sons.

Schiehser, D. M., Delano-Wood, L., Jak, A., Matthews, S., Simmons, A. N., Jacobson, M.W., Filoteo, J. V., Bondi, M. W., Orff, H. J., & Liu, L. (2015). Validation of the Modified Fatigue Impact Scale in Mild to Moderate Traumatic Brain Injury. *Journal of Head Trauma Rehabilitation*, 30, 116-121. Doi: 10.1097/HTR.0000000000000019.

Shapiro, E. S., & Kratochwill, T. R. (Eds.). (2000). *Conducting School-Based Assessments of Child and Adolescent Behavior*. New York: The Guilford Press.

Shenton, A. K. (2004). Strategies for Ensuring Trustworthiness in Qualitative Research Projects. *Education for Information, 22*, 63-75. Retrieved from http://www.crec.co.uk/docs/Trustworthypaper.pdf

Silver, J. M., McAllister, T. W., & Yudofsky, S. C. (2011). *Textbook of Traumatic Brain Injury*. Arlington, VA: American Psychiatric Association.

Spitz, G., Schönberger, M., & Ponsford, J. (2013). The Relations among Cognitive Impairment, Coping Style, And Emotional Adjustment Following Traumatic Bain Injury. *Journal of Head Trauma Rehabilitation, 28*, 116-125. Doi: 10.1097/HTR.0b013e3182452f4f

Stebnicki, M. A., & Marini, I. (Eds.). (2012). *The Psychological and Social Impact of Illness and Disability*. (6th ed.). New York: Springer Publishing Company.

Taylor, B., Sinha, G., & Ghoshal, T. (2006). *Research Methodology: A Guide for Researchers in Management and Social Science*. New Delhi: Prentice-Hall of India Private Limited.

Tyerman, A., & King, N. S. (Eds.). (2008). *Psychological Approaches to Rehabilitation after Traumatic Brain Injury*. USA: Blackwell Publishing.

Van Velzen, J. M., van Bennekom, C. A. M., Edelaar, M. J. A., Sluiter, J. K., & Frings-Dresen, M. H. W. (2009). How Many People Return to Work After Acquired Brain Injury: A Systematic Review. *Brain Injury, 23*, 473-488. Doi: 10.1080/02699050902970737.

Waasdorp, T. E. (2008). *Coping with Relational Aggression within Children's Close Friendships* (Doctoral dissertation). University of Delaware, Delaware, USA.

Walsh, M. (2001). *Research Made Real: A Guide for Students*. Cheltenham, UK: Nelson Thornes Ltd.

World Health Organisation. (2017). Rehabilitation. Retrieved from http://www.who.int/topics/rehabilitation/en/

Wright, C.J., Zeeman, H., Biezaitis, V. (2016). Holistic Practice in Traumatic Brain Injury Rehabilitation: Perspectives of Health Practitioners. *PLOS ONE, 11,* 1-20. doi:10.1371/journal.pone.0156826

Zihl, J., & Heywood, C. A. (2015). The contribution of LM to the neuroscience of movement vision. *Frontiers in Integrative Neuroscience*, *9*, 6. http://doi.org/10.3389/fnint.2015.00006

APPENDICES