

LITERATURE REVIEW: WHAT WERE CARE BEST PRACTICES FOR REHABILITATING  
WORKING AGE ADULTS FOLLOWING TRAUMATIC BRAIN INJURY TO HELP THEM  
TO RETURN TO WORK?

Student's Name

Institution

Date



Dissertation  
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## **I. Abstract**

**Aim:** The aim of this literature review is to investigate the current evidence-based best practices for helping working age-adult patients with traumatic brain injuries to return to work. The study focuses on the best strategies for helping adult patients to recover enough skills to be able to perform their chosen occupations.

**Methods:** This study was done in a literature review approach. The main literature review examines 6 studies, two being qualitative, two quantitative, and two mixed methods research. The research evaluates the methods and results of the studies that have been selected for evaluation. The research only includes studies done within the past decade to ensure that the information collected is updated to current evidence.

**Findings:** This study found that the best practices for recovering patients must include practices that target the medical interventions of the traumatic brain injury, social support, psychological support, and the direct training of the patients to gain the skills that relate to the type of work that they want to perform.

**Conclusions:** This study concluded that a holistic approach to rehabilitation is the best for a quick recovery of patients with traumatic brain injuries who may want to return to work. The rehabilitation care plan must focus on more than just the illness of the patient. It must be all-round to include other areas of their well-being such as their social and emotional health.

## **II. Background**

Traumatic brain injuries are quite prevalent in the UK. According to Lawrence et al. (2016), data collected by the Trauma Audit and Research Network shows that approximately 15, 820 patients were admitted due to traumatic brain injury between 2014 and 2016 in England and Wales. This being a prevalent issue, it is important to understand the health and social care practices that are needed to help rehabilitate patients of traumatic brain injury and help them to recover their ability to perform their day-to-day activities (McCrea et al., 2009). Rehabilitative practices in traumatic brain injury aim to reduce any long-term impact and to help the patient and their family to cope with any resultant disabilities successfully. Nonetheless, rehabilitation of brain injury can be significantly different for every patient, since every injury is unique (Nudo, 2013; Corrigan, Selassie, & Orman, 2010). For instance, the time scale for the rehabilitation can vary from months to years depending on the characteristics of a patient's injury. However, there are some common characteristics in the physical, psychological, and social impact of traumatic brain injuries that warrant the similarity in the experiences and rehabilitative practices used on patients of traumatic brain injuries (Margulies & Hicks, 2009). The research on the rehabilitation of traumatic brain injuries shows that physical neuro-rehabilitative practices combined with psychological and social support are necessary for the recovery of brain injury patients to be successful.

**a. The Relevance of the Study**

The rehabilitation of traumatic brain injury patients aims at helping them to recover their independence. Traumatic brain injury results in short-term and long-term effects that affect a patient's independence (McAllister, 2011). For instance, brain injury can affect cognitive skills, communication, locomotion, and mental health. Some of these effects affect a person's ability to perform a majority of the activities of daily living (McAllister, 2011; Stern et al., 2011; Bramlett & Dietrich, 2015). The Roper-Logan-Tierney Nursing Model is a theoretical approach to nursing that evaluates patients' need for care based on activities of daily living (ADL) (McCrae, 2012). A patient is considered to be in good enough condition when they are able to perform their ADLs. Based on this theory, there are 12 ADLs that one should be able to perform to live an independent life (Shelkey & Wallace, 2012). One of the activities is working and playing (Williams, 2015). To be independent, a person should be able to work and play. These are both activities whose performance is negatively influenced by traumatic brain injuries. This study focuses specifically on finding the best practices for helping working-age adults with traumatic brain injury to return to work. Therefore, this study is relevant in helping to improve the independence and quality of life of adult patients recovering from the effects of brain injury.

**b. Research Question**

What are the care best practices for rehabilitating working-age adults following traumatic brain injury to help them to return to work?

**c. Aim and Objectives**

The objective of this research is to determine the health and social care practices that can best help working-age adults who have suffered traumatic brain injuries to help them return to work. The research will be aiming to determine the physical, psychological, and mental support needed by recovering traumatic brain injury patients for quick rehabilitation and recovery of adequate functions to return to work.

**d. Rationale**

This research takes a secondary study approach to determine the best practices for traumatic brain injury rehabilitation. Secondary research is an approach involving the use of already existing data to investigate a given research topic. In particular, this study takes a literature review approach involving examining the current literature on the topic of focus. The research includes qualitative, quantitative, and mixed-methods studies on the rehabilitation of traumatic brain injury patients. The findings of the research will then be used to summarize the best practices for helping adults return to work after brain injury.

**III. Literature Review Methodology**

A literature review is a research methodology that involves an analysis of past literature in a given research topic. This is a secondary research method since it relies on data developed by other researchers to make inferences on a given research issue (Aveyard, 2014). In this review of literature, secondary information from qualitative, quantitative, and mixed-methods researches was used to determine the best practices for rehabilitating working-age adults who have suffered

traumatic brain injuries to help them get back to working. All literature that was evaluated for this study was from peer-reviewed scholarly articles. The purpose of using peer-reviewed articles for this literature review was to ensure that only quality information was used in this study. The purpose of peer-reviews is to assess the quality of articles before they are submitted to a publishing journal (Burns & Grove, 2010). Therefore, data presented in such articles is likely to be of good quality. This chapter summarizes the methodology that was used to find, select, and evaluate the literature for this study.

**a. Search Strategy and Scope**

The studies used in this literature review were sourced from various online databases with peer-reviewed articles in Medicine, health, and social care. Some of the main databases that were used for the search include PsychINFO, MEDLINE, Cochrane, and Google Scholar. Each of these online sites includes a variety of literature on a wide range of topics relating to traumatic brain injuries, which was the central area of focus for this study.

The search process was done using the Boolean search strategy. The boolean search strategy is a method of research that allows the combination of keywords relating to a given topic with the modifiers "OR", "NOT", and "AND" to find alternatives, eliminate some words from a search, and combine related keywords respectively. This search strategy makes it easier to get access to relevant results when doing any type of online search. The strategy broadens the search results and prevents irrelevant results from being part of the search engine results (Bozzano et al., 2006). The following is an example of one of the searches made to find relevant results for this study.

"Rehabilitation" OR "Management" AND "Traumatic Brain Injury" OR "Brain Injury"

**b. Study Selection**

The search for articles yielded a lot of results, but not all met the criteria to be included in this research. The eligibility of the studies was based on the relevance of the information as the main factor. Other factors used to either include or exclude the studies from this research are summarized in the following inclusion and exclusion criteria.

***Inclusion Criteria***

This research included both primary and secondary studies that showed a reasonable level of relevance to the topic of this study. The main focus was on research studies that investigated the practices used to rehabilitate patients of traumatic brain injuries. Next, the study focused on those researches that focused on adult care only. The focus of this research is to determine best practices for rehabilitating working-age adults. There are significant factors that differentiate care for children, working-age adults, and elderly adults. Thus, this criterion was important. The study included studies that were done from 2010 to 2019. This study aims at finding only recent data on health and social care for traumatic brain injuries. Therefore, it was important that data is focused within the past ten years only. Evidence-based practice refers to the use of the most recent relevant data to support health and social care practice. Therefore, it is important that the

best practices are derived from recent data (Fink, 2019). Lastly, the review included qualitative, quantitative, and mixed-methods researches. Regardless of the approach used to do the research, the results were considered to be important for this review.

### ***Exclusion Criteria***

Articles that took the form of a personal opinion were excluded from this review. It was important that data with a high evidence rating were included in this review. Personal opinions are not considered as relevant evidence in nursing research; hence they had to be excluded. The review also excluded studies that were published in languages other than English to avoid any translation errors that may affect the quality of the results.

#### **c. Information Analysis**

After an analysis of the inclusion and exclusion criteria, 6 studies were selected for analysis. The six studies include 2 qualitative research articles, 2 quantitative studies, and 2 mixed-methods researches. The qualitative research was evaluated for common themes and the quantitative research for the similarity of data findings. The next chapter summarizes the findings of the literature analysis.

#### **d. Considerations**

One of the considerations made in this study is the ethical nature of the studies selected for the review. I made sure that all the studies reviewed in this paper took the necessary steps to make sure that their study approaches were ethical. Research ethics is essential, especially in studies that involve human subjects. It is important to make sure that the subjects of a study are protected from any form of harm that may result from a research process and that their ethical rights are respected (Sieber, 2012).

Another consideration made in this literature review is the potential of a researcher's bias to affect the results of this study. A researcher's bias also referred to as experimenter bias, is a form of bias where a researcher conducts research in a manner that confirms their prior assumptions on the topic of study. Having some knowledge and experience in health and social care could have influenced what I believe to be the best practices for rehabilitating traumatic brain injuries. Therefore, it was important to make some effort to avoid experimenter bias. I avoided the experimenter bias by confirming the information with data from various researches to establish consistency.

### **IV. Findings of the Literature Review**

The findings of this literature review have been grouped in terms of the approaches used by the researchers in the respective literatures. The quantitative studies include the researches that used a systematic empirical investigation using statistical or mathematical techniques (Nardi, 2018). On the other hand, the qualitative studies are those that used an exploratory approach without the use of any numerical data (Green & Thorogood, 2018). Lastly, the mixed methods studies are those that combine qualitative and quantitative research techniques (Brannen, 2017).

### **Quantitative Studies**

In a quantitative study, Villapol et al. (2015) investigated the impact of neurorestoration after a brain injury. In particular, the study investigates the impact of angiotensin II receptor blockage on traumatic brain injury. The study used an experimental approach to investigate the impact of angiotensin II receptor blockage on mice as a predictor of the expected impact on human subjects. The experiments were done in harmony with the NRC guidelines on the use and care of laboratory animals. The mice used in the experiment were anesthetized, and a traumatic brain injury was performed in their left parietal cortex at a moderate depth of 1mm and a 2mm diameter impact using an electromagnetically driven injury device. Different doses of candesartan were introduced as the intervention. Several variables were used as measures of change once the intervention was introduced into the research subjects. These included a measure of the change in blood pressure, cerebral blood flow, and functional recovery. The data collected was later statistically evaluated with one-way ANOVA with Dunnett's multiple comparison test. The results of this study show that both low and high doses of candesartan have an impact on lesion volume reduction. Lower doses of between 0.1 and 0.5 mg/kg produced a larger lesion reduction than the higher dosage of 1 mg/kg. The study also found that neither the high nor the low dose had a significant impact on the systolic or diastolic blood pressure. The administration of candesartan was found to have a significant impact on the increase in cerebral blood flow a few days post-injury. The study concluded that the candesartan improved morphological and functional recovery in traumatic brain injury.

Carroll and Coetzer (2011) conducted a quantitative study investigating the apparent identity alteration in adults with traumatic brain injury. The primary purpose of this study was to investigate the connection between identity change, self-awareness, self-esteem, depression, and grief in rehabilitating adults with brain injuries. The researchers studied a sample of 29 adults with traumatic brain injury with their times of injury ranging between 2.25 years and 40 years. The participants, their clinicians, and significant others completed a variety of questionnaires studying the various variables of the study. The questionnaires used in the study included Brain Injury Grief Inventory (BIGI), Rosenberg Self-Esteem Scale (RSES), Hospital Anxiety and Depression Scale-Depression, the Awareness Questionnaire (Self/Significant other/Clinician versions), and Head Injury Semantic Differential Scale (HISDS-III). The results of this study found that there was a significant loss in self-concept with patients viewing their current self as worse than their pre-injury self. The research finds a positive correlation between the change in self-concept and depression and grief. There was a negative correlation between self-concept and self-esteem. Awareness was negatively correlated to self-esteem and positively correlated to depression. This study concluded that emotional adjustment should be an important part of rehabilitating adults with traumatic brain injury to achieve desirable results.

### **Qualitative Studies**

Hooson et al. (2013) conducted a qualitative study investigating the subjective experiences of adult patients of traumatic brain injury in their rehabilitation. This study investigated the psychosocial outcome of traumatic brain injury with a focus on adults who were



employed prior to their injury. The participants were required to share their experiences on the changes occurring in the process of rehabilitation. The main purpose of the study was to find out the rehabilitative practices that may be assistive to working-age adults with traumatic brain injury to regain their ability to work. The sample studied for this research was a group of ten participants from a group of 1500 applicants. The data for this study was collected using semi-structured interviews and the responses analyzed in an interactive phenomenological approach. The study aimed to get information in five main areas; the prior employment status of the participants, their current employment status, their experiences with a return to work rehabilitation, and the changes that they feel might have occurred after their rehabilitation. From the experiences of the participants, the following results were recorded. First, the participants experienced personal costs of lifestyle losses that forced them to redefine their wellbeing. Traumatic brain injury was found to have some significant impacts on the type of occupations that the participants could engage in post-injury. They had to undergo retraining as part of the rehabilitation to return to work. The rehabilitation period was affected by factors such as the extent of the participant's physical ability, the psychological impacts of the injury, and the therapeutic relationships they have with people around them. Some of the factors that helped in a successful return to work rehabilitation included family support, faith in the clinicians' ability and knowledge, and the personal attitudes of the injured towards recovery.

Levack, Kayes, and Fadyl (2010) conducted a qualitative review of research on the experiences of recovery in adult patients with traumatic brain injury. This study was done using a qualitative meta-synthesis approach. Data from between 1965 and 2009 investigating the lived experiences of adults with traumatic brain injuries was collected from fifteen databases. A total of 23 studies were found and evaluated, yielding the following results. The research found that the recovery from a traumatic brain injury is affected by several factors including the mind and body disconnect, disconnect with the self before the injury, emotional and social disconnect, availability of internal and external resources, and the reconstruction of personhood. Therefore, this study concluded that in rehabilitating adults with traumatic brain injuries, the outcome measures need to focus on the psychosocial aspects of the new life of the injured person to help them reconnect with their identity after the injury.

#### **Mixed-Methods Studies**

Harding et al. (2017) used a mixed methods research strategy to investigate the best pathways to functional recovery after traumatic brain injury. The research methods used included qualitative interviews of people who had taken part in a post-hospital multidisciplinary brain injury recovery and an examination of the Mayo-Portland Adaptability Inventory-4 (MPAI-4). The sample size included 10 participants who answered the interviews and 712 participants from the MPAI-4 tests. The results of the quantitative part of the study found that recovery after traumatic brain injury recovery is linked to self-care, initiation, and residence. Success in rehabilitation is linked to an individual's ability to perform self-care activities. Success was also linked to the residence of the participants. Residences that supported independent living had a higher chance of rehabilitative success. On the other hand, the qualitative part of the study found

that the themes that contributed to improvement during rehabilitation included access to paid staff, support from family, availability of peers in the rehabilitation program, the quality of the skills of the paid staff, the timing of access to the rehabilitation program, the availability of different levels of care, and the location of the program. This study provides information on factors that need to be included in program development for the rehabilitation of adults with traumatic brain injuries. The main factors that need to be included in program development include use of a continuum of care approach, a person-centred approach, development of holistic therapeutic interventions, and development of an appropriate physical setting where the care is provided.

Glintborg, Thomsen, and Hansen (2017) conducted mixed methods study investigating the status of patients with mild to severe traumatic brain injury post-discharge. The study's main focus was on the status of the patients on the following variables; depression, quality of life, cognitive and physical function, and their civil and work status. The study also explored the correlation between these variables and the patients' transitional experiences after discharge. The study included 37 participants between 18 and 66 years who had experienced traumatic brain injury at least two years before the study. The participants were interviewed and also answered several measures including the quality of life (WHOQOL-bref), standard measures of depression (MDI), and functional independence measure (MDI). The results of these measures were compared to the historical data of their tests at discharge. The quantitative results found that recovery was negatively correlated to psychological problems including depression and psychological quality of life. The qualitative interview results showed perceived importance of psychosocial support in the rehabilitation of brain injury patients. Patients needed psychological support, family relations, return to work training, and fatigue and personal competencies to achieve recovery. The researchers concluded that the status of the patient two years after discharge is determined by social and psychological influences. Therefore, in developing rehabilitative practices, the patients' social and psychological environment should be taken into consideration to achieve the best outcomes.

#### Literature Review Matrix

Author(s)	Date	Title	Aims	Methods	Sample	Findings	Relevance
Villapol et al.	2015	Neurorestoration after traumatic brain injury through angiotensin II receptor blockage	To determine the impact of neurorestoration on functional skills recovery after traumatic brain injury	Quantitative	Lab rats	Doses of candesartan improved functional recovery	Helps to show the importance of medical intervention as part of rehabilitating adults with brain injury



<b>Carroll and Coetzer</b>	2011	Identity, grief and self-awareness after traumatic brain injury	To investigate the perceived identity change in adults with traumatic brain injury	Quantitative	29	There was a significant loss in self-concept with patients viewing their current self as worse than their pre-injury self	Helps to show the psychological aspect of the recovery process in traumatic brain injury rehabilitation
<b>Hooson et al.</b>	2013	Patients' experience of return to work rehabilitation following traumatic brain injury: A phenomenological study	To investigate the subjective experiences of adult patients of traumatic brain injury in their rehabilitation	Qualitative	10	The rehabilitation period was affected by factors such as the extent of the participant's physical ability, the psychological impacts of the injury, and the therapeutic relationships they have with people around them	This is effective in showing the factors that contribute to successful rehabilitation of patients based on their experiences.
<b>Levack, Kayes, and Fadyl</b>	2010	Experience of recovery and outcome following traumatic brain injury: a metasynthesis of qualitative research	To determine the factors that affect rehabilitation of adults with traumatic brain injury.	Qualitative	23	the recovery from traumatic brain injury is affected by several factors including the mind and body	This study reveals some important components of effective rehabilitation.

						disconnect, disconnect with the self before the injury, emotional and social disconnect, availability of internal and external resources, and the reconstruction of personhood	
<b>Harding et al.</b>	2017	Post-Acute Traumatic Brain Injury Rehabilitation Treatment Variables: A Mixed Methods Study	To investigate the best pathways to functional recovery after traumatic brain injury	Mixed-methods	712	The main factors that need to be included in rehabilitation include use of a continuum of care approach, a person-centred approach, development of holistic therapeutic interventions, and development of an appropriate physical setting where the care is	Details some key factors that need to be included in a rehabilitation program to make it effective

						provided	
<b>Glintborg, Thomsen, and Hansen</b>	2017	Beyond Broken Bodies and Brains: A Mixed Methods Study of Mental Health and Life Transitions After Brain Injury	To investigate the correlation between depression, quality of life, cognitive and physical function, and their civil and work status in post-discharge traumatic brain injury	Mixed-methods	37	Status of the patient two years after discharge is determined by social and psychological influences	This study demonstrates the importance of including social and psychological interventions in rehabilitation.

#### V. Discussion

The theoretical focus on this literature review was on working, as one of the ADLs in The Roper-Logan-Tierney Nursing Theory. The study aimed to find the best practices that would help adult patients who had suffered traumatic brain injury to return to working. The analysis of the literature review above led to the development of four key themes; medical interventions, social support, return to work training, and psychological support. These are the three key areas of focus that should be considered when developing an appropriate rehabilitation plan for adults who have suffered traumatic brain injury to help them return back to work. Generally, this study finds that for patients of brain injury to regain the physical, mental, and cognitive skills that enable them to return to work, a holistic approach to care should be developed. A holistic care approach is one that goes beyond the illness affecting the person (Hudson, Remedios, & Thomas, 2010; Papathanasiou, Sklavou, & Kourkouta, 2013). Holistic care focuses on the person as a whole including their physical, mental, and social well-being. This care approach includes an evaluation of the physical, mental, and social aspects that affect a person's well-being (Galway et al., 2012; Dossey & Keegan, 2013). The literature reviewed in this study shows that the factors affecting the recovery and return to work for patients of traumatic brain injury go beyond the injury and its direct impacts. There are also some social and psychological factors that affect rehabilitation, and thus, the ability to go back to working. The following is a summary of the key findings of the literature review and their relation to the rehabilitation of working-age adults after traumatic brain injury.

#### Medical Intervention

Medical intervention refers to medicinal treatment of a condition with the intent of modifying an outcome. This literature review has revealed that one of the ways to help

rehabilitate patients with traumatic brain injury is to use medical interventions that speed up their physical recovery from the effects of the injury. Villapol et al. (2015) found that neurorestoration helped to recover patients' functional skills. In order to return to work, the patients need to be able to perform work activities independently. It is important that patients achieve reasonable functional recovery before they can go back to work (Ma, Chan & Carruthers, 2014). Therefore, the rehabilitation of patients should include reasonable medical interventions that can help to speed up the recovery of their functions to a level that enables them to work.

### **Social Support**

This literature review has also demonstrated that social support is necessary for the rehabilitation of adults with traumatic brain injuries to be successful. Hoonson et al. (2013) argued that family support is important in the recovery process. Levack, Kayes, and Fadyl (2010) also found that social disconnect can be a hindrance to the recovery process in rehabilitation. Therefore, it is important that care planning aiming at helping adult patients to return to work takes into consideration the aspects of their social environment and how they impact their recovery process. The importance of social support in the recovery of long-term illnesses is supported by several other researchers. Social support has been found to be important in the recovery process of most illness because it gives patients the access to the additional mental and physical assistance they need to cope with the symptoms of the illness and recover (Naylor et al., 2011). The inclusion of social support is also a part of achieving the holistic approach to health and social care, which considered the wellbeing of all aspects of the patient's life. Therefore, one of the best practices in helping working-age adults with traumatic brain injury is to develop an adequate social support system for them.

### **Psychological Support**

The results of this literature review also revealed that the psychological state of the patient has a great impact on their ability to recover. Patients who need to go back to work after suffering a traumatic brain injury need to be in a positive psychological state to recover enough to gain the ability to work. Most of the literature evaluated in this study found a connection between the patient's psychological well-being and their successful recovery. Carroll and Coetzer (2011) found that the patients' self-concept affected their psychological well-being post-injury. The patients' idea of their self could cause depression, grief, and lower self-esteem. Thus, it was important to help the patients to have a positive view of their well-being. Hoonson et al. (2013) also found that the personal attitudes of the patients affected their recovery process. Glintborg, Thomsen, and Hansen (2017) also supported this argument by finding a connection between the success of recovery and the personal psychological view of the quality of life of the patient. Therefore, it is important to develop a rehabilitation plan that includes practices aiming at improving the psychological well-being of the patients.

Resuming work after brain injury is a move towards being independent. To achieve this, patients have to learn how to be self-sufficient. This can only be achieved through self-care practices. The self-care theory on nursing focuses on the patient's accountability towards their

health and well-being (Orem, 2011). For a patient to achieve successful recovery, they must be willing to take action to achieve a significant change in their quality of life. Patients must have a positive attitude towards their health to be able to find the motivation to take action that will lead to recovery (Taylor, Katherine Renpenning, & Renpenning, 2011; Richard & Shea, 2011). Therefore, the care plan should aim towards psychological assistance to help patients gain the right attitudes and psychological state to recover enough to get back to working.

### **Return to Work Training**

Helping adults with traumatic brain injury also requires direct training to help them recover the skills they need to return to work. In addition to the therapeutic interventions included in the rehabilitation, patients also need to be directly trained depending on the work they want to do so that they can quickly gain the abilities required to perform their respective jobs. Hooson et al. (2011) and Glintborg, Thomsen, and Hansen (2017) revealed that recovering traumatic brain injury, adults needed work training as part of the rehabilitation to be able to return to working successfully. Therefore, when designing the rehabilitation practices, the occupational areas of the patients should be considered and included in the rehabilitative practices of the care plan.

## **VI. Conclusion**

The purpose of this research was to investigate the best practices for rehabilitating working-age adults following traumatic brain injury to help them to return to work. The study was done in a literature review design that aimed to determine some of the past literature supporting effective rehabilitative practices for adults recovering from effects of traumatic brain injury. Six studies were evaluated in the literature review including two qualitative, two quantitative, and two mixed-methods studies. From the literature review, there are four main themes that were identified; medical intervention, social support, psychological support, and return to work training. The study finds that the best practices for rehabilitating working-age adults with traumatic brain injury to help them return to work should take a holistic approach. Interventions should focus on the patient beyond the illness. In addition to the medical support to help with the recovery of functional skills, the rehabilitation should also focus on the social and psychological well-being of the patient. The best practices in helping adult patients recover and return to work must also include practices that directly train the patients to gain occupational skills depending on their areas of work.

The results of this study have some significant implications on the development of rehabilitation care plans for adults who have suffered a traumatic brain injury. A big percentage of the people who experience traumatic brain injury are adults in the working age. The effects of this injury prevent them from being able to work as they did before successfully. Most of these patients wish to return to work, but they are unable because of the impacts of the injury. Therefore, this study focuses on recovery strategies that specifically focus on helping adults who want to return to work. The application of the results of this study can help a lot of patients to regain their independence and help them to become economically self-sufficient.



Nonetheless, there are areas of further research that can help to develop even better strategies to help adults who have suffered traumatic brain injuries to return to work. Further studies on how specific effects of brain injuries affect the recovery of these patients may be needed. There are different forms of brain injury, which lead to significantly different effects. Developing a rehabilitation plan that is specific to the symptoms experienced by the patient might yield faster results to help them get to work faster. The results of this study are currently general and do not include specific practices for specific symptoms.



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