THE EFFECTIVENESS OF COMMUNITY-BASED THERAPY IN RE-LEARNING SOCIAL SKILLS AMONG ADULTS LIVING WITH TRAUMATIC BRAIN INJURY: A CRITICALLY APPRAISAL TOPIC

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Abstract

This study critically appraised peer reviewed journal articles to investigate the success of community-based therapy in re-learning social skills among adults with traumatic brain (TBI) injuries. Data were collected using the following databases: Psychinformation; Pubmed; Medline; Proquest; CINAHL; OT seeker and the Cochrane Library. Four journal articles that met the inclusion criteria were selected for final appraisal. While all the selected appraised studies support the assertion that community-based therapy is effective in aiding adults with TBI in re-learning their social skills, they also suggested that this approach to care should not be used in isolation of other care methods.

Keywords : Traumatic brain injury, Life skill training, community-based therapy, community-based rehabilitation, cognitive rehabilitation, intensive, integration, brain damage

Introduction/ Clinical Scenario

Traumatic brain injury (TBI) is one of the leading public health problems around the globe. For instance, the incidence of people with Traumatic brain Injuries in the United States of America is estimated to be about 200 per 100,000 population (CDC, 2010). Traumatic brain injuries can negatively impact the lives of both the patients and their family members due to loss of memory and life skills by individuals that have incurred TBI. The world community is equally impacted negatively as it costs millions of dollars to manage the long-term disabilities that adults survivors of TBI are forced to live with. While, many therapies that have been designed to help adults living with TBI re-learn their social skills, there is enough evidence to suggest that a community based therapy is one of the most successful

therapies in helping adults living with disabilities re-learning their social skills and be contributing members of their communities.

Focused Clinical Question

Is community-based therapy in re-learning social skills effective in increasing independence in home management and participation in productive activities for adults with traumatic brain injuries?

Clinical Bottom Line

There is a reasonable evidence to support the assertion that community-based life skills training can be used to increase independence in home management and participation in productive activities for individuals with traumatic brain injuries.

Strength of Recommendation

Grade B with consistent level 2; as all the studies supported the fact that community-based life skills training is effective in increasing independence in home management and participation in productive activities for individuals with traumatic brain injuries while recommending more research into different methods of measuring outcome after traumatic brain injuries in order to find out the most comprehensive and sensitive measures of the effects traumatic brain Injury rehabilitation and increased integration into the community.

Method and Procedures

Search Strategy:

Terms used to guide Search Strategy:

- Patient/Client Group: Individuals or adults
- Intervention (or Assessment): community- based life skills training
- Comparison: treatment group and non-treatment group
- Outcome(s): traumatic brain injury or head injury

Databases and sites searched	Search Terms	Limits used
• Psychinformation • Pubmed • Medline • Proquest • CINAHL • OT seeker • The Cochrane Library	• Traumatic brain injury • Head Injury • Life-skills training • Community-based therapy • Independence • Community and participation • Re-learning of skills • Integration • Intensive • Brain Damage • Rehabilitation • Cognitive therapy	• Randomised Control Trials (RCT) • Cohort studies • Only English Journals • Only studies conducted and published between 2002 to 2012 • Limited to adults with head or brain injuries

Inclusion And Exclusion Criteria

- Inclusion:
  1. Studies examining adults or people with acquired brain injury
  2. People or adult with mild or severe brain injury with reported difficulty with community participation
  3. People or adult with acquired brain injury that need home and community supervision
  4. People with brain injury having the ability to understand the nature of the and the process of consent
  5. They or their public guardians willingly consented to give measurement data
- Exclusion:
  1. People with other forms of mental illness
  2. Studies dealing with infants, adolescents or anyone below 18 years old
  3. Journals or studies published more than 10 years ago
  4. Studies that deal with other form of therapies beside community –based re-learning trainings method

Search Results

Table 1: Summary of Study Designs of Articles retrieved

Study Design/ Methodology of Articles Retrieved	**Level**	**Number Located**	**Author (Year)**
Randomised Control Trials	2b 1c	2	**Lane et al (2007)** **Jenkinson et al (2007)**
Cohort	2b	2	**Wheeler (2004)** **Donahue (2004)**

Best Evidence

The following studies/papers were identified as the 'best' evidence and selected for critical appraisal. Reasons for selecting these studies were:

- They investigated traumatic brain injury and community-based therapy
- The studies showed the effect of community-based re-learning life skills therapy on community participations and independence in home management
- The studies fall with the defined grade of level 2 evidence or higher

Summary Of Best Evidence

Table 2: Description and appraisal of (name study design) by (authors, Year)

Author (s)	Study Design	Participation	Intervention Investigated	Outcome Measures	Main finding	Levels of evidence	Conclusion
Lane et al (2007)	RCT (with some level of blinding)	36 people living with brain injuries between the ages of 18-55 years. 18 people were participating in intensive life skills training while the other 18 served as the control group. The median age for the treatment group is 33.67 years while the control group is 34.83. 12 males and 6 females took part in both the treatment and control studies. To be eligible for treatment group participants must have received 20 hours of direct skills training. Treatment group participants resided at Radical Rehab Solution centre located in southern West Virginia and east Kentucky. The control group participants were enlisted from psychology and psychiatric practices, outpatient rehabilitation facilities, neurological medical practices and local brain injury support groups.	That individualized, intensive life skills training would significantly improve community integration and self reported life satisfaction among participants.	Each group means was tested for baseline CIQ and SWLS scores was completed to find out the level of the initial group differences	The main findings showed no significant differences between group means for overall CIQ and SWLS scores and individuals CIQ subscales. The only exception to this is that existence of a subscale of the CIQ (Z=2.78; P=.03).	2b with some level of blinding	There were no notable differences between the treatment group and the control group, but there were pre-treatment differences on the extent of community integration and life satisfaction

Jenkinson et al (2007)	RCT	There were 34 individuals with acquired brain injury within the treatment group and 15 individuals in the non-treatment group. The median post injury years= 52 and SD= 3.92 The control group were randomly selected. There was an eight week treatment period	The objective of this study was to investigate the clinical usefulness of the Canadian Occupational Performance Measure (COPM) for community-based individuals with acquired brain Injuries	The study measured the subjects' awareness of memory deficits, emotional status and cognitive function. The subjects' relatives completed the brain injury community rehabilitation Outcome 39 (BIRCO-39) Scales. There were initial assessment and 8-week follow up assessments.	The main findings: both pre test and post test assessment comparison for the treatment group showed a significant improvement on most COPM Ratings (P< 0.05), but not the Brain Injury Community Rehabilitation Outcome 39. There was self-ratings satisfaction improvement for the treatment group. Self-ratings of satisfaction were notably associated with the subjects' anxiety but no association were made between COPM ratings and awareness, mood, and cognitive fiction	Level 1 The study was well designed and biases were highly controlled through proper randomization of subjects	Evidence supports the usefulness of COPM in community-based rehabilitation and that the self-ratings are to be interpreted in the context of other outcome indicators
Wheeler (2004).	Cohort (Quasi Experiment)	There 36 individuals in this study that is: 18 treatment and 18 comparison subjects. They are between 18 to 55 years. Treatment group are admitted to a community based life skills training program that uses the Life Coach	The objective of this study is to investigate the clinical outcomes that are related to a community based, transitional living program for people with traumatic	Each group means was tested for baseline Community Integration Questionnaires (CIQ) and the Satisfaction With Life Scale (SWLS) scores was completed to	The main findings are: There is a notable improvement in community integration on the treatment group. The control group showed no improvement. There were	Level 2b with blinding	

		Model of Rehabilitation while the non-treatment group come from neurological and neuropsychological outfits, outpatient clinics, and community based services for those with traumatic brain injuries	brain injuries that use Life Coach model.	find out the level of the initial group differences. The measurement used both within and between group comparison after a 90 day follow-up period	no between group differences during follow on community integration.		
Donahue	Cohort	There were 7 participants. They have moderate to severe traumatic brain injuries. They have been receiving treatment from a community based independent living program fro several years.	The aim of this study is to examine the effects of the attention process training in a community-based program for individual with traumatic brain injury.	The study used parametric procedures and related samples t test were used to find out whether the differences between pre and post treatment scores were statistically significant. Individuals were asked to attend 8 weeks of Attention Process Training -11, two sessions each week.	The findings show no notable changes in performance among all seven participants on objective outcome measures subsequent to APT-11 participation. Participants 1-6 reported qualitative changes in day to day activities as a result of APT-11.	Level 2	

Critical Appraisal/ Discussion:

Lane et al (2007).

Validity*:*

This study was unable to limit the level of biases during investigation process.

There were biases in selecting control subjects as staff members were aware that the control subjects were being studied. They could have been influenced to produce the anticipated outcomes. There were also some measurement biases in that there were variations in the data produced. It is believe that using a retrospective data collection method limited the ability of the researchers to control the possibility of biases. The existence of baseline differences within the groups in both community integration and life satisfaction hindered

direct between-group comparison and as a result, limited the validity of this findings.

Jenkinson et al (2007)

While one cannot fully assure that this study was hundred percent bias free, its research methodology seemed to have been effective in reducing searchers and participants' baises. The use of randomization during participants' allocation assured that the researchers did not influence their pre and post assessments. Based on these facts, it is believed this study is more valid than the first study.

Wheeler (2004)

Validity:

The use of quasi experiment gave this study some level of validity. The dynamic features of the subjects however seemed to have weakened the strength of the findings of this study as the study did not really define how it measures or compares the effects of community based life skills training programs on these individuals.

Donahue (2004).

Validity:

The use of small number of subjects made this study very manageable and helped in limiting the level of biases thus, favourably affected the strength of evidence in this study. Also the applications of various forms of evaluation methods made the results to be all inclusive.

Interpretation of Results

All the four studies to a large extent proof the effectiveness of community-based rehabilitation therapy on individuals living with traumatic brain injuries. Also, they all prove that it takes more than one form of community-based rehabilitation therapies to fully take care of a patient with TBI. In addition, the studies revealed the importance of pre-treatment sessions on the full recovery of patients with TBI.

Summary/Conclusion: There is no doubt that community-based therapies will effectively increase community participation and life skill satisfaction of individuals living with TBI. But given the fact that all our studies showed some statistical discrepancies, and are unable to limit the level of both researcher and participant biases, it is suggested that further studies be conducted in these areas. For instance, there is the need for "self-ratings to be interpreted in the context of other outcomes indicators."

Implications for Practice, Education and Future Research

Further research on the most effective methods of interventions to improve the community participation should be conducted. This will community-based care facilities to

develop and use therapies that will enable an individual or group of people living with TBI to contribute more to society, maintain healthier relationships and achieve more fulfilling lives. Finally, the use of both qualitative and quantitative research techniques will enhance the validity of research outcomes and allow for a better understanding.

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