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ORIGINAL REPORT

THE USE OF REAL LIFE ACTIVITIES IN REHABILITATION: THE EXPERIENCE OF YOUNG MEN WITH TRAUMATIC BRAIN INJURIES FROM REGIONAL, RURAL AND REMOTE AREAS IN AUSTRALIA

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Objective: **This study aimed to explore the experience of young men with traumatic brain injuries from regional, rural and remote areas in Australia who had participated in real life activity rehabilitation.**

Design: **A qualitative study. The primary data collection method was a semi-structured interview.**

Setting: **The Townsville Hospital, Queensland, and private dwellings in rural and regional areas within North Queensland.**

Participants: **Eight male participants aged between 18–28 years.**

Main outcome measure(s): **Key qualitative themes identified via thematic analysis of the data.**

Results: **This research identified 3 main themes regarding the patient's perspective of a real life activity intervention. These were: perceptions of the activities used in the intervention; insight into injury; and returning to previous activities of daily living. The findings of this study highlight incorporating real life activities assisted in engaging participants in rehabilitation. Participants expressed a desire for vocational activities to be included within rehabilitation activities.**

Conclusion: **This study has clinical implications for real life activities to be incorporated as part of rehabilitation, and that this was preferred by young male traumatic brain injury patients. Therapists may consider using individualized real life activities with similar patient cohorts in the future.**

Key words: traumatic brain injury; qualitative research; rehabilitation; rural population; men.

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INTRODUCTION

A traumatic brain injury (TBI) occurs when there is damage to neural tissue from an external force (1). TBI hospital admissions are most prevalent in youth and young adults, with the most common causes of injury being related to transport (42%) and falls (46%) (2). Young men particularly are affected after involvement in motor vehicle accidents, falls, sports injuries or physical assaults (2, 3). Men generally are 3.4 times more likely to sustain a TBI than women (4).

A person's ability to re-engage with meaningful activities can be compromised due to a TBI (5, 6). Individuals who sustain a severe brain injury receive intensive inpatient rehabilitation to assist a return to previous roles (7–9). The impact of gender on recovery has been a focus of research, with recent studies suggesting that generally women experience a better cognitive recovery than men following a TBI, particularly in the areas of attention and working memory (10). Successful adjustment for men following TBI has been found to be conditional on reformulating their masculine identity (11). Studies investigating masculinity and disability suggest a tension between the culturally idealised hegemonic masculinity and the experience of disability (12).

Anecdotally, the Townsville Hospital (TTH) rehabilitation therapists have found it difficult to engage young men with TBI from rural and remote areas in the rehabilitation process. Furthermore, therapists attempting to assess executive functioning skills reported that patients were unwilling to engage in traditional assessment tasks, particularly pen and paper activities such as questionnaires testing memory, attention and planning skills.

The effectiveness of traditional rehabilitation approaches focusing on bio-medical factors has been questioned, with recent research indicating a difference between health professional views on recovery and those of the patient (13). Stroke survivors focused on return to everyday life roles and activities and reported finding rehabilitation activities quite meaningless; not adapted to age or interests and not helpful in preparing for changes in social role and lifestyle (13). Similarly, Gagnon et al. (14) found that adolescents with mild TBI were focused on returning to familiar activities and wanted control over rehabilitation activities so that they better suited their interests.

Eriksson et al. (15) investigated adaptation following acquired brain injury (ABI), identifying that many individuals experience an increase in 'occupational gaps' (gaps between what a person can do and what they want to do) in everyday

activities post rehabilitation. Broadening the traditional focus of rehabilitation activities beyond bio-medical recovery and functional independence to include leisure and work related activities has been advocated to better engage patients in rehabilitation and facilitate re-engagement in everyday life following discharge (13, 15, 16).

To address lack of engagement in rehabilitation by young men with TBI, rehabilitation therapists at TTH instigated a program of 'real life activities' (RLA) as part of the patients' therapy program. Patients were encouraged to identify RLA that related to their own pre-injury interests and activities were included in the program if they were able to be done within the rehabilitation setting without unreasonable expense.

The initial purpose of this program was to engage the individual in their rehabilitation; however, the activities also provided opportunity to assess how patients completed goal oriented tasks in a real world setting. This assessment allowed for cognitive, perceptual or behavioural deficits to be identified and addressed prior to discharge. For example, for the activity of 10 pin bowling, the participant would be required to practice and complete a phone call to book the lane, identify the location using maps and plan how to get there using public transport. Building up upper limb strength to participate may also be required and money management, interpersonal and planning skills were monitored throughout the activity.

Each activity was usually run 2–3 h/day over one week with a few days for planning the task prior to execution. Some activities, such as planning and hosting a BBQ lunch, were run weekly as a group activity. RLA included activities such as shopping, cooking, sports, fishing and woodwork projects.

The aim of this research was to explore the experience of young men with TBI from regional, rural and remote areas in Australia who had participated in RLA rehabilitation. A particular focus of this study was to discover if involvement in RLA assisted participants to engage with their rehabilitation and to return to pre-injury activities.

METHOD

Research design

A qualitative approach using a naturalistic design strategy was utilised to gain an understanding of the participant's experience of the RLA interventions. A narrative approach using open ended interviews was employed to gain insight into the individual's experience (17). An interview guide was utilised to provide a general structure for the interviews and allow for flexibility to explore and probe more deeply areas brought forward throughout the interview (18).

Recruitment

Ethical clearance was obtained from TTH Service District Institutional Ethics Committee (HREC/09QTHS/40) and the James Cook University Human Research Ethics Committee (09/04).

The first author provided the contact details by rehabilitation therapists of 14 patients who met the research selection criteria. Participants were eligible to be included in the study if they (*i*) participated in the real life activity intervention at TTH (*ii*) had a diagnosis of a TBI, as evidenced by a period of post traumatic amnesia (PTA) and medical imaging; (*iii*) were a male between the age of 18–30; (*iv*) lived in a rural or remote area; (*v*) communicated in English; and (*vi*) had given informed consent.

Participants were excluded if they were unable to recall the RLA intervention. To determine this, participants were asked directly if they could recall specifics of the RLA intervention when being informed about the purpose of the study.

Researchers recruited participants until thematic saturation was reached (17). A preliminary thematic analysis of each transcript was conducted by the author after each interview. When no new themes emerged, and all research questions had been answered, thematic saturation was deemed to have been reached (19). This occurred after 6 participant interviews. Two further interviews were conducted to consolidate identified themes.

Interview formation

The interview guide explored the participants willingness to engage in RLA; the suitability of activities; perceptions of whether activities assisted rehabilitation; if activities assisted in gaining insight into their injuries and their transition into the community; and preferences for activities to be included into the rehabilitation process.

Data analysis

Interviews were audio-recorded and transcribed verbatim. A thematic analysis of the data was completed. This involved identifying patterns and salient themes from the transcripts (17, 18, 20). The use of an interview guide provided structure to the content analysis of the data. Inductive analysis identifying key participant phrases and terms was also used. Transcripts were read several times and meaningful segments of data identified and grouped into categories (20). Software was used to catalogue these into broader themes. Un-coded transcripts were independently coded by the 2nd and 3rd authors with general consensus reached. Finally, the study's findings were mailed to participants to for verification (17). Table I provides a list of categories and identified themes.

Table I. *Data analysis of categories and themes*

Themes and categories
Perception of activities used in the intervention
Activities were enjoyable (A, C, D, E, F, G, H)
Willing to engage in real life activities (A, C, G, H)
Provided a feeling of accomplishment (A)
Preference for vocational activities to be included (B, C, E, F, G)
Preference for additional sporting activities to be included (D, H)
Discontentment with pen and paper tasks (C, D, E, G)
Happy to get some respite from the hospital (C, D, E, G)
Activities elevated boredom (A, D, E, H)
Insight into injury
Provided reassurance regarding their ability to complete ADL1 to a pre-injury standard (A, C)
The intervention provided insight into impairments (A, B, D, E, G, H)
Concerned over the public's perception of them (D)
Returning to previous ADL
Felt comfortable with ADL when they returned home (A, B, D, G)
Nervous about returning to the road (A, D, E)
Belief that activities assisted in their return to work (A, B, C, G)
Wanting to return home (A, B, C)
A graded approach used to return to work (A, B, E, G)
Wanting to return to work (C, D, E, H)
Belief that activities assisted in recovery (A, C, D, F, G, H)
Belief if they completed activities they could return home (A)

Letters A–H denote participants who raised this category.
ADL: activities of daily living.

RESULTS

Participants

Eight men aged from 19 to 28 years (mean = 21 years) participated. Two participants identified as Aboriginal or Torres Strait Islander. All participants were employed at the time of their injury, with 5 having a trade qualification or apprenticeship; two working as stock hands on cattle stations and the remaining participant involved in tourism.

The following key indicators regarding brain injury severity were noted to provide an understanding of the participants' injuries. The participants initial Glasgow Coma Scale score (21) was a mean of 8, indicating severe brain injury; the mean length of PTA was 21 days, again signifying a severe brain injury; and average mean of stay in acute hospital care was 54 days. Participants' TBI were confirmed by medical imaging. Three participants were in-patients, and 5 had been discharged. The period since discharge ranged from 29 days to 632 days with an average of 294 days.

Three main themes were identified and are discussed below.

Theme 1) Perception of the activities used in the intervention

The RLA intervention involved fishing at a Barramundi fish farm; organising and hosting barbeques; purchasing materials and completing wood work projects; installing car stereos; bowling; and playing computer games.

Activities were enjoyable. Participants found the RLA enjoyable. In particular, participants reported that physical activities were the most preferable:

Participant A: *"Doing physical stuff and seeing if you can handle a drill and a hack saw and all that, yeah, it was good."*

Participant H: "*I was looking forward to it; I was looking forward to watching a movie, play ten pin bowling or going fishing. I enjoyed them every time."*

Activities alleviated boredom. Treatment for a TBI results in an extended period of inpatient rehabilitation (7). Many participants found the hospital setting to be boring and reported the RLA assisted in alleviating this.

Participant G: "*Yeah, it was great, actually getting in there and doing real life stuff, instead of just sitting in your bed being bored."*

Participant E: "*Really, it was better than sitting around the hospital, cause you normally go and see 2 sometimes 3 people a day and I spend about half an hour with them, then after that I just sit in my bed all just doing nothing and getting bored, so when he wanted to go into town, I was like let's do it, cause I want to get out of here."*

Willing to engage in real life activities. The majority of participants were excited about the prospect of engaging in RLA. Satisfaction with the activities resulted in a willingness to engage.

Participant A: *"*[The therapist] *said we are going to make a table and I was like, awe you ripper, I was happy, it was like medical things seeing if I was right, but I was happy to be doing something."*

Participant C: "*Yeah,. you are actually doing something, not sitting in a office reading and stuff, that's not sort of my thing."*

One participant reported feelings of uncertainty and negativity regarding the intervention as a direct result of not understanding the purpose of the activities in which he was asked to engage.

Participant B: *"Building the box, I don't know how that was helping me, the same with fishing, catching the bus.I don't know how they were really helping me."*

This response is in contrast to the other participants and as a 'negative case' may provide critical information (18). When asked further about his experiences, Participant B stated he found the activities: *"frustrating, as I wanted to get out of there, well I was in hospital for 7 weeks, just wanted to come home to my mates and dog I suppose."*

This indicates dissatisfaction with being in hospital rather than a specific dissatisfaction with the RLA. Participant B later acknowledged: *"I was really impatient and I just really wanted to get out of there, like I didn't see the point in why I should be doing these sort of things, I could be home. It definitely helped me I suppose, but back in rehab I didn't really care, I just wanted to get out of there."*

Preference for vocational activities. Participants identified a preference for vocational activities to be included in the rehabilitation process. When asked about making the transition from hospital to community easier, Participant B stated *"it would really help them* [other TBI patients]*, like touching on their trade, like plumbing, like get them to repair an actual tap, or like just ask little questions about the trade itself."*

Discontent with pen and paper tasks. Engaging this group with pen and paper tasks for assessment and intervention was reported as problematic by rehabilitation therapists. This discontent was highlighted by the majority of participants. When participant E was asked if he enjoyed doing the RLA, he stated *"Yeah,* [the intervention] *was real good, I would rather do that sort of stuff than sit around and write words and all that sort of stuff, cause I'm not real good at that sort of thing, that's why I sort of left school and went to work."* Participant C reported that his reluctance to engage in pen and paper tasks was misinterpreted by rehabilitation therapists*: "Yeah, that's why they still thought that there was something still really wrong with me, but I just didn't like that sort of thing."*

Theme 2) Insight into injury

The RLA were also introduced by therapists in order to promote the development of a greater depth of insight by patients into their condition. The two key categories regarding insight were identified.

The intervention provided participants insight into impairments. By engaging in RLA, participants reported that they were able to identify variations in their normal task perfor-

mance. This insight resulted in some patients reporting perceived impairments to therapists in order to receive targeted rehabilitation and self select goals. Participants acknowledged the insight activities gave staff.

Participant D: *"Cause I was actually doing tasks that you would do in real life outside, it's like helping you train. It was good, as I could see the areas I need to pick up on and I could work on those areas here* [at TTH] *as well, so I could get improvements. If I knew I couldn't do something, I could tell the physio's or therapists and they gave me activities I could do to improve on that."*

Participant A: *"I could see that it was good from their point of view as they could see how good you are with your planning procedures and doing physical stuff."*

Provided reassurance regarding ability to complete activities to a pre-injury standard. Participants found that engaging in RLA provided reassurance that they were able to complete activities to a pre-morbid standard.

Participant A: *"I figured out that I can still drive power tools and still have the right thought patterns and plan procedures. It* [the intervention] *was good to make sure that the brain was still working."*

As the intervention often involved creating or building an object, patients had something tangible at the completion of a task as evidence of their capabilities. Participant C: "*I knew that I could still do it* [build a wood work project]. *It was a pretty good job too."*

Theme 3) Returning to previous activities

Many of the participants had been transferred to the hospital from their remote or rural communities for an extended admission. Participants expressed a strong desire to return home and re-engage in employment.

Wanting to return to work. A strong theme that emerged was a desire to re-engage with employment roles. Most participants felt they could return to previous vocational roles with a graded return to work program. However, two participants reported that they were unable to return to their previous demanding and high risk vocational roles. These participants now engaged in less demanding, low risk employment.

Participant D: *"I just can't wait I thought I would never say it but I actually want to go back to work. I used to always whinge about going to work but now I know there is a lot more worse things than work."*

Patient H: *"I'm not returning back to banana picking because I always cut myself, I'm always sick of cutting up snakes all the time. I went to do some aboriginal dancing, because I am pretty good at that. I do bush tucker tour, I take people on walks, and I explain about us and dance, the didgeridoo and each dance."*

Belief that activities assisted in recovery and return to work. Participants believed that the real life intervention assisted in the recovery process by allowing them to attempt activities in a supervised real life environment. Through this rehearsal process, participants could monitor their progress and build on their skills. Discharged participants believed the intervention had facilitated their return to work by aiding in the development of work skills and providing reassurance that they could still use hand held power tools.

Participant D: *"*[The activities] *were pretty fun, but at the start they were hard, but I just got going, and got better and better each time I went out, like I could notice that I was doing better."*

Participant E: "[The activities] *got me back to how I was before the accident, so it was a lot better, cause I started I knew I was getting back to how I was before the accident, it was real good. "*

DISCUSSION

The present study explored the experience of young men with TBI who live in rural, remote and regional areas of Australia and their perceptions of how RLA impacted on their recovery, reintegration, and return to work. While engaging TBI patients in meaningful activities as part of the rehabilitation process is well supported (5, 13–15, 22), this study addresses the paucity of research regarding the engagement of young males with a TBI from rural and remote areas in hospital rehabilitation programs. Additionally it adds to knowledge regarding volition and satisfaction of engaging in rehabilitation using a leisure based approach external to the hospital setting; as opposed to using standardised cognitive assessments and desk top cognitive rehabilitation tools.

Turner et al. (5) reported individuals with ABI were more likely to experience a successful transition from hospital to community if they were engaged in activity. Fleming et al. (16) noted that opportunities to participate in age appropriate leisure activities while in rehabilitation were limited. The use of such activities to address the decline in leisure participation by individuals with ABI post-discharge, and to support recovery of physical and cognitive skills required to engage in activities of daily living (ADL) is recommended (16). Participants in this current study believed that engagement in RLA assisted in their recovery and ultimately their return to life, post-discharge.

When undertaking RLA, participants chose activities that reflected their own interests pre-injury. Medin et al. (13) highlighted the importance of motivation and empowerment in facilitating return to work with stroke survivors. In this study, motivation was enhanced through both individual choice of activities and having RLA related to pre-injury interests, including work. Allowing for individual choice positively influenced the reported levels of enjoyment, engagement and satisfaction with rehabilitation and assisted with return to life post discharge.

The literature highlights that neurological impairments that were previously undetectable can be revealed when engaging a patient in RLA (23, 24). Through undertaking RLA, participants in this study were able to identify areas of weakness

regarding their ability to complete tasks to a pre-injury standard and sought assistance from therapists. This action suggests the development of insight and self awareness regarding their ability prior to their discharge from the hospital setting. For many patients with brain injuries, self awareness is only developed post discharge, when attempting to re-engage in activities (22, 25). Unsuccessful re-engagement post discharge can lead to feelings of shock and failure (25). The use of RLA during rehabilitation provides an opportunity for the development of a reconstructed self identity allowing individuals to make sense of changed capacities and roles. Reconstructed self-identity is intrinsic to successful rehabilitation and may minimise the occurrence of 'occupational gaps' post discharge (11, 15, 26).

Participants in this study believed that engagement in RLA assisted a return to pre-injury activities and work by allowing opportunities for practice and rehearsal. Participants expressed a strong desire for vocational activities to be included in the rehabilitation process. These findings correlate with current research which highlights that almost all participants recovering from brain injuries expressed a desire to return to work (5, 11, 27). Engaging in vocational activities may also assist in the reconstruction or reformulating of the masculine identity following a trauma (11). Engagement in work tasks reflects the strong hegemonic masculine ideal which is at odds with being ill or disabled (12). Results indicate that a stronger vocational focus in the rehabilitation of young men, especially those from rural, remote and regional locations, may assist with the readjustment of their masculine identity.

While the use of RLA is well supported by the literature, many rehabilitation programs still focus on return to independence in functional activities (16). The lack of utilisation of RLA may be attributed to a number of factors. Firstly, there is a lack of consensus regarding the most appropriate method to assess executive functional deficits (28, 29). Secondly, therapists may not have the time and resources to facilitate this method of intervention. Future clinical trials into the most effective and efficient use of RLA in clinical settings may enable uptake of RLA by health services as recommended treatments which are better resourced.

The cultural appropriateness of this intervention for Indigenous patients must also be considered. The poorer health status of Indigenous Australians is often exacerbated by the under or non-use of existing mainstream health services, and/or compliance to health care interventions. This under-use is largely attributable to the lack of access to culturally appropriate health care services (30). The Indigenous Australian participants in this study reported similar positive experiences as non-Indigenous participants, likely due to the individualised therapy being meaningful to them.

Limitations

While the results highlight many issues applicable to clinical practice, methodological considerations must be recognised. The participants interviewed have varying levels of cognition as a result of their injuries. Because of these deficits, the participants' ability to recall events and thoughts may have been impaired and attention during interviews was limited. Some interviews were therefore shorter than ideal for exploring topics in depth. Additionally, the period of time since discharge may also have impacted on recall accuracy. Regardless, data saturation was still achieved across participants as a whole.

A number of limitations must also be considered when disseminating the findings of this study. Firstly, this study investigated a specific intervention on a targeted demographic. Therefore, the transferability of these results to other populations is restricted. Secondly, the positive outcomes experienced by participants may be due to the lack of post injury morbidity amongst this group, as this study failed to capture the experiences of patients who have acquired significant disabilities resulting from TBI. Finally, the intervention being used to engage this group of patients in the rehabilitation process is still under development. Further research addressing these limitations would provide a means for confirming these findings.

The study was also restricted to young men, as these were the majority of clients of the rehabilitation service. The RLA program was specifically targeted at this demographic, as historically therapists reported difficulties in engaging young men from rural areas in rehabilitation tasks. The results from this study indicate that application of such a program to both men and women experiencing TBI is an area for further research.

Conclusion

In conclusion, this qualitative study aimed to explore the experience of young men with TBI from regional, rural and remote areas in Australia who had participated in the RLA rehabilitation. Given the nature of qualitative research these results are not directly generalizable to other populations, however, the results do enable the expansion of existing theory and evidence into the treatment of young men with TBI.

The findings of this study highlight that incorporating meaningful activities in an environment external from the hospital setting increased the engagement of a group of patients who were previously reluctant to engage in traditional rehabilitation activities. By engaging TBI patients in meaningful occupational roles as part of the rehabilitation process, patients may gain a greater understanding of their capabilities when attempting to re-engage in activities post discharge (25). The incorporation of vocational activities could also occur during the in-patient phase of assessment and rehabilitation. Occupational therapists have the ability to grade and modify activities, as well as set realistic goals before a patient returns home (31, 32). Therapists can play a key role in introducing vocational activities during TBI patients' rehabilitation.

Further research into the use of a RLA intervention as an effective rehabilitation and assessment tool is needed. An examination of the effectiveness of this intervention when applied to both men and women and a population with more severe disabilities or from a different geographic location is indicated. Even though findings need to be confirmed, there is a sound body of knowledge around the importance of collaborative goal setting and engaging patients with TBI in meaningful activity (3, 33, 34). Therefore, given the positive results of this study

and that young men with TBI are often difficult to engage in standardised rehabilitation; it is recommended that the RLA identified in this study be incorporated on an individualised basis in rehabilitation.

REFERENCES

1. Pendleton HM, Schultz-Krohn W. Pedretti's occupational therapy: practice skills for physical dysfunction. St. Louis: Mosby; 2006.
2. Helps Y, Henley G, Harrison J. Hospital separations due to traumatic brain injury, Australia 2004–05. Injury research and statistics series. Canberra: AIHW; 2008.
3. Bruns J, Hauser WA. The epidemiology of traumatic brain injury: A Review. Epilepsia, 2003; 44: 2–10.
4. Hirschberg R, Weiss D, Zafonte R. Traumatic brain injury and gender: What is known and what is not. Future Neurol 2008; 3: 483–489.
5. Turner B. Fleming J, Cornwell P, Worrall L, Ownsworth T, Haines T, et al. A qualitative study of the transition from hospital to home for individuals with acquired brain injury and their family caregivers. Brain Injury 2007; 21: 1119–1130.
6. Bennett TL. Neuropsychological evaluation in rehabilitation planning and evaluation of functional skills. Arch Clin Neuropsych 2001; 16: 237–253.
7. Mellick D, Gerhart KA, Whiteneck GG. Understanding outcomes based on the post-acute hospitalization pathways followed by persons with traumatic brain injury. Brain Injury 2003; 17: 55–71.
8. Turner-Stokes L, Nair A, Sedki I, Disler PB, Wade DT. Multi-disciplinary rehabilitation for acquired brain injury in adults of working age. Cochrane Database Syst Rev 2009 Jul 20 (3): CD004170.
9. Wertheimer JC, Hanks RA, Hasenau DL. Comparing functional status and community integration in severe penetrating and motor vehicle-related brain injuries. Arch Phys Med Rehab 2008; 89: 1983–1990.
10. Ratcliff JJ, Greenspan AI, Goldstein FC, Stringer AY, Bushnik T, Hammond FM, et al. Gender and traumatic brain injury: Do the sexes fare differently? Brain Injury 2007; 21: 1023–1030.
11. Jones J, Curtin M. Reformulating masculinity: Traumatic brain injury and the gendered nature of care and domestic roles. Disabil Rehabil 2011; 33: 1568–1578.
12. Shuttleworth R, Wedgwood N, Wilson NJ. The Dilemma of Disabled Masculinity. Men Masc 2012; 15: 174–194.
13. Medin J, Barajas J, Ekberg K. Stroke patients' experiences of return to work. Disabil Rehabil 2006; 28: 1051–1060.
14. Gagnon I, Swaine B, Champagne F, Lefebvre H. Perspectives of adolescents and their parents regarding service needs following a mild traumatic brain injury. Brain Injury 2008; 22: 161–173.
15. Eriksson G, Tham K, Borg J. Occupational gaps in everyday life 1–4 years after acquired brain injury. J Rehabil Med 2006; 38: 159–165.
16. Fleming J, Braithwaite H, Gustafsson L, Griffin J, Collier A M, Fletcher S. Participation in leisure activities during brain injury rehabilitation. Brain Injury 2011; 25: 806–818.
17. Creswell JW. Qualitative inquiry and research design. 2nd ed. Thousand Oaks: Sage; 2007.
18. Patton MQ. Qualitative research & evaluation methods. 3rd ed. Thousand Oaks: Sage; 2003.
19. Bowen GA. Naturalistic inquiry and the saturation concept: a research note. Qual Res J 2008; 8: 137–152.
20. Ritchie J, Lewis J, editors. Qualitative Research Practice: a guide for social science students and researchers. Sage Publications: Thousand Oaks; 2005.
21. Teasdale G, Jennett B. Assessment and prognosis of coma after head injury. Acta Neurochir 1976; 34: 45–55.
22. Parsons L, Stanley M. The lived experience of occupational adaption following acquired brain injury for people living in a rural area. Aust Occup Ther J 2008; 55: 231–238.
23. Godbout L, Grenier MC, Braun CMJ, Gagnon S. Cognitive structure of executive deficits in patients with frontal lesions performing activities of daily living. Brain Injury 2005; 19: 337–348.
24. Primeau L.A. Play and leisure. In: Julet TL, editor. Willard and Spackmans occupational therapy. Lippincott Williams and Wilkins: Philiadelphia, PA; 2003, p. 567–570.
25. Turner B, Ownsworth T, Corwell P, Fleming J. Reengagement in meaningful occupations during the transition from hospital to home for people with acquired brain injury and their family caregivers. Am J Occup Ther 2009; 63: 609–620.
26. Ostrander RN. When identities collide: Masculinity, identity andrace. Disabil Soc 2008; 23: 585–597.
27. Lefebvre H, Pelchat D, Swaine B, Gelinas I, Levert MJ. The experiences of individuals with a traumatic brain injury, families, physicians and health professionals regarding care provided throughout the continuum. Brain Injury 2005; 19: 585–597.
28. Burgess PW, Alderman N, Forbes C, Costello A, Coates LM, Dawson D, et al. The case for the development and use of "ecologically valid" measures of executive function in experimental and clinical neuropsychology. J Int Neuropsych Soc 2006; 12: 194–209.
29. Cicerone K, Levin H, Malec J, Stuss D, Whyte J. Cognitive rehabilitation interventions for executive function: Moving from bench to bedside in patients with traumatic brain injury. J Cognitive Neurosci 2006; 18: 1212–1222.
30. McGrath P, Patton MA, Holewa H, Rayner R. The importance of the 'family meeting' in health care communication with Indigenous people: findings from an Australian study. Aust J of Prim Health 2006; 12: 56–64.
31. Baum C, Edwards DF. Cognitive performance in senile dementia of the Alzheimer's type: the Kitchen Task Assessment. Am J Occup Ther 1993; 47: 431–436.
32. Fisher AG. Uniting practice and theory in an occupational framework: 1998 Eleanor Clarke Slagle Lecture. Am J Occup Ther 1998; 52: 509–522.
33. Webb PM, Glueckauf RL. The effects of direct involvement in goal setting on rehabilitation outcome for persons with traumatic brain injuries. Rehabil Psychol 1994; 39: 179–188.
34. Fischer SS, Gauggel S, Trexler LE. Awareness of activity limitations, goal setting and rehabilitation outcome in patients with brain injuries. Brain Injury 2004; 18: 547–562.