

ORIGINAL ARTICLES

**THE DEVELOPMENT OF A RESOURCE GUIDE ON
POST TRAUMATIC STRESS DISORDER FOR RURAL
HEALTH CARE WORKERS**

Tiziana Bontempo, Lauren Westmacott, John Paterson,
Margo Paterson*

ABSTRACT

The purpose of this paper is to discuss the benefit of culturally sensitive education and treatment protocol for Post Traumatic Stress Disorder (PTSD) in a developing country. PTSD affects many individuals worldwide, particularly in areas of conflict. Risk factors for traumatic events for the development of PTSD are more common in developing countries. Occupational therapy (OT) and Community Based Rehabilitation (CBR) offers a unique perspective to the treatment of PTSD.

The authors developed a PTSD education and treatment resource guide and introduced it in a workshop format to health promoters in El Salvador in March 2007.

The workshop and educational resources were well received by the local health workers. The authors aimed to address the cultural differences between countries, by presenting a framework that is adaptable to specific local customs and health beliefs. This resource guide reflects a combination of the holistic views of Occupational Therapy and CBR.

INTRODUCTION

The worldwide prevalence of Post Traumatic Stress Disorder (PTSD) is estimated at 8%; however, it is thought to be considerably higher in areas affected by warfare(1). It is estimated, that up to one third of the world's population will be affected by a significant traumatic event in their lifetime; 10-20% of those exposed will develop some form of stress reaction such as PTSD. Prevalence of PTSD is related to increases in unemployment, educational failure, teen child bearing, and dysfunctional marriages. At the community level, the

consequences of PTSD can be seen in a loss of productivity and a decrease in economic stability(1, 2). PTSD has been acknowledged in a number of developed countries, but has only recently been recognised as a significant issue in developing countries. Occupational Therapy which aims at enabling people to function independently in their daily lives has been used along with other treatments for PTSD; however, it may not be appropriate or feasible to apply conventional treatments in developing countries. The purpose of this paper is to discuss research relevant to PTSD, Community Based Rehabilitation (CBR), and Occupational Therapy and to describe the development of a resource guide and its application in El Salvador.

Post Traumatic Stress Disorder is a form of mental illness and is part of a group of disorders known as anxiety disorders. PTSD is unique within post-conflict populations as it requires exposure to a traumatic incident or group of events that are beyond the realm of normal human experience. A full diagnosis for the disorder requires the presence of six signs and symptoms:

- exposure to a traumatic event,
- repetitive re-experiencing of the event such as flashbacks,
- avoidance of upsetting situations and emotions,
- chronic hyper-arousal,
- severe distress and interference in daily life, and
- symptoms lasting longer than one month (3).

Symptoms of PTSD may be experienced immediately after the traumatic event; or symptoms may lie dormant and become active later in the individual's life (3). Recovery time varies significantly, with some individuals continuing to have symptoms for years and even decades following the traumatic event.

A traumatic event that has the potential to lead to PTSD is an incident that falls outside of the realm of normal daily experience. Trauma can be either physical or emotional and involve a serious threat to a person's health, well-being, sense of self, or life. Traumatic events include: exposure to war as a combatant or civilian, natural disasters such as earthquakes or tsunamis, rape, sexual or physical assault, motor vehicle accidents, work related accidents, captivity, torture, ethnic or political genocide or imprisonment, and life-threatening medical

conditions, among others(2, 3). Given these events, high risk populations for PTSD include indigenous populations, immigrants, women and child victims of domestic violence, those affected by civil war and natural disasters, individuals working in unsafe environments, and those with lack of access to medical attention for serious illness. In addition to this, compounding factors such as difficult living conditions due to poverty, disability, poor social support and refugee camps increase the risk for development of PTSD (4).

Research has been conducted to discover the psychological, emotional, social, physical, and neurological factors involved in PTSD. It's relation to anxiety disorders has resulted in many studies into the effectiveness of various medications for alleviating the symptoms of PTSD, such as Selective Serotonin Re-uptake Inhibitors (SSRI's). Other treatments that have been employed by health professionals include various forms of psychotherapy such as -Trauma-Focused Cognitive Behavioural Therapy (TFCBT), Stress Management Therapy (SMT), Non-Directive Counseling (NDC), and Psychodynamic Therapy (PDT), among others. Of these types of psychotherapy, TFCBT and SMT were found to be the most effective, with the other forms of psychotherapy not producing significant improvements in symptoms of PTSD (5); however, these treatments are usually administered on an individual basis, and therefore may not be as effective as group therapy.

When working in rural communities or developing countries, it may not be possible to treat each person individually due to time, financial and personnel constraints. In these situations, Community Based Rehabilitation (CBR) may be more beneficial. One of the aims of CBR is to develop a community's ability to provide support for its members, thereby promoting social re-integration and preventing further development of stress related mental health issues (6, 7). One strategy of CBR is the transfer of knowledge and skills through education and training (8). There are many different strategies and approaches to CBR education ranging from the provision of extensive training sessions to giving local workshops. These education programmes can be targeted to participants with varying levels of education and areas of practice(9). When preparing education programmes, it is advantageous to use existing social networks to access both trainer and trainees (10).

Access to rehabilitation services, including those in CBR initiatives, is limited for certain groups. These groups include people suffering from mental illness or other forms of mental distress (7). In the past, many CBR programmes have implemented services primarily for

people with physical injuries and disabilities; however, it has been shown that individuals who have been physically injured in a traumatic event may also experience increased risk factors and symptoms of mental illness, such as PTSD (11). It is important therefore, to provide community-based services that encompass both physical and mental rehabilitation. Based on their research on individuals with amputations due to landmines, Ferguson, et al (12), suggest that local health care workers be trained in psychosocial support skills, in order to improve service provision in areas where there are few health care options by combining physical and mental rehabilitation.

Developing countries have few resources to deal with mental health problems which are mainly due to events such as wars, natural disasters, human rights violations, weak economies, and complications secondary to serious illness. Rural areas in particular, have less access to specialised professionals (13). Mental health services in Latin America are not normally integrated within the general health system, nor are they linked with social structures in the community such as family, religious and community leaders (14). In Latin America, there is a shortage of mental health professionals that creates an even larger disparity especially in Central America where the majority of people live in rural areas and cannot access the few resources that do exist, mostly in the capital cities (15).

In many situations, Western views of appropriate treatments are thrust upon developing countries, whose cultural views do not correspond with the treatments being provided. This is the case with PTSD as demonstrated by a quote from Summerfield (6): *Although PTSD is reported to be prevalent worldwide in populations affected by war, the assumption that a Western diagnostic entity captures the essence of human response to such events anywhere, regardless of personal, social, and cultural variables, is problematic.*

While it is recognised that traumatic events and thus PTSD occur worldwide, it must also be recognised that each culture will react to these events in different ways. In some cultures, the view is that a single traumatic event can produce PTSD symptoms; however, many people in developing countries deal with chronic stressors caused by combinations of poverty, war and resulting disability. It is therefore important for foreign trained health care providers to incorporate the cultural, political and socioeconomic context of the individual country into the treatment programme (12).

Occupational Therapy and CBR share several core characteristics which indicate a close fit for occupational therapists working in CBR initiatives. These include an emphasis on client-centered practice, facilitating the capacity building of others, and the development of self-sufficiency and occupational independence (16). The mutual values placed on the process of enablement and collaboration also lend support for the combination of occupational therapy and CBR (17). Both fields recognise that individuals and communities are unique in culture and in their view of mental and physical health. Occupational therapy and CBR also share common philosophies. One of the tenets of CBR is knowledge transfer which is also important to occupational therapists who provide treatment through non-traditional educational techniques, such as: group sessions, demonstrating the use of equipment, informing the client about service options and recognising adult learning principles. Occupational therapy training programmes include physical and mental health education as well as models that guide treatment, such as the Model of Human Occupation (MOHO) and the Canadian Model of Occupational Performance (CMOP). These models present a view of an individual's performance capacity as the relationship of the environment, the occupation, and several personal characteristics (18, 19). These factors create a holistic view of disability and treatment options, which includes utilising the strengths and capacities of the entire community.

Occupational therapy theories such as the MOHO and the CMOP provide a framework for understanding the impact of mental illness and trauma on an individual and community. The MOHO was developed by Gary Kielhofner (19), as a method of describing human occupations, interactions, spirituality, and activities in the context of the physical and social environment. The model encompasses three areas which govern how humans approach and perform their daily routines and occupations. These three areas are:

1. Volition, which includes one's motivation for choosing specific occupations.
2. Habituation, the occupational patterns and roles one takes.
3. Performance capacity, the potential for performing occupations based on the physical and cognitive systems.

The CMOP was created in 1997, by occupational therapists under the auspices of the Canadian Association of Occupational Therapists. It demonstrates the dynamic interaction between three components: the person, their environment and occupation. It emphasises how change

in any area has an impact upon the whole being. The three components interact to either help or limit a person with their occupational performance. The person is at the centre, demonstrating the focus of interventions. The CMOP also recognises that spirituality is a large part of every individual. More than just religion, spirituality is understood as the person's 'sense of self' and is shown at the core; affecting the person, shaping the environment, and giving meaning to occupations (18).

Occupational therapy is a discipline which has much to contribute to PTSD survivors, whose ability to perform an occupation may be affected because of fear of re-experiencing the traumatic event. This affects a person's ability to perform daily activities, maintain or build new relationships, and their enjoyment of life. People may avoid activities that trigger memories of the traumatic experience, resulting in the person withdrawing from meaningful occupations and activities, that once brought them joy. They may also neglect personal hygiene, regular routines, and become isolated socially. Occupational therapists with an expertise in mental health can offer assistance to these individuals by developing and providing treatment options. Examples of these treatment options include Scaffa, Gerardi, Herzberg, et al's (20) proposal for a framework for the occupational therapists' role in disaster relief and participation which is general and applicable to a wide-range of situations. Other research conducted by Simo-Algado, Mehta, Kronenberg et al (21), in post-war Kosovo provides support for occupational therapy by focusing on train-the-trainer CBR initiatives. Their programme, utilising local teachers, demonstrated positive results in reducing PTSD symptoms in children.

METHOD

Development of the Resource Guide on Post Traumatic Stress Disorder

The authors were interested in incorporating mental health aspects into CBR initiatives, in developing countries. The topic of stress disorders, notably PTSD, was limited in the literature on developing countries. After a thorough literature review and discussion with experienced international developers, the authors designed a resource guide aimed at educating local health promoters on the disorder itself and treatment options that may be available to them.

The education and treatment resource guide on PTSD for health care practitioners working in rural and under-serviced areas, is a combination of education and treatment strategies. It

is designed as a resource to 1) improve awareness of PTSD as well as 2) to provide treatment options for community health care workers. The resource guide is intended for use in any country or area that is lacking access to appropriate health care, and was developed as a framework to be adapted to local cultural beliefs. The inclusion of sections on special considerations on cultural aspects encourages users to adapt it to their culture, needs and unique symptoms.

The creation of the resource guide was directed by philosophies central to occupational therapy and CBR. The MOHO and CMOP theories, combined with the common principles of occupational therapy and CBR, helped to provide a framework through which the symptoms and issues related to PTSD could be addressed. These principles allowed the authors to gain an understanding of the impact of mental illness and trauma on both the individual and the community.

The resource guide assumes the following:

1. It is intended for use by health care workers to gain a basic understanding of the disorder in order to detect and treat basic symptoms.
2. It does not replace treatments given by specialised professionals.
3. It is dynamic in nature and can be modified to most cultures or communities in need.

There are three sections included in the resource guide (Table 1). The first section contains education directed towards the health care workers, as well as treatment options to be utilised with community members. The second section is an appendix of simplified handouts designed to be given to community members, to help with their understanding of the disorder. The third section contains website information from relevant sources to enable further study and research by the health care workers, as well as local supervisors and policy makers.

The first section provides the health care workers with an overview of PTSD, what constitutes trauma, symptoms, and the impact on the individual and community. The next segments cover general guidelines for acute treatment, reassessment and long term treatment of both adults and children. Other sections cover coping strategies, group therapy, relaxation techniques, healthy sleeping strategies, common emotional reactions, and relapse prevention. The section on coping includes examples of positive strategies to use when dealing with

symptoms of PTSD as well as negative strategies to be avoided. The section on group therapy discusses the benefits, suggested topics, and step-by-step instructions on running group sessions. There are five relaxation techniques covered: breathing techniques, active, and passive muscle relaxation, guided imagery and meditation. Issues of sleep quality are addressed by suggesting environmental and behavioural changes. Instructions for dealing with common emotional reactions cover grief, anger, trust, and guilt. The final treatment segment, discusses the chain of behaviour and events associated with a relapse of symptoms. The design and development of the Resource Guide on Post Traumatic Stress Disorder was primarily planned for implementation in El Salvador. In order to understand the El Salvadoran situation, a brief background is provided in the next section.

Application to El Salvadoran context

El Salvador has experienced a series of events in its recent history that have the potential to cause mental

Table 1. Contents of education and treatment Resource Guide

| |
|--|
| <p>Education and treatment resource guide on PTSD for health care practitioners working in rural and underserved areas</p> <p>Contents</p> <p>Introduction</p> <p>Post-Traumatic Stress Disorder: Definition, Signs and Symptoms</p> <p>Acute Treatment</p> <p>Reassessment</p> <p>Long Term Treatment</p> <ul style="list-style-type: none">• Adults• Children: Includes examples of games <p>Coping Strategies</p> <p>Group Therapy Techniques</p> <p>Relaxation Techniques</p> <p>Healthy Sleeping Strategies</p> <p>Dealing with common emotional reactions</p> <p>Relapse Prevention</p> <p>Appendix: Includes simplified handouts of selected topics</p> <ul style="list-style-type: none">• Post Traumatic Stress Disorder• Long Term Treatment: Adults• Trauma in Children• Relapse Prevention <p>Websites: Associations and information for additional study</p> |
|--|

health problems. The civil war between 1980 and 1992, produced years of human rights violations and massacres, resulting in physical and mental disabilities. Many suffered from an increase in anxiety, depression, sleep disturbances and flashbacks in addition to psychosomatic complaints. Land resettlements following the war has continued to create deep community divisions and promoted individual stress (22). Consequently, there has been an increase in violence, homicide as well as alcohol and drug use (22). Although all of the landmines from the civil war are reported to be cleared, gang members have begun fabricating explosive devices for criminal use (23). Landmines and explosives as well as complications from illnesses such as diabetes, have caused amputations and resulting psychological effects (12). Recent natural disasters such as the major 2001 earthquakes and floods (11) have contributed to the unstable environment and consequently to mental health issues.

There is limited data on the prevalence of mental health conditions specific to El Salvador either before, or after the war (22). In terms of PTSD, Salvadoran refugees in the United States have had symptoms such as recurring nightmares or a recurring of the traumatic event, after fleeing their country from political violence and poverty (24). The Pan American Health Organisation (PAHO) estimated that over 20% of the Salvadoran population needed mental health services after the two major earthquakes in 2001 (11). Research done by Woersching and Snyder (11) revealed that up to 67% of earthquake survivors were shown to experience mental health complaints related to physical injury, complications due to illness and loss of income. Their recommendations included educating the local communities on available resources for medical and mental health treatment, as well as improving access to these services for at risk individuals. Other research conducted in temporary camps held after the earthquake demonstrated that positive coping behaviours were directly correlated with perceived level of social support and proximity to family, friends and familiar community members (25).

The present health care system in El Salvador is composed of three sub-sectors: public, social security and private, including profit and not-for-profit services. The public sector includes various health units dispersed throughout the country, known as *Sistemas Básicos de Salud Integral* (SIBASI's). Of these, 49 offer mental health services (4). Psychosocial treatment is offered in less than 50% of these ambulatory centres. PAHO estimates that

psychosocial intervention is given to only 1-20% of the patients in the centralised psychiatric hospitals (11). There is a gap in the provision of health care between the rural and urban settings as most mental health care is centralised to the two psychiatric hospitals located in the capital (4). Forty percent of the population in El Salvador lives in rural areas (4). Due to inaccessible roads, many Salvadorans living in rural areas travel to a health care facility only for serious illnesses (26). After the war and the earthquakes, many in rural areas did not receive physical or mental health care (11).

FINDINGS

Implementation of Health Promoter Workshops

The authors collaborated with the Acceso project, part of the Technology Transfer Fund Canadian International Development Agency (CIDA) between El Salvador and Canada, to provide mental health workshops, with a focus on PTSD symptoms and treatment. The Acceso project was managed by the Social Programme Evaluation Group (SPEG) at Queen's University in Canada. The focus of the Acceso project was to reduce poverty and inequality for persons with disabilities, by assisting El Salvador in the implementation of CBR programmes and development of prosthetics and orthotics services (27). The authors facilitated mental health workshops in the rural areas of Santiago de Maria and Toncatepeque, with the collaboration of a local psychiatrist and physiotherapist, and a Canadian occupational therapy consultant for the ACCESO project. Attendees of the workshop included local area health promoters as well as members of local disability groups.

The purpose of the one day workshops was to increase awareness of mental health issues affecting community members, in particular PTSD, and to educate the health promoters about simple treatment techniques. Each workshop utilised the local psychiatrist and physiotherapist in conjunction with the three Canadian occupational therapists. The workshops used several different interactive and didactic techniques. Brainstorming sessions included discussion in three areas: understanding of the types and causes of mental health conditions, issues and challenges in the community, and strategies and resources found in their rural communities. The workshops also included presentations by local survivors of different traumatic experiences, who discussed their personal experiences with disability and the resulting psychological impact. The authors presented the signs and symptoms of

PTSD as well as the treatment options available. This was followed by a practical demonstration of breathing techniques, allowing the participants to experience the benefits themselves. The local psychiatrist completed a culturally-appropriate guided imagery exercise with the group. The case study, prepared by the local psychiatrist, was based on local experience and therefore true to their culture. Group discussions took place and were followed by a general debriefing from the psychiatrist. Printed copies of the resource guide were provided to each health promoter and electronic copies to those in supervisory roles.

Evaluation was based on the full workshop and was not specific to the PTSD module. The evaluation consisted of 5 open-ended questions and was administered at the end of each workshop. The data collected were primarily based on subjective accounts from the participants. Areas such as satisfaction with the workshop, applicability of information in their daily work, areas for improvement and future workshop themes of interest were discussed. The final question was structured, asking the participants to name two principles learned from the workshop. This question yielded information on the salient features that were retained by the health promoters. The majority of the respondents felt that the workshop was very useful for their work as health promoters. One health promoter was motivated by the workshop, "I learned quite a bit on the topic of mental health in the community. I plan to use some of the strategies I learned today with my patients such as relaxation techniques, poetry writing, and physical exercise." An overwhelming majority expressed the desire to learn more about sexual and reproductive health, particularly HIV/AIDS in future workshops.

RECOMMENDATIONS

Further research regarding the efficacy of the resource guide would be beneficial in order to develop the validity and reliability of the resource guide for more extensive use. Potential avenues for testing this include follow-up research involving the health promoters in El Salvador and the use of the resource guide and its effectiveness within their practice. Other options include systematic implementation and evaluation of each individual section of the module, as well as the module as a whole.

A broad spectrum of mental health problems exists in all developing countries, but for the scope and purpose of this project, PTSD was focussed upon as there are few investigations,

especially in rural areas. It also fit with goals of the Acceso project in El Salvador. Other options for future initiatives include: mood disorders, other anxiety disorders, or schizophrenia. This project was supported by the local psychiatrist and occupational therapy consultant who has extensive practical experience in El Salvador and other developing countries. The Acceso project provided an opportunity to implement the resource guide in a practical manner. Although the resource guide and presentation were initially tailored for the El Salvadoran context, it must be remembered that it is designed as a framework that can be adapted for use in most developing countries. Health care workers should first apply cultural norms and beliefs in order to make the guide effective.

The Acceso project identified the health promoter workshops as the ideal venue for presenting the resource guide. The health promoter system in El Salvador is an already established system, in which the promoters are often the first line of care in rural areas. Incorporating the study of mental health conditions into their education and training, could greatly enhance the current service provision in rural areas in El Salvador. By providing training in both physical and mental rehabilitation, the local health promoters would be better equipped to offer a continuum of treatments. This type of training could reduce the gap in services that currently exists and standardise the training across the country.

Further work in other areas of mental health would be beneficial to improve service provision in developing countries. Specifically, research into the efficacy of PTSD treatments, especially in a CBR context, could help to improve service provision. Development of consensus through repeated research studies on the same topic would support a stronger argument for providing trauma-related mental health treatments in a CBR programme both nationally and internationally. This workshop is one example of a mental health initiative. Future initiatives could include other topics in mental health presented in a form that is easily accessible by health care workers in rural areas in El Salvador and other developing countries. The ultimate goal is the prevention, treatment, and integration of people with mental illness into the community.

LIMITATIONS

The authors were not able to do a needs assessment at the local level prior to developing and implementing the education and treatment module. Instead the resource guide was based on

research studies and suggested treatment options found through the literature search. Additional direction was provided through context-specific information presented by the Acceso, project manager's interviews, collaboration with an occupational therapist with international experience and a 2004 needs assessment.

Language issues hindered spontaneous discussion between the authors and the health promoters. This was addressed through the use of an experienced translator; however, this may have interrupted the flow of discussion and possibly discouraged some health promoters from seeking clarification.

The resource guide has not been tested or effectively evaluated and although the workshop evaluation contains inherent threats to validity, there was some valuable information obtained. The responses were mostly positive, but offered some information which can be used to improve the resource guide and its presentation. Cervero (28), cautions that interpretation of satisfaction questions must be done carefully, as participants are apt to answer rapidly and the answers may not be reflective of their true learning; therefore, these responses must be accepted with some caution. Many of the health promoters stated they would use the stress management and relaxation techniques described in the workshop in their daily practice. The addition of suggestions increases the value of the information provided. Many reported suggestions to improve the workshop, namely, to expand on each theme and increase the length of the workshop. Suggested topics included sexual and reproductive health, aggression, and hyperactivity disorders.

CONCLUSION

PTSD is a mental illness which affects a significant proportion of the population worldwide, particularly in areas of high risk for traumatic events. Many developing countries, and in particular their rural areas, do not have the resources to deal with mental health issues. Current treatments utilised in Western countries involve individualized treatments that are time and resource consuming. The education and treatment resource guide for PTSD is an attempt to provide local health professionals with more accessible treatment ideas, especially in areas with limited service provision. It aims to address the cultural differences between countries, by presenting a framework that is adaptable to specific local customs and health beliefs. This resource guide reflects a combination of the holistic and inclusive views of OT

and CBR. Initial presentation of the resource guide at workshops in rural areas of El Salvador was well received by the local health care workers.

*School of Rehabilitation Therapy
31 George St., Queen's University, Kingston ON K7L 3N6
E-mail: tizianabontempo@hotmail.com; lwestmacott@sumhab.com

ACKNOWLEDGMENT

The authors would like to thank Isabelle Cormier, OT, for her guidance in the preparation and implementation of the workshops. This project was supported in part by the Social Programme Evaluation Group of Queen's University, Kingston, ON. Finally, the authors' heartfelt thanks go out to the El Salvadorans with whom they consulted, as well as the health promoters who participated in the workshops in Santiago de Maria and Tonacatepeque, El Salvador.

REFERENCES

1. Brunello N, Davidson J, Deahl M, Kessler R, Mendlewicz J, Racagni G, et al. *Posttraumatic stress disorder: Diagnosis and epidemiology, comorbidity and social consequences, biology and treatment*. Neuropsychobiology. 2001;43:150-162.
2. Cara E, MacRae A. *Psychosocial Occupational Therapy*. 2nd ed. Clifton Park (NY): Thomson Delmar Learning; 2005.
3. American Psychiatric Association. *Diagnostic and statistical manual of mental disorders: DSM-IV-TR*. 4th ed. Washington, DC: American Psychiatric Association; 2000.
4. Pan American Health Organization (PAHO) *Basic Health Indicator Data Base: El Salvador*. [homepage on the internet]. Pan American Health Organization. c2005. [cited 2007 Jan 12] Available from: http://www.paho.org/English/DD/AIS/cp_222.htm
5. Bisson J, Andrew M. *Psychological treatment of post-traumatic stress disorder (PTSD)*. Cochrane Database Syst Rev; 2005 Apr 18; 2. Cited in PubMed; PMID 15846661.
6. Summerfield D. *Conflict and health. War and mental health: A brief overview*. British Medical Journal. 2000; 321:232-235.
7. World Health Organization (WHO). *CBR: a strategy for rehabilitation, equalization of opportunities, poverty reduction and social inclusion of people with disabilities: joint position paper*, International Labour Organization, United Nations Educational, Scientific

- and Cultural Organization and the World Health Organization. [cited 2006 Oct 15]. Geneva: Switzerland: WHO; 2004. Available from <http://www.who.int/disabilities/publications/cbr/en/index.html>
8. Homer S. *Community-based occupational therapy in psychiatry and mental health*. In: Crouch R, Alers V, editors. *Occupational therapy in psychiatry and mental health*. 4th ed. London: Whurr; 2005. 147-173.
 9. Peat M. *Community Based Rehabilitation*. London: W.B. Saunders; 1997.
 10. Benner JE. *Use of a train-the-trainer workshop to integrate community based rehabilitation in rural El Salvador* [dissertation]. Kingston (ON): Queen's University; 2001.
 11. Woerschling, JC, Snyder, AE. *Earthquakes in El Salvador: A descriptive study of health concerns in a rural community and the clinical implications: Part III—mental health and psychosocial effects*. *Disaster Manage Response*. 2004; 2:40-45.
 12. Ferguson AD, Sperber Richie B, Gomez MJ. *Psychological factors after traumatic amputation in landmine survivors: The bridge between physical healing and full recovery*. *Disability and Rehabilitation* 2004; 26:931-938.
 13. Levine P. *Developing a community mental health program in the Venezuelan Andes: Implications for international psychological rehabilitation*. *Psychiatric Rehabilitation Journal*. 1996; 19(3): 23-32.
 14. Wijnant IH. *The challenges and opportunities for mental health in the third millennium*. Pan American Health Organization: *Perspectives in health*; 2000 [cited 2007 Jan 12]; 5(1). Available from: http://www.paho.org/English/DPI/Number9_article3.htm
 15. Duarte C, Hoven C, Berganza C, Bordin I, Bird H, Miranda C. *Child mental health in Latin America: Present and future epidemiologic research*. *International Journal of Psychiatry Medicine*. 2003; 33(3), 203-222.
 16. Banks S, Head B. *Partnering occupational therapy and community development*. *Canadian Journal of Occupational Therapy*. 2004; 71:5-11.
 17. Franssen H. *Challenges for occupational therapy in community-based rehabilitation: Occupation in a community approach to handicap in development*. In: Kronenberg F, Simo Algado S, Pollard N, editors. *Occupational Therapy Without Borders: Learning from the Spirit of Survivors*. Edinburgh (UK): Elsevier-Churchill Livingstone; 2005. p. 166-182.
 18. Townsend E, editors. *Enabling Occupation: An Occupational Therapy Perspective*. Revised ed. Ottawa: CAOT Publications, ACE; 2002.
 19. Kielhofner G. *Model of human occupation: Theory and application*. 3rd ed. Baltimore: Lippincott Williams and Wilkins; 2002.

20. Scaffa M, Gerardi S, Herzberg G, McColl M. ***The role of occupational therapy in disaster preparedness, response, and recovery.*** American Journal of Occupational Therapy. 2006; 60:642-649.
21. Simo-Algado S, Mehta N, Kronenberg F, Cockburn L, Kirsh B. ***Occupational therapy intervention with children survivors of war.*** Canadian Journal of Occupational Therapy. 2002; 69:205-217.
22. Ugalde A, Selva-Sutter E, Castillo C, Paz C, Cañas S. ***Conflict and Health: The health costs of war: can they be measured? Lessons from El Salvador.*** British Medical Journal 2000; 321:169-172.
23. El Salvador, Landmine Monitor Report [homepage on the internet]. Landmine Monitor. c2006 [updated 2006 Sept 12; cited 2006 Nov 1]. Available from http://www.icbl.org/lm/2006/el_salvador.html -
24. Jenkins JH. ***The state construction of affect: Political ethos and mental health among Salvadoran refugees.*** Culture in Medical Psychiatry 1991; 15:139-165.
25. Perez-Sales P, Cervellon P, Vazquez C, Vidales D, Gaborit M. ***Post-traumatic factors and resilience: The role of shelter management and survivors' attitudes after the earthquakes in El Salvador*** (2001). Journal of Community Applied Social Psychology. 2005; 15:368-382.
26. Lewis M, Eskeland G, Traa-Valerezo X. ***Primary health care in practice: is it effective?*** Health Policy, 2004; 70: 303-325.
27. Social Program Evaluation Group. ***Project Acceso*** [Brochure]. n.d.
28. Cervero RM. ***Evaluating workshop implementation and outcomes.*** In: Sork TJ, editor. New Directions for Continuing Education: Designing and implementing effective workshops. San Francisco: Jossey-Bass. 1984; 22: 55-68.