The Aftermath of the Tsunami

Post-traumatic stress disorder in children -
the teacher’s role in psychosocial intervention
A literature review

Christina Suboh

Masteroppgave i Spesialpedagogikk
Institutt for spesialpedagogikk
Det utdanningsvitenskapelige fakultet

UNIVERSITY OF OSLO
Spring 2008
Summary

Introduction: The Indian Ocean tsunami in 2004 received massive media coverage as it affected many countries, among others Indonesia, Thailand, Sri Lanka and India. In all 229,866 lives were lost and many changed forever as people try to cope with their grief and struggles of re-building their lives. It has been reported that 70-80% of all natural disasters occur in Asia, and are estimated to increase in the future. It is thus important to have good cultural adaptive interventions at hand when such calamities occur to address the needs of the affected people, in particular school children who are a vulnerable group in mass disasters. To have a crises intervention plan is especially vital in developing countries, where mental health is not on the daily agenda.

Research questions: What are the post-tsunami mental health effects in school children and the prevalence of post-traumatic stress disorder? What may be the role of the teacher in psychosocial intervention? Significant attention is given in this thesis to the cultural understanding of the tsunami how the trauma related symptoms were perceived by the affected pupils, and possible cultural sensitive interventions.

Method: The method of literature review was used to answer the stated research questions. It is my aim to present and discuss research and theory, establishing an overview of what researchers have published, and through this present literature relevant to this topic. I have mainly used electronic databases to find related literature. The key words used in the search were combinations of: tsunami, trauma, PTSD, children, mental health, psychosocial support, disaster aid and culture. Many key word combinations received a high number of hits, therefore a selection of relevant studies was chosen, and thus this literature presentation is not exhaustive. Four research studies were used as main literature, in addition to four articles and two editorials as supportive literature. The main criteria for choosing an article, besides its relevance, was that it is published in an acknowledged journal that is peer-reviewed.
**Presentation:** Children are vulnerable in the aftermath of disasters, and many consequently experience psychological distress. Thienkrua and colleagues (2006) found that 13% of children living in camps, 11% of children from affected villages, and 6% of children from unaffected villages reported PTSD symptoms in Thailand. In a collaborative study, van Griensven and colleagues (2006) reported that 12% displaced and 7% of non-displaced adults in Phang Nga, and 3% of non-displaced adults in Krabi and Phuket reported PTSD symptoms. Bhushan and Kumar (2007) conducted an assessment of distress and post-traumatic stress in Indian children, with results showing a high level of post-traumatic stress. Neuner and colleagues (2006) assessed children’s prevalence of PTSD in Sri Lanka, where prevalence rates of tsunami-related PTSD ranged between 14% and 39% and an additional 5 to 8% had PTSD unrelated to the tsunami. It is evident, based on these researches, that there is an essential need of intervention after a mass disaster. Teachers may be important resources for psychosocial support. The main roles of teachers is to provide pupils with opportunities to express thoughts and feelings, share accurate information, engage children in the community and referral of children with severe distress. It is reported that therapeutic effect of their psychosocial support can be achieved through utilizing cognitive-behavioral strategies adapted to the cultural context in the school-setting.

**Conclusion:** Many children and adults were negatively affected by the tsunami, experiencing prolonged distress and some PTSD. This distress has been reported to affect children’s learning abilities and parents’ ability to care for their children. All children have the right to evidence-based treatment, which is however limited in developing countries. Research states that there is potential in applying cognitive-behavioral strategies, especially since they can easily be adapted to various cultural contexts and may have with their psycho-educational elements a natural role in school-based intervention. Acknowledging the value of keeping an open dialog with community and religious leaders, and including local professionals and teachers, may be the key to successful psychosocial support and intervention after disasters. More research is urgently needed to assess the efficiency of the above stated interventions.
Preface

Early on in my studies towards a master’s degree, I was convinced to write a master thesis on a topic that touches audiences in Norway and beyond. Many Norwegian aid organizations assist in the aftermaths of disasters and may be able to contribute more meaningful psychosocial support if they become aware of the issues presented in this master thesis. In addition, it is my international background, my interest for trauma and PTSD, and my relation to the tsunami-affected areas that led me to the theme of this master thesis: The Aftermath of the Tsunami: Post-traumatic stress disorder in children - the teacher’s role in psychosocial intervention.

Many have contributed to this master thesis along the way through input, encouragement and support. I want to acknowledge my family, especially my father who always came with great input regarding both research and theory. I also wish to direct a special thanks to my supervising professor Jon-Håkon Schultz who came with significant contributions. Moreover I wish to express gratitude to my husband for motivating and cheering me on throughout the planning and writing process of this master thesis, contributing to its completion and success. Thank you to all those who believed in me – I wouldn’t have come this far without your support.

I hope that this master thesis will encourage many to seek more awareness of global issues, especially those concerning mental health - to reflect on actions taken by relief agencies, the research available on mental health, as well as your own professional behavior. I hope to inspire the readers to look beyond themselves and their neighborhood, identifying their own resources that can make a difference in the lives of vulnerable people.

Lastly, I wish to thank you – the reader, who made this long process of completing this master thesis worthwhile.

Oslo, May 2008

Christina Suboh
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>p.7</td>
</tr>
<tr>
<td>1.1. Background</td>
<td>p.7</td>
</tr>
<tr>
<td>1.2. Purpose of the study</td>
<td>p.8</td>
</tr>
<tr>
<td>1.3. Presentation of the research questions</td>
<td>p.8</td>
</tr>
<tr>
<td>1.4. Relevance for special needs education</td>
<td>p.9</td>
</tr>
<tr>
<td>1.5. Structure of the thesis</td>
<td>p.11</td>
</tr>
<tr>
<td>Method</td>
<td>p.12</td>
</tr>
<tr>
<td>2.1. Literature review</td>
<td>p.12</td>
</tr>
<tr>
<td>2.2. Research process</td>
<td>p.13</td>
</tr>
<tr>
<td>2.3. Validity and reliability</td>
<td>p.17</td>
</tr>
<tr>
<td>2.4. Cultural and ethical considerations</td>
<td>p.18</td>
</tr>
<tr>
<td>Theory</td>
<td>p.19</td>
</tr>
<tr>
<td>3.1. Context</td>
<td>p.19</td>
</tr>
<tr>
<td>3.2. Trauma</td>
<td>p.23</td>
</tr>
<tr>
<td>3.3. Post-traumatic stress disorder (PTSD)</td>
<td>p.31</td>
</tr>
<tr>
<td>3.4. The affected persons</td>
<td>p.35</td>
</tr>
</tbody>
</table>
3.5. Cognitive-behavioral therapy (CBT)………………………………………p.40

3.6. Relevance of culture and religion…………………………………….. p.47

4. **Presentation and Discussion**…………………………………………p.51

4.1. Why such a responds?.................................................................p.51

4.2. Mental health..............................................................................p.52

4.3. Research studies ................................................................. p.55

4.4. Psychosocial support in disaster aid.........................................p.65

4.5. Relevance of Buddhism........................................................... p.72

4.6. School-based intervention.......................................................p.74

5. **Conclusion**.............................................................................p.86

6. **Bibliography**........................................................................... p.89
1. Introduction

In the beginning of this master thesis, I want to shed light on the background and purpose of this study. Next, I will present the research problem central to the thesis, as well as this study’s relevance for the field of special needs education. Lastly, I will address the structure of the thesis.

1.1 Background

Research suggests that children are an especially vulnerable group in the event of a mass disaster like the Indian Ocean tsunami in 2004 (Vijayakumar, Kannan & Daniel 2006). The immediate psychosocial impact of the tsunami brought loss, grief, pain and distress. Initial disbelief followed by anger and sadness. Most were able to cope with their distress, while some developed mental disorders such as PTSD (Ghodse & Galea 2006). What distinguishes the person who develops PTSD from the one who seems to cope? Are there risk factors that can predict the outcome? Better knowledge to answer these questions is crucial in the event of disasters like the tsunami to be able to concentrate the psychosocial interventions on these vulnerable groups, preventing the escalating of their symptoms. Furthermore, precious resources can be saved by employing school-based interventions, where the special needs of children can be addressed in a safe and familiar environment.

Developing countries suffer the most severe effects of natural disasters in regards to life losses, and in social and economic terms. The reason can be found in their limited resources, lack of infrastructure and protective system to prepare for and prevent disasters. (UNESCO 2007). This was also true in regard to the Indian Ocean tsunami in 2004. In all, approximately five million people were affected in India, Indonesia, Maldives, Myanmar, Thailand, Seychelles and Sri Lanka by the initiating earthquake and the following tsunami (Ashraf 2005). Many lost their lives and many more were displaced. Every country used their available resources in managing the crises, using diverse disaster management plans to cope with the impending need (Bhugra 2006).
1.2 Purpose of the study

The purpose of this master thesis is to give insight on how the tsunami affected survivors’ mental health, with a focus on school aged children, by reviewing established research literature. Thus, this master thesis aims at highlighting important issues of disaster aid and school-based intervention, and discussing the challenges of the field. By doing so, I aim to explore interventions that can be effectively employed across cultures, and can be implemented by the teachers of the affected regions in a school setting. In this regard, I wish to discuss the role of the teacher in the time of crisis, and school-based interventions that can be implemented. My focus is on psychosocial support for pupils, since their psychosocial distress often becomes apparent in the classroom and can affect their learning capacity negatively. It is thus my hope that awareness regarding the potential of cultural sensitive interventions in the school-setting is raised through this master thesis.

1.3 Presentation of the research questions

This master thesis focuses on the following research questions:

*What are the post-tsunami mental health effects in school children and the prevalence of post-traumatic stress disorder? What may be the role of the teacher in psychosocial intervention?*

In order to share light on these questions, it is necessary to look at research studies conducted on children’s mental health consequences (specifically post-traumatic stress disorders), which also raise awareness on mental health issues of significant adults, as these will greatly impact the well-being of children. Many aid agencies were engaged with psychosocial relief work after the disaster. The characteristics of psychosocial support, depending on the phase of disaster aid are important to keep in mind when teachers try to give culturally sensitive intervention to their pupils. There is a need for interventional trials to evaluate the efficiency of the different interventions over time.
As I am answering the above stated research questions, I will also address issues pertaining to the cultural understanding of the tsunami and the trauma related symptoms. People interpret their experiences with help of their culture, religion and their previous experiences. Thus, it is important to be aware of differences in how people interpret traumatic events, how they conceive their symptoms, and if they perceive themselves as mentally ill. This perspective is crucial in order to provide culturally sensitive intervention, as interventions not sensitive to culture will likely do more harm than good. There are many interventional models for post-traumatic stress disorder and trauma related symptoms. However, most of these methods were developed in the West, and hence have questionable relevance for other cultural contexts. Furthermore, many interventions focus on giving therapy and are therefore not aimed to be used by teachers. It is thus essential to utilize intervention strategies that are not only adaptable to various cultural and religious settings, making the intervention culturally sensitive and meaningful for the affected population, but are simple enough to be employed by teachers without needing extensive training.

1.4 Relevance for special needs education

Special needs education as a field aims to help children who face challenges, whether these problems have a physical, social or emotional nature. Thus, addressing concerns regarding tsunami-affected children and their specific needs are highly relevant. Whenever children face psychological and emotional problems, their learning and their social behavior can be severely impaired. Teachers may become part of disaster aid, being trained to offer support to affected children. Thus, schools become significant areas where the needs of children can be addressed. In this setting, teachers can provide support to affected children, and target interventional strategies towards pupil groups who need more help to cope with their distress, not least those who displayed special needs already prior to the tsunami.

Knowing how mental health is perceived in other cultures, and how cultural and religious traditions can be incorporated in interventions, is important not only for disaster aid abroad, but also for interventions based in Norway. In this regard, I think
specifically of interventions aimed at refugees, who often come to Norway with a burdened past of traumatic experiences. It is quite possible that our Western models may frequently fail to meet their needs, as their understanding of their own traumas, as well as their perception of mental health might vary drastically from ours. Even though it is unrealistic to believe that all teachers and mental health workers are able to avoid the cultural and religious obstacles related to their help, it is important that one is aware of the issue. This awareness will expectantly lead teachers and mental health workers to seek a better understanding of the person, their background, beliefs, social and cultural traditions and their coping strategies, instead of being focused on diagnostic terms, symptoms and therapeutic strategies.

The tsunami affected countless people who were geographically distant from the devastating event, including children in Norway. The repeated media coverage of the disaster may have been disturbing for many, but foremost children who have previously been exposed to traumatic events. Memories of their past experiences were likely relived, causing mental distress. Children’s psychosocial distress often becomes visible in the classroom environment and can have negative effects on their learning (Raundalen & Schultz 2006). Thus, exploring the mental health consequences for children who were exposed to traumatic events like the tsunami contributes to raising awareness around these children, and to those who will suffer from similar distress in the future.

The expression “education in emergencies”, which has recently marked its way into the terminology of many aid organizations, implies that a teacher’s role is not only to teach the curriculum content, but he/she should also play a central role in helping children cope with the events of a disaster or crises. It is therefore important, that simple interventional strategies are identified, so that teachers can utilize them to address the distress in their pupils. It is not intended, that teachers should work as therapists; however, teachers, given that they have the right tools and guidance, can bring about therapeutic effect - leading to reduced trauma-related symptoms and improved well-being of children (Raundalen & Schultz 2006).
Exploring the tsunami disaster, and the following psychosocial support made available in the affected regions, might have great learning potential in the event of a future disaster, also in Norway. In recent years, crisis management has received increasing focus in Norwegian schools. Thus, this master thesis is of interest to this growing field, as it underlines important issues already familiar, and shares important insights that could be beneficial for its future practice.

1.5 Structure of the thesis

A holistic approach was chosen for this master thesis, which provides the reader with a broad theoretical and contextual background to the research topic. This basic understanding is not only essential for the presentation of the core literature of this thesis, but is considered important knowledge for approaching cultural issues. It is therefore, a logical prerequisite to find answers to the research questions.

The thesis is structured into five chapters, including this introduction. Chapter 2 will present the method used to conduct this study, addressing literature review as a method, the research process, validity and reliability, as well as cultural and ethical considerations. Chapter 3 will attend to the underlying theory, and theoretical concepts, essential for the study. The chapter begins with sharing information on the context of the tsunami-affected regions. Then, theory on trauma and post-traumatic stress disorder (PTSD) will be presented, including the concept of resilience. Following this presentation is a section on the affected persons, covering concepts and issues regarding the victims, survivors and vulnerable groups. Then, cognitive-behavioral therapy (CBT) will be described, including research studies that argue its efficiency. Chapter 4 begins with a reflection of the tsunami responds, followed by a discussion on the mental health effects of the tsunami. Four research studies will be presented in this chapter, before psychosocial support in disaster aid will be discussed. Thereafter, school-based interventions will be described, including the role of the teacher. Lastly, Chapter 5 is dedicated to the conclusion of this master thesis, followed by a detailed bibliography.
2. Method

A method can be viewed as a purposeful way of gathering, interpreting and analyzing data or knowledge, in order to answer the questions raised (Befring 2002). In this chapter I want to present the method used in this thesis - literature review. Following this presentation, I will address the research process involved and the issues of validity and reliability. Lastly, some cultural and ethical considerations involved in this research will be presented.

2.1 Literature review

I have chosen the method of literature review to answer the previously stated research questions. A literature review can have many different goals, focuses perspectives, organizations, strategies, and audiences. Thus, literature reviews can focus on research outcomes, research methods, theories, applications, or all these. This method of research can attempt to incorporate what others have done and said, criticize previous academic writings, build bridges between related topic areas, identify central issues in a field, or attempt to do it all. Generally speaking, there are two types of literature review: research synthesis and theoretical review, which I will describe in the following sections. (Cooper 1998).

Research synthesis
The first type of literature review has been alternately called research synthesis or integrative research review. Research syntheses focus on empirical studies, and draw overall conclusions by summarizing previous, separate research investigations that are related or have identical hypotheses. The aim of research synthesis is to present the latest state of knowledge concerning a specific issue or relation of interest, and to highlight vital issues that need further examination. Thus, it aims to direct future research. (Cooper 1998).
Theoretical review

The second type of literature review is a theoretical review. The aim of this method is to present theories that help explain a particular phenomenon and/or compare these theories with each other in regards to their breadth, consistency and the nature of their predictions. Theoretical reviews commonly include descriptions of research already conducted, assess which theory is most efficient and relevant, and sometimes aim to reformulate or integrate notions from different theories. (Cooper 1998).

A comprehensive literature review will often aim to combine both research synthesis and theoretical review. This was also the aim of my master thesis, presenting and discussing previous research and theory. I thus aspire to gain a general overview of what researchers have published on the topic of research, and present the studies and theories I find relevant and important in order to answer the research questions. Hence, the purpose of this study is to convey reputable knowledge and ideas, and address issues that need further investigations.

2.2 Research process

Taylor and Procter (2007) address two things which are necessary in order to write a good literature review: to be information seeking and to give critical appraisal. Scanning literature efficiently and identifying useful journal articles and books has been a big part of the thesis, a process that was both challenging and rewarding. I was able to find literature that brought diverse aspects to this master thesis and shed light on the research questions with the help of the University of Oslo’s library and electronic databases. Furthermore, I used the ancestry approach to find literature, where I examined research reports already acquired to find references to studies yet unknown. When I perceived a reference as relevant to this thesis, I retrieved the full-text of the article.

I will now provide an overview of the electronic databases I have used to access research articles. Following is an outline of the key words used in the search, including the number of hits found in each database. After this section, I will present
the criteria and guiding questions helping me in the elimination process of the retrieved literature, followed by a description of the primary literature used in this master thesis.

**Electronic databases**

Several electronic databases were used in this master thesis to retrieve relevant literature. The following three databases were used the most: PsycINFO, Informaworld and Medline. PsycINFO is an electronic bibliographic database, which provides abstracts and citations in the fields of psychological, social, behavioral, and health sciences. The database is updated weekly, and provides access to journal articles, books, chapters, and dissertations. 98% of the journals in the database are peer-reviewed, and thus of high quality. Informaworld is a fairly new database that gives access to information in a wide spectrum of fields and provides access to journals, encyclopedias and eBooks from Taylor & Francis, Informa Healthcare, Routledge and Psychology Press. Medline is the U.S. National Library of Medicine's leading bibliographic database, consisting of over 16 million references to journal articles in life sciences. The database provides access to approximately 5,200 journals, which are based on recommendation by a rigorous reviewing committee.

Other databases used to find literature are the Excerpta Medica database (EMBASE), the Cochrane library, ISI Web of Knowledge and ProQuest. EMBASE is the most widely used database due to its in-depth indexing. It is updated on a weekly basis, giving access to the latest trends in medicine and pharmacology. The Cochrane library is a collection of evidenced based reviews, aiming to inform healthcare professionals in their decision making. ISI Web of Knowledge is a research platform that provides access to high quality, diversified scholarly information in the disciplines of sciences, arts and humanities, and social science. The advantage of ISI Web of Knowledge is that one can cross-search several resources simultaneously. Lastly, ProQuest provides access to one of the largest online content storage in the world, including newspaper articles and dissertations.
Key words and hits

There are several key words I used to find relevant journal articles in the electronic databases. A description of the results for specific key words in the three main databases used can be found in table 2.1 below.

<table>
<thead>
<tr>
<th>Search combinations</th>
<th>PsycINFO</th>
<th>Medline</th>
<th>Informaworld</th>
</tr>
</thead>
<tbody>
<tr>
<td>tsunami AND trauma</td>
<td>891</td>
<td>507</td>
<td>9</td>
</tr>
<tr>
<td>tsunami AND post-traumatic stress disorder</td>
<td>666</td>
<td>800</td>
<td>4</td>
</tr>
<tr>
<td>tsunami AND children</td>
<td>82751</td>
<td>2308</td>
<td>7</td>
</tr>
<tr>
<td>tsunami AND post-traumatic stress disorder AND children</td>
<td>925</td>
<td>775</td>
<td>1</td>
</tr>
<tr>
<td>tsunami AND mental health</td>
<td>7299</td>
<td>508</td>
<td>21</td>
</tr>
<tr>
<td>tsunami AND mental health AND children</td>
<td>356</td>
<td>511</td>
<td>2</td>
</tr>
<tr>
<td>tsunami AND psychosocial support</td>
<td>1818</td>
<td>1276</td>
<td>10</td>
</tr>
<tr>
<td>tsunami AND disaster aid</td>
<td>126</td>
<td>197</td>
<td>12</td>
</tr>
<tr>
<td>tsunami AND culture</td>
<td>6883</td>
<td>500</td>
<td>4</td>
</tr>
<tr>
<td>tsunami AND culture AND mental health</td>
<td>176</td>
<td>610</td>
<td>3</td>
</tr>
<tr>
<td>culture AND post-traumatic stress disorder</td>
<td>618</td>
<td>636</td>
<td>16</td>
</tr>
</tbody>
</table>

Table 2.1: Overview of search combinations and number of hits in the respective databases.

As it becomes evident in table 2.1, many of the key word combinations produced a high number of hits, especially in the PsycINFO and Medline databases. Many articles repeatedly came up in several key searches, and some articles were also found in all three databases. It should also be noted, that often times only the first 10-25 articles were relevant from the hundreds of hits shown. Often the words were only mentioned in publications without the articles contributing necessarily to the subject. A lot has been written on the topic without being research based. Thus, the research, theories and discussions I present in this master thesis are a selection mostly based on quality of the research presented and far from exhaustive.

Criteria and guiding questions

The criteria established to aid the decision on whether or not to use certain articles was foremost their relevance to the research questions. The validity and quality of the research articles was of foremost importance, and was determined by whether the article was published in an acknowledged journal that was peer-reviewed.

Throughout the research process I asked myself several questions, which guided me in the search for relevant literature: Who is the author? Is it a recognized researcher,
is he/she affiliated with a University or a known research group? Are the goals, outcomes and limitations clearly stated? What assumptions or hypothesis guided the research? Are these hypotheses in line with the method and the conclusion of the study? Furthermore, I used several questions stated by Taylor and Procter (2007) as a guide for reviewing articles or books: How does this article or book contribute to the understanding of the problem under study? Is it useful for practice? Are there gaps in knowledge that need some further research? Is there a consensus or a debate about the subject and what are the positions?

**Literature**

Four research articles were used to share light on the mental health effects on the surviving population of the tsunami. Together with six supporting articles, they provide the backbone of this master thesis. This literature is described briefly in table 2.2 and 2.3, which name the author, year, title, design and conclusions of each literature. Thus, establishing a clear overview for the reader.

<table>
<thead>
<tr>
<th>Author/Year</th>
<th>Title</th>
<th>Design</th>
<th>Conclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>van Griensven et al. 2004</td>
<td>Mental health problems among adults in tsunami-affected areas in Southern Thailand</td>
<td>Mental health survey among adults in Phang Nga, Phuket and Krabi 2 and 9 months post-tsunami.</td>
<td>Elevated rates of PTSD, anxiety and depression symptoms 8 weeks after the disaster. Within 9 months, the rates were decreased.</td>
</tr>
<tr>
<td>Thienkrua et al. 2004</td>
<td>Symptoms of posttraumatic stress disorder and depression among children in tsunami-affected areas in Southern Thailand</td>
<td>Mental health surveys among children in Phang Nga, Phuket and Krabi 2 months and 9 months post-tsunami</td>
<td>Documents prevalence of mental health problems – traumatic events experienced were significantly associated with symptoms of PTSD and depression.</td>
</tr>
<tr>
<td>Bhushan &amp; Kumar 2007</td>
<td>Emotional distress and posttraumatic stress in children surviving the 2004 tsunami</td>
<td>Assessment of posttraumatic stress among children in Tamil Nadu, India one year post-tsunami</td>
<td>Both genders reported high levels of distress. Loss of family members played a vital role. Family support had a positive effect on the child’s coping.</td>
</tr>
<tr>
<td>Neuner et al. 2006</td>
<td>Post-tsunami stress: A study of posttraumatic stress disorder in children living in three severely affected regions in Sri Lanka</td>
<td>Assessment of PTSD symptoms in 265 children 3 to 4 weeks post-tsunami in Sri Lanka.</td>
<td>PTSD symptoms explained through severity of trauma exposure, family loss, and previous traumatic events. A high need for mental health assistance is indicated.</td>
</tr>
</tbody>
</table>

Table 2.2: Overview of research articles.
In addition to these research articles, many other sources of literature were used to support theory, presentation and discussion. In this regard, I want to describe six articles in table 2.3 below, that were specifically helpful and hence frequently used as references in this thesis.

<table>
<thead>
<tr>
<th>Author/Year</th>
<th>Title</th>
<th>Design</th>
<th>Conclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ghodse &amp; Galea 2006</td>
<td>Tsunami: Understanding mental health consequences and the unprecedented response</td>
<td>Article on the mental health consequences and the global response of the tsunami.</td>
<td>Important to provide culturally and contextually sensitive, integrated and coordinated interventions.</td>
</tr>
<tr>
<td>de Silva 2006</td>
<td>The tsunami and its aftermath in Sri Lanka: Explorations of a Buddhist perspective</td>
<td>Article discussing the tsunami disaster in Sri Lanka with special reference to Buddhism.</td>
<td>There is a relationship between culture and traumatic experiences. Buddhist concepts and practices can be relevant in the clinical setting.</td>
</tr>
<tr>
<td>Rao 2006</td>
<td>Psychosocial support in disaster-affected communities</td>
<td>Article outlining psychosocial interventions offering care and support to disaster-affected communities</td>
<td>Interventions must be adapted to the needs of the population. Social support is crucial. Psychosocial care is a long-term process and training is thus vital.</td>
</tr>
<tr>
<td>Silove &amp; Bryant 2006</td>
<td>Rapid assessment of mental health needs after disasters</td>
<td>Editorial questioning the Thai studies, PTSD and effectiveness of interventions</td>
<td>Knowing how to assess needs, researchers must make full use of it to test interventions that make a difference</td>
</tr>
<tr>
<td>de Jong, Prosser &amp; Ford 2005</td>
<td>Addressing psychosocial needs in the aftermath of the tsunami</td>
<td>Editorial examining mental health needs, the mental health response, and thoughts on the future.</td>
<td>Community-based, culturally adapted psychological interventions, which recognize religion as a vital coping mechanism, should be mobilized.</td>
</tr>
<tr>
<td>Yule 2006</td>
<td>Theory, training and timing: Psychosocial interventions in complex emergencies</td>
<td>Article discussing psychosocial care and the lessons learned.</td>
<td>Highlights the need for training and delivering evidence-based psychological first aid.</td>
</tr>
</tbody>
</table>

Table 2.3: Overview of supporting literature.

2.3 Validity and reliability

When conducting a literature review it is important to address the adequacy of the studies accessed. It has therefore to be questioned: Is the literature search comprehensive and conducted in an adequate manner? How might the population
contained in the studies differ from others of interest, the question of generalization of the findings? I am confident that another researcher would find the primary articles and research studies in this literature review in his/her own literature search, and would reach similar conclusions regarding their quality and relevance to the research topic. Thus, also reliability is accounted for. In regard to the second question, it is likely that the samples used in the research studies were comprised of populations easily accessible and close in proximity to the primary researcher. One can question if these populations were subject to replications and participated in several research studies, or that these samples did not effectively represent the affected population as a whole. There is also a chance that the testing conditions and various methods might not have been adequate and thus lead to skewed conclusions.

This master thesis in general comprises carefully undertaken research and common knowledge on trauma, PTSD, resilience, intervention and disaster aid. The conclusions presented in this master thesis are not only relevant for the tsunami, but can have an impact on future disasters and crises.

2.4 Cultural and ethical considerations

There are several common ethical considerations for research. These include striving to apply good citation ethics throughout the thesis, to help the reader not only making a clear cut between my own thoughts from ideas taken from other authors, but giving the reader a reference point to read more on the topic. Furthermore, plagiarism is avoided and data presented as they were intended to, not fabricated to fit my purpose. Since I rely solemnly on literature, I do not face the same ethical challenges as I otherwise would. The challenge lays however in being clear in my speech, reasonable in the argumentations and to avoid partiality in the way I collect, present and interpret the data of this literature review. Another ethical consideration I need to take into account is cultural sensitivity, both the authors’ as well as my own. In order to conclude with solid answers to the research questions I need to assess how the articles at hand managed the cultural diversity, avoiding statements that lead to inappropriate generalizations or may stigmatize cultural groups. (NESH 2006).
3. Theory

In this chapter I will present the underlying theoretical concepts. First I will provide the cultural and political context of the tsunami-affected countries, followed by the various categories of exposed people. Then, concepts of trauma and post-traumatic stress disorder (PTSD) will be presented. Thereafter, I will address cognitive-behavioral therapy as a means of intervention for trauma and PTSD. Lastly, I will present the relevance of including culture and religion in psychosocial support.

3.1 Context

To understand the impact the tsunami had on the mental health of its survivors, one needs to know the context of where it took place. To have this background is also crucial for planning intervention, so that psychosocial programs are culturally sensitive. Hence, I chose to present relevant information on the four most affected countries: Indonesia, Sri Lanka India and Thailand; how the tsunami affected them and how mental health is perceived. This section will thus provide the necessary platform to understand why cultural sensitive intervention is vital.

Indonesia

Indonesia is made up of hundreds of ethnic groups, all with their own cultures and languages. The Aceh Province in the Western corner of Indonesia consists of a population of 4 million, whereof 98 % are Muslim and often more orthodox than seen in the rest of the country. (Reuters AlertNet 2007).

The Aceh Province has been an area of conflict for more than 40 years. The Free Aceh Government (GAM) was established in 1959 to pressure the Indonesian government for independence, and there has been an ongoing armed conflict since. (de Jong, Prosser & Ford 2005). Financial profits were made during the conflict by illegal road tolls, kidnapping and demands for protection money by both the military and the GAM rebels. As one can imagine, civilians were often caught in the middle. As many as 15,000 people have died as a result of the ongoing war, others suffered
arrests and intimidation, and around 500,000 people were forced to leave their homes. Livelihoods, healthcare and schooling were disrupted due to the fighting and the restrictions imposed on the population. As with most conflicts, human rights were violated. Especially military troops were accused of torture, rape and unauthorized killings. The tsunami has thus worsened an already challenging situation. (Reuters AlertNet 2007).

As of 23 January 2005, 453,845 people have been displaced, and 1,736 hospitalized in Aceh after the tsunami. 6,222 persons are still missing and 166,760 were confirmed dead. (WHO 2005). It is estimated, that more than 600,000 people lost their livelihoods, around half of them fishermen. Also farmers and traders were badly affected, as the tsunami left around 60,000 hectares of agricultural land damaged. Three months after the tsunami, another 1,300 people died on the island of Nias by aftershocks. (Reuters AlertNet 2007).

**Sri Lanka**

Northern Sri Lanka has been burdened by conflicts between the government and the Liberation Tigers of Tamil Eelam (LTTE), who want an independent state in the North and East of the island, since 1983. It is a war of ethnicity; language, religion, prolonged separatist agitation and a history of tensions. The conflict is centered on the complex relation between the Sri Lanka Tamils, which are a minority, and the powerful majority, the Sinhalese. Since the start of the violence around 70,000 people have been killed in the fighting, and many were displaced. Several areas on the island are left devastated due to landmines and left-over explosives, and can no longer be inhabited. Agricultural land stands untouched, while children suffer from malnutrition. The most prevalent downside of the conflict, however, is the Tamil Tigers use of child soldiers – robbing children of their childhood and likely scaring them for life. In 2002, a truce was agreed. However, the violence erupted again in the end of 2005, with the Tamil rebels restating their demand for independence. (Reuters AlertNet 2008).
The tsunami affected all religious groups in the country: Buddhists, Hindus, Muslims and Christians (de Silva 2006). In all, 103,789 families were affected by the tsunami. As many as 15,196 people were injured and 5,637 are still reported missing. 30,955 persons were confirmed dead and 403,245 were still displaced in the end of January 2005. (WHO 2005).

**India**

South India includes four states and two territories; and is frequently affected by flooding during monsoon season. Many of the 233 million people who live in Southern India are Hindus (83 %); the other main religions are Islam (11 %) and Christianity (5 %). The belief of an eternal universe is of special importance in South India, and is often celebrated through dance, sculptures and clothing. Illiteracy is very high in this region, an estimated 73 % can not read or write (national average: 60 %). Agriculture is the main livelihood for many, with outcomes greatly determined by the monsoon and dry summer months. Poverty is a major concern similar to the rest of India. Also a distinction of caste, even though abolished, plays a role in every day life in the region. (Wikipedia 2008b).

The tsunami wave moved in an incredible speed and first crashed into the Andaman and Nicobar Islands, followed by the coastal states of Tamil Nadu, Kerala, Andhra Pradesh and Pondicherry (ReliefWeb 2005). Around 3 million people were affected. 638,297 people were evacuated from their homes and 595 relief camps were established, hosting 376,171 persons. The event injured 6,918 people and 647,556 persons were still displaced in the end of January 2005. In all 5,551 persons were reported missing and 10,872 deaths were confirmed. (WHO 2005).

**Thailand**

Southern Thailand is located on the Malay Peninsula and covers an area of around 70,713 km². Generally speaking, the Southern provinces are poorer than the rest of the country, with their main means of livelihood being fishing, agriculture and tourism. (Wikipedia 2008a).
The most severely tsunami-affected area in Thailand was the province of Phang Nga, followed by Krabi and Phuket (Thienkrua et al. 2006). In all 5,373 people were verified dead, 3,141 still missing and 8,457 people were injured when the tsunami wave hit Thailand (WHO 2005). An approximate of 20,000 children in Southern Thailand are estimated to have been displaced, lost at least one family member, were injured or lost valuable possessions (Thienkrua et al. 2006).

**View on mental health**

The number of mental health professionals is limited in all the tsunami-affected regions. With a population of 4.2 million, the Aceh province has for example only three known psychiatrists. In all, there is an estimate of 500 clinical psychologists in Indonesia, which is about one per 420,000 inhabitants. Thus, mental health care was frequently left to local hospitals and clinics, which often had little or no experience in managing mental health issues. (de Jong, Prosser & Ford 2005).

In the coastal area of Sri Lanka, there are five known psychiatrists covering the population of about 5 million (Lamberg 2005). The concepts of “mental health” and “psychological problems” are not common in Sri Lanka. Therefore, people often express their emotional distress through physical pain, such as headaches. Mental health problems, as with other Asian countries, are highly associated with shame and stigma, which present an obstacle to even the most well-meaning counselor. This view of mental health thus makes the assessment of psychological needs difficult. (Ghodse & Galea 2006).

In India, arranged marriage is still frequently practiced. Having a family history of mental illness will likely reduce the opportunity to marry. It is therefore common that families send persons with mental illnesses to institutions, thus not limiting the chance of a good marriage match for other family members. Hence, mental illness does not only bring shame to ones family, but also results in social isolation.

Thailand has a quite stable mental health care system compared with other South-East Asian countries (Silove & Bryant 2006). However, it cannot meet the standards of the services available in the West. Most citizens in the regions affected by the tsunami do
not know what a psychologist is or does. The focus of intervention should therefore be on trying to understand people’s problems and improving their functioning in their communities, instead of “labeling” them with psychiatric terms and diagnoses. (de Jong, Prosser & Ford 2005).

Appropriate support after the tsunami was often given by the social network of the person, including the village community. Religion had a main role in the way traumas were understood and processed. Traditional forms of grieving and relaxation were thus often encouraged to help people cope with their emotions. (Ashraf 2005).

3.2 Trauma

The word “trauma” is originally Greek and means “wound”. As stated in the Cambridge Advanced Learner’s Dictionary (2008) “trauma” can refer to two things: a severe injury as usually caused by a terrible accident/attack, or a severe emotional shock/pain caused by a very displeasing experience - a traumatic experience. In this thesis, trauma is referred to as the later. In addition I want to refer to the words of Armen Goenjian, a professor of psychiatry at the University of California in Los Angeles, as it is said in Levin (2006, p.22): “Just being in a traumatic situation doesn’t mean you’re exposed to trauma - you have to be exposed and frightened.”

Generally there are two types of emotional traumas. Type 1 refers to a single traumatic event, whereas type 2 is comprised of situations where a person undergoes a series of traumatic events over a period of time (Dyregrov 2000).

The field of disaster psychiatry states three categories of trauma: 1) Threat trauma, a situation where a person is under a threat to lose their own life or be seriously injured, 2) Loss trauma, where a person is overwhelmed by a sudden and unexpected death of one or more significant others, and 3) Conflict trauma, where a person is in a position of conflict whether to save their own life or the lives of others. (Waldenstrøm 2005). These are traumas that play out directly in people’s lives. However, it is not uncommon to be indirectly affected by for example the media, where we become witnesses to the traumatic experiences of others. Watching
broadcasts about earthquakes, hurricanes, tsunamis, terror and war have become a part of our daily agenda. Whether exposed to traumatic experiences directly or indirectly, they shake the foundations of our beliefs about safety and shatter our assumptions of trust.

Many who have been affected by a trauma become aggravated. They are often critical of themselves which leads to a higher vulnerability. Frequently we do not realize the impact a traumatic event has on us, and do not understand the struggles we might face as a consequence thereof. While some affected people and those around them may think they have become mad, they might in fact face the natural consequences to being exposed to a traumatic event. To the outsiders, their reactions may become understandable if the person’s prior experience/s are known and taken into consideration. (Allen 2005).

The following sections will describe the reactions common to experiencing a trauma. In addition, the issue of resilience will be addressed. Many of the symptoms described below have been summed up under the diagnostic category of post-traumatic stress disorder (PTSD), which will be presented in section 3.3.

**Common reactions to trauma**

Prior to the 2004 tsunami there was little data on the mental health outcomes of tsunamis. However, there is extensive knowledge from other major disasters such as earthquakes, floods and hurricanes, showing that the mental health of survivors is often greatly affected by the tragic events. (Stevens & Slone 2008). Therefore, the scale of the tsunami predicted a massive and severe impact on mental health, as survivors easily become overwhelmed by the circumstances, and their coping strategies and skills become insufficient in light of the event (Bhugra 2006). It is hence understandable that many feared a high number of mental health problems, as disasters lead to both individual and collective traumas (Ashraf 2005). Due to human resilience however, a majority of survivors were expected to recover from their distress without lasting effects (Stevens & Slone 2008). Nevertheless symptoms of
distress may start showing weeks or even months post-disaster and may become long-lasting (Lazarus, Jimerson & Brock 2003).

In order to identify mental health problems after a disaster, it is crucial to be familiar with the normal stress reactions common after a traumatic event. Thus, normal stress reactions will be described in addition to the more severe stress reactions observed after the tsunami. Included in the later are risk factors for developing psychological disorders and estimates of people who will require professional help in order to cope. These sections are followed by a discussion on PTSD.

**Normal stress reactions**

Normal stress reactions may last for several days after the traumatic experience and affect the person on an emotional, cognitive, physical and interpersonal level. *Emotional responses* can consist of shock, anger, guilt, shame, grief, feeling helpless or hopeless and feeling numb. *Cognitive reactions* may include worry, memory loss and disorientation, self-blame and shortened attention span. *Physical complaints* in the initial period after the event often consist of insomnia, bodily aches, nausea, tension, change in appetite and a racing heartbeat. A person can also experience *interpersonal reactions* such as loss of intimacy, distrust and increase in conflicts, withdrawal and irritability. (Young, Ford & Watson 2007).

**Severe stress reactions**

Psychological disorders often associated with calamities are depression, anxiety, and PTSD. Studies report that persons, who show severe stress reactions following a traumatic event, are at risk for developing PTSD. Some severe stress reactions related to these traumatic experiences include emotional numbing, dissociation, avoidance behavior, intrusive re-experiencing, hyperarousal, severe depression and anxiety. (Young, Ford & Watson 2007). Many also reported somatic complaints and non-specific distress after the tsunami (Stevens & Sloan 2008). Factors which determine the risk of PTSD and depression include level of exposure to the event, personal injury or loss of loved ones, level of parental support, dislocation from home or community, and pre-existing risk factors such as earlier exposure to traumatic events (Lazarus, Jimerson & Brock 2003). Current literature suggests that injury and threat
to one’s life is a good indicator in predicting the probability of psychological disorders. The degree to which a survivor is resilient to mental illness is greatly determined by their functioning prior to the disaster, secondary stressors and their mental resources. (Stevens & Slone 2008).

**Anxiety:** Of all the emotions that come with a trauma, anxiety is probably the most central emotion. Anxiety refers to the reaction of a defined threat in the presence, which triggers the apprehension of being either physically or psychological hurt again. Such a threat is experienced by being exposed to a situation that reminds of the traumatic event. At the same time anxiety can stem from the worry whether one will be able to cope with a similar threat in the future or not. When we live in an alarm mode, our attention is directed at finding signs of threats in our immediate environment. Anxiety is the opposite of control and security – life becomes unpredictable and our plans put on hold. (Allen 2005).

**Anger and aggression:** Anger is also a basic emotion. Both anxiety and anger are natural reactions that contribute to survival and therefore are a part of our defense mechanism. If we can’t find a way out – if flight is not possible - we need to attack and fight in order to protect ourselves. Therefore, aggression is a consequence of both anxiety and anger. Frustration as a primary emotional experience can often lead to secondary feelings like anger and aggression. Aggression can be triggered by anything that causes stress, discomfort or threats to one’s identity. There are plenty examples of people with post-traumatic stress disorder (PTSD) who are easily angered and attack others without any apparent reason - triggered by the way someone speaks or behaves, their outer appearance or smell. Many who have been traumatized feel a strong conflict between their feelings of anger and expressing these emotions in a culture appropriate way. The fear of having an anger outburst is a common experience.

**Regression and depression:** Many are withdrawing themselves from important near ones. The fear of being misunderstood, or their behavior not being tolerated by society, can also lead to the avoidance of feeling anger, which can lead to numbness
or apathy. (Allen 2005). It may be therefore, that many researchers report an increased level of depression in traumatized youth. If the depression is severe, it can lead to suicidal thoughts and attempts many years after the traumatic event. (Yule, Perrin & Smith 1999).

**Shame and guilt:** Shame and feelings of guilt develop at two years of age, when we become more conscious of our selves and become more sensitive towards other’s reactions. This is the time where we build up our identity. Shame is often a feeling of not being sufficient, not being able to live up to your own or others expectations or going against a norm. Guilt however is a feeling that stems from an action, of having hurt oneself or others. (Allen 2005). Traumatic experiences convey the feeling of being helpless. This feeling is central in feeling shameful. The affected person will have a deep feeling of having let down oneself and others. Guilt rises specifically when one is the only one who has survived the traumatic event. This is referred to *survivor’s guilt* (Horowitz 1997, p.21).

According to psychiatrist Donald L. Nathanson (1992) there are four ways of escape from shame: 1) *Withdraw* – to isolate one self in order to avoid meeting others, 2) *give in* – try to block shame as a mechanism of defense, 3) *attack self* – avoiding shame by mobilizing anger towards one self through self destructive behaviors such as injuring oneself by cutting or burning, 4) *attack others* – turning ones overwhelming feeling of shame to aggression by humiliating others and causing them shame. Persons might feel that they have nothing more to loose.

While sadness and sorrow is released by crying, anger by hitting, fear by shouting or shivering, so can the feeling of shame only be relieved by acceptance and social contact. The contact with an accepting, non judgmental person is healing. (Benum 2006).

**Loss and sense of foreshortened future:** Many traumatized people struggle with intense sadness (Allen 2005). Each trauma results in some form of loss. There are elements in trauma that are in conflict with our universal wish of life and the need for security and care (Horowitz 1997). The loss of someone close and meaningful to us is
painful. Children experience sorrow in a different way than adults. They often go in and out of their sorrow and relate the death with guilt and punishment. Children therefore often blame themselves for the death of a loved one. (Waldenstrøm 2005). People who have survived a trauma have learned that life is fragile and vulnerable. This can lead to loosing faith in the future or the feeling that the future might be short. It is clear that their previous picture of the world is questioned. (Yule, Perrin & Smith 1999).

**Re-experiencing:** Long after the danger is gone, traumatized people re-experience the event as if it is happening again in the presence. They often cannot continue with their previous life because their trauma interferes. It is as if life was put on halt at the time of the traumatic event. The trauma is imprinted on ones mind and reappears unconsciously as flashbacks by day, and dreams by night. (Herman 1997). Traumatic memories and dreams are not like common memories and dreams. Traumatic memories often lack verbal narrative and context, and are not integrated in a person’s history of life. Rather they are coded in form of lively sensations and pictures. Robert Jay Lifton (1980, p.113) articulates this well when he refers to traumatic memory as *indelible image or death imprint*.

**Resilience**
I want to give a considerable amount of focus to the phenomenon of resilience because it seems to be an essential part to be considered when providing school-based interventions.

When children experience a stressful event, they are confronted with learning to cope and adjusting to changes. Some children are in need of professional help, whereas most are able to cope with the traumatic experience. They return to normal function after the acute period post-disaster and continue to thrive in health and development according to their age. There is nothing mystical that protects some children from distress after a traumatic event. Children, who despite hard times succeed, are described as being *resilient*. Resilience comprises beliefs, feelings and behaviors that appear when faced with adversity, resulting in being able to “spring back” from the
traumatic experience to normal functioning. It is a process or result of adjusting successfully to difficult conditions. (Cloitre, Morin & Linares 2004).

Results from studies imply that resilience is formed by the characteristics of the recovery milieu and the individual variations in the child. Several factors influence the way a child adapts after exposure to trauma: 1) characteristics of the trauma, 2) resources of the child, 3) characteristics of the family, 4) support of the community and 5) the developmental course of the child. These five contributing factors, stated by Cloitre, Morin and Linares (2004), will be further described below.

**Characteristics of the trauma:** Children often cope well when they face a trauma of a low or moderate scale. There are three main factors involved in determining the child’s experience of the trauma and the risk of long-lasting distress: 1) the proximity to the event, 2) the relationship to victims and 3) the extent of emotional distress in the moment of exposure.

**Resources of the child:** The way we respond to stress is partly an outcome of our genetic disposition, and thus some children tend to adapt more easily than others. The other factor shaping our responds to stress is the environment. Apprehensive, sad and fearful children, prior to a traumatic experience, are likely to require more time to recover, and need additional attention. Some factors that add to constructive adaptation are being optimistic, persistent, adaptive, goal-oriented, and intelligent. Other characteristics include having a high self-esteem, being willing to approach tasks, and possess good social skills. These factors can all mature in time, if they are nurtured accordingly. One such nurturing occasion is provided by positive interactions with family members and friends.

**Characteristics of the family:** Family is a place where its members, including children, will turn to for comfort, guidance and pleasure. It is essential to resilience that parents and other adult family members are available and give support when children have experienced a trauma, or are otherwise scared or sad. The way one resolves conflicts, disagreements and issues of discipline in the household will affect the resilience of a child. In general, the following can be said of a resilient child’s
family: disagreements are communicated openly and dealt with positively; parents agree on child rearing strategies; and children are not caught in the middle of parental conflicts. Thus one can conclude that good communication is an essential part of resilience.

**Support of the community:** Community programs, whether they are of social, spiritual or recreational kind, play a key role in nurturing the physical, emotional and social health of children and their families. Thus, they are a part of enhancing resilience. Many initiatives of the community are aimed at protecting people, from embryo throughout adulthood. Examples of such programs are promotion of healthy pregnancies, building self-esteem in early childhood, enhancing school environment through anti-bullying initiatives, and providing access to parenting courses.

**Developmental course of the child:** Resilience varies with age. Children’s stage of development often influences the way they respond to traumatic experiences. The variables assisting their recovery, and the recuperating signs they will show, depend on their maturation. The family’s role, specifically the bond to the primary caregiver, is central in enhancing resilience in children from birth to 5 years of age. Infants and toddlers who are resilient will regain feelings of safety after a stressful experience through sharing a close bond with their caregivers. Preschoolers will cope with their fear through play and will seek the encouragement and safety their caregivers can provide.

When children reach school-age, they start to build close relationships with persons other than their family members. These new bonds include their classmates and teachers. Good relationships are crucial in enhancing the natural healing of children, and helping them remain socially involved in school, recreational activities and other events. During middle childhood, children are able to express themselves more verbally. Resilient children of this age will likely talk about their experience, ask for help, try new activities and practice positive self-talk - thereby improving their own well-being.
The time of adolescence can be a challenging period of life, where one’s values, feelings and identity are questioned. It is also a time where adolescents try to distance themselves from family members, in an attempt to gain independence. In spite of this, they often share their feelings with friends and adults of their confidence, who assist them in their recovery. After an initial period of distress, resilient adolescents will continue to express interest in their future and will recover from the traumatic experience without lasting effects.

### 3.3 Post-traumatic stress disorder (PTSD)

Post-traumatic stress disorder (PTSD) is a series of psychological and physical symptoms that are a consequence of traumatizing events, existing long after the event took place. The expression PTSD comes from the 1970s, where almost a million veterans of the Vietnam War reported being disturbed by their memories months and years after they had returned home.

Reactions to tremendous stress can vary with age and personal disposition, and surprisingly there are numerous children suffering from PTSD. It is estimated that every year, a minimum of three million children will become victims of PTSD around the world. The initiating trauma can vary from war, devastating natural disasters to violence or abuse in the family. These children live in constant fear; re-experience the event in their play, sleep and in relations to others, regardless of the initial traumatic event. (Rosen 2004). However, not all who have been exposed to a traumatic event develop PTSD. Results from research vary, but it can be agreed that only about 20 % of those experiencing a traumatic situation will develop PTSD. (Rothschild 2000).

A study conducted with the assistance of UNICEF in the late Yugoslavia has found high levels of PTSD symptoms, specifically anxiety and depression during the war. The study also concluded that children who were exposed to more war events displayed higher levels of stress. These findings have been confirmed by a study comprising 3,500 children in the town of Mostar in Bosnia. (Yule, Perrin & Smith 1999).
There are various symptom constellations of PTSD and variances in the duration and degree these symptoms interfere with the functioning of a person. Three different types of PTSD have been identified by the Diagnostic and Statistical Manual, 4th edition (DSM-IV 2002): acute PTSD, chronic PTSD and PTSD with delayed onset. Acute PTSD is diagnosed when symptoms last from one to three months after the traumatic experience. Chronic PTSD refers to symptoms that last more than three months after the event. In delayed onset PTSD, symptoms first appear at least six months after the traumatic event.

Similar to PTSD is acute stress disorder, which has been added to DSM-IV after symptoms of stress were observed in among others victims of natural disasters. Acute stress disorder refers to stress reactions that last from at least two days up to four weeks after exposure to a traumatic event. Acute stress disorder shares several symptoms with PTSD; however it often has a stronger emphasis on dissociative symptoms. (Bryant & Harvey 1995). Besides dissociation, symptoms include arousal, intrusion, and avoidance, and often occur almost instantly after the traumatic incident. Hence, symptoms of acute stress disorder likely predict the development of PTSD. (National Center for PTSD 2007).

I will now take the time to review the symptoms of PTSD in depth, concentrating on the three symptoms’ clusters of PTSD: re-experiencing, avoidance and hyperarousal. In addition, substance abuse will be presented, which is a consequence of this disorder and has a clear direct negative impact on children.

**Re-experiencing:** The symptom most strongly associated with PTSD is re-experiencing the traumatic event. Re-experiencing the traumatic event happens often suddenly and stems from the unconscious part of the brain. These flashbacks often include painful memories of the event in form of pictures and sensations. Physical reactions such as pain are also common. It feels as if the traumatic event has returned and is happening again in the present. (Jakobsen 2006). Flashbacks, in addition to sleep problems, are the main signs of PTSD (Joseph, Williams & Yule 1997). Re-experiencing the traumatic event includes dreams that cause unease and thereby
creating sleep disturbances. In fact, veterans of the Vietnam War who were diagnosed with PTSD were more likely to suffer from nightmares (52.4%) than those without PTSD (4.8%) (McNally 2003). Besides nightmares, where elements of the trauma are displayed, many also express physical symptoms, such as throwing around with arms and legs. Trauma related sleeping difficulties are triggered by unconscious and uncontrolled fear. A person can for example wake up with fear or have a panic attack without being aware that he/she had a dream or a nightmare. On the other hand, a person might also be afraid of going to sleep out of fear of having another nightmare. (Allen 2005).

Avoidance: Symptoms of avoidance are expressed by trying to avoid thoughts, feelings and conversations around the trauma. A person avoids activities, places and people that recall memories of the traumatic event. Dissociation, which refers to being unable to remember important elements of the trauma, can arise. (Steele, van der Haart & Nijenhuis 2006). Persons that display avoidance behavior often have less interest for and participation in important activities, and experience being alienated from their surroundings. Fear of everything that reminds of the trauma is the root of avoidance behavior. When trying to avoid the trauma related episodes by not thinking or talking about it and avoiding situations, life becomes limited and narrow-minded. Persons with PTSD feel that their inner world is a danger zone where trauma-related thoughts and emotions reign. Most of their energy is put into avoidance of emotional triggers, which reduces their involvement in the presence and amplifies their past. (van der Kolk, McFarlane and Weisæth 1996). Hence, avoidance does not only limit a person’s participation in activities and socialization, but also interferes with treatment by confronting the trauma, dealing with it, and consequently moving on (Allen 2005).

Hyperarousal: The third main symptom of PTSD is hyperarousal. This is a state where a persons’ defense mechanism is on a constant alarm mode after a traumatic event. It is as if the threat can return any minute. When a traumatized person is experiencing hyperarousal, he/she is easily scared, irritable, overreacting and can have anger outbursts. Many also report have insomnia due to their hyperarousal.
(Herman 1997). An experiment has been conducted on the timidness of different patient groups. A sharp sound in earphones was used as stimuli and measured the contraction of the eye muscle as response. The study showed that unlike the healthy control group and anxiety patients, people with PTSD did not get used to the stimuli. The eye muscle response became less as the experiment continued in the control group and anxiety patients, whereas the persons with PTSD reacted equally strong throughout the experiment. The study suggests that timidness is an effect of the traumatization and hence exposure therapy would not show itself as beneficial for this group of patients. (Jakobsen 2006).

Numbness, like avoidance, is a counter response of hyperarousal. However, feeling numb is not necessary to receive a PTSD diagnosis, but is often associated with the PTSD. (Joseph, Williams & Yule 1997).

**Substance abuse:** A study showed that the substance abuse of 75 % of veterans who developed alcohol dependency and 23 % of veterans abusing narcotics could be traced back to their traumatic war experiences. Exposure to traumatic events can also lead to alcohol- and drug abuse in adolescents and adults (30-40 % of the cases). Alcohol and narcotics becomes a way of self-medication where a person tries to calm the inner alarm system, reduce anxiety and relief depression even only for a short time - to experience a “time-out”. (Yule, Williams & Joseph 1999). Although alcohol can give a momentary distraction and release, it is a bitter-sweet experience as it reduces the chance of enjoying life, being able to concentrate and be industrious. Alcohol also contributes to an abiding cycle of avoidance, making treatments more difficult and often less effective. In addition, it can decrease the adult’s ability to care for their children. PTSD combined with alcohol abuse can lead to other severe disorders: anxiety, disruptive behavior, mood, and addictive disorders, as well as chronic physical pain and illnesses. It is estimated that 10-50 % of adults who struggle with PTSD and alcohol problems suffer at the same time from one or more of the mentioned disorders, referred to as comorbidity. (National Center for PTSD 2007).
3.4 The affected persons

This section will provide an overview of who the affected persons are. I will present types of victims, three categories of survivors and especially vulnerable groups during disasters, consisting of children, women and the mentally ill.

The victims

Taylor and Frazer (1982) state that there are generally three types of victims after a disaster: *The primary victims* are those who were directly affected by the disaster. These are the men, women and children who saw the tsunami wave and ran in panic. These are the victims that were swept away by the wave, and those who had their homes and livelihoods destroyed. *The secondary victims* are those who knew the primary victims and had a relation to them, whether they are family or friends. These victims include families around the world, whose family or friends became primary victims while vacationing in the affected places. *The third level victims* are those who responded to the disaster: aid and rescue workers, members of the community, and health care workers are among them. (Rao 2006). Even though it is likely that the primary victims are in most need of psychosocial support, also secondary and third level victims might be in need of care in the difficult hours after a disaster.

The survivors

The psychosocial impact of the tsunami caused loss, grief, acute pain and distress. As the death toll grew larger, so did the distress in both those who were directly affected and those affected indirectly. People lost their loved ones, their homes and possessions, their neighbors, co-workers, employment and so much more. It is understandable that the initial disbelief was soon followed by anger and intense sadness. Most survivors of the tsunami felt a psychological distress due to the overwhelming feeling of loss and insecurity. They first feared for their own life and their loved ones, and then faced uncertainties regarding their basic needs and livelihood. Most survivors resolved this discomfort within days or weeks post-tsunami, displaying great resilience in this time of adversity. Some however continued feeling distressed for a longer period of time and even fewer people
developed mental disorders. Ghodse and Galea (2006) describe three categories of survivors, which I will present below.

**Category 1:** A large number of people who experienced the tsunami were category 1 survivors, people who experienced psychological discomfort in the first few weeks post-tsunami. Common symptoms were anxiety, tearfulness, insomnia, fear, and feeling both helpless and hopeless. It was also common that mental distress was presented as somatic discomfort, including general malaise, headaches, and other vague aches and pains. Feelings of guilt were widespread, especially in family members wondering whether they could have done anything differently in order to save a loved one. The feeling of anger was also prevalent. Since so many questions were left unanswered, survivors struggled to direct their anger. As a result they often blamed themselves, authorities, God or nature. People avoided the sea, afraid that another tsunami may hit the region. Myths of fish feeding on their loved ones, as well as fear for another tsunami prevented many from returning to their fishing activities. All these symptoms are viewed as normal reactions to a distressing event. Experience shows that a majority of people classified as category 1 survivors recover from their distress without requiring intervention.

**Category 2:** The severity of the event caused some survivors to continue their distress for longer than expected, and therefore are referred to as category 2 survivors. People, who are most vulnerable, are those who directly experienced the tsunami and those whose loved ones were killed or were missing. The degree of vulnerability or resilience relies partly on personality factors within the person and partly on social support. It is generally viewed that children and women are vulnerable groups during disasters, which I will discuss more thoroughly later in this chapter. Survivors of category 2 generally share the same symptoms with category 1 survivors, but experience them more intensely and over a longer period of time. Atypical grief reactions, guilt, anger and hostility were common problems associated with this group of survivors during the tsunami. People coped differently with their distress, some turning to alcohol and drugs for relief. Others, feeling too overwhelmed with the events, became at risk for suicide. It is important for health
care workers to be aware, that suicide rates often increase after the initial post-disaster period has faded.

**Category 3:** Survivors in this category are those whose distress has turned into a mental disorder. The most frequent diagnoses given after a disaster according to the World Health Organization (WHO 2000) are depression, anxiety and PTSD. It is often the lack of natural recovery with the passing of time that distinguishes the category 1, 2 and 3 survivors. This is especially the case with a survivor diagnosed with PTSD, who initially may have been classified as a category 1 or 2 survivor. Others may have immediately fallen under category 3. These are often persons who have a vulnerability to or history of mental illness prior to the tsunami. WHO (2000) estimates that the frequency of mental disorders can double from 10 % to 20 % in a normal population after a big disaster. Similarly, more severe psychiatric disorders such as depression or psychosis can double from 2-3 % to 3-4 %. This is not surprising, considering that persons with a history of mental illness are more sensitive to stress and often have reduced capability to stabilize their own mental state. They have reduced resilience and are at risk of relapsing or experiencing a deterioration of their disorders. Others who are grouped under category 3 survivors include individuals with abnormal grief reactions, as well as those showing psychotic symptoms.

**The vulnerable**

Within any given population there are some groups who tend to be more vulnerable in a post-disaster situation than others. These groups include children, women, and mentally ill, which I will discuss below. Other vulnerable groups to consider, but not further discussed in this thesis, are the elderly, physically injured and handicapped persons.

**Children**

Disasters have a devastating effect on children, which represent 39 % of the overall population in the hardest-hit countries of the tsunami. Children are physically less able to outrun the water or withstand its’ force. Hence, children presented a large
proportion of casualties. (UNICEF 2005b). Generally they also display more severe
distress after a disaster than adults (Stevens & Slone 2008).

Children who survived the tsunami were often separated from their parents or in
worst cases orphaned. This was for many an even more traumatizing experience than
the tsunami itself. Many were exposed to traumas, which they will continue to carry
with them for a long time. Through research we know that safe and secure
environments for children are essential to build the foundations of good mental health
in adulthood. The mental health of parents is also crucial. However, feelings of safety
and security were gone within minutes when the wave hit the affected areas. Parents,
who were overwhelmed with the events and were in mental agony themselves, found
it difficult to give reassurance and necessary care to their children. Hence, the
consequences in children’s mental health were widespread and can without
intervention become long-lasting. (Ghodse & Galea 2006).

It is common that children express their distress through their behavior, as they are
often less able to do so verbally. Withdrawal, nightmares, avoiding communication,
poor concentration, and aggression were common (Ghodse & Galea 2006). Many
children between the ages of 4 and 7 also displayed regressive behaviors, including
clinging, fearfulness, bedwetting, startle reactions, as well as separation anxiety
(Becker 2007). It was also observed that children blamed themselves for what
happened to their parents and siblings. These feelings of guilt are common in all ages
but especially prominent in young survivors. (McDougall 2005). Most children
experienced that their symptoms disappeared within a few days or weeks post-
tsunami. Some children however, continued to display psychological problems
beyond the initial distress. (Ghodse & Galea 2006).

Studies indicate that nearly one third of children in Northern Sri Lanka have been
negatively affected by the civil war. It is likely that also many children in the Aceh
Province in Indonesia were influenced by the conflict affecting their region. Children
in these areas, who have previously been exposed to traumas, are hence at high risk
of developing mental health problems, such as PTSD, after an additional trauma.
VIVO 2005). Besides vulnerability to psychological distress, children also face other threats after a disaster. Post-tsunami, several relief agencies feared that children, who were separated from their families, were at risk of human traffickers - seeking to exploit surviving children through labor and sex work. The undertaking of illegal adoptions was also of concern. (McDougall 2005).

**Women**
It is estimated that 3-4 times more women than men have died in the tsunami. Many women lost their lives in the attempt to save their children and elderly relatives. (Oxfam 2005). The distress surviving women faced post-tsunami had likely a significant implication for children, as women are the main caregivers and homemakers in the affected regions. Maternal depression is believed to be one of the most critical factors regarding the development of psychopathology in children (Weissman & Jensen 2002). Thus, I find it important to state the risks and threats surviving women encountered as they are directly associated with the well-being of their children.

In a post-tsunami state of social chaos, women were at risk of abuse and sexual violence (Ghodse & Galea 2006). In camps, where the majority of survivors were men, women faced a heightened risk of rape, sexual assault, verbal and physical harassment and gender specific health problems (Oxfam 2005). Such incidents in turn increase the risk of mental problems. Also pregnant women and females who gave birth before or shortly after the tsunami were at high risk, as they experienced fear of loosing their offspring, and felt an increased strain as they needed to provide for their child despite having lost their loved ones, homes and possessions. (Ghodse & Galea 2006). Concurrently, they lived in crowded camps, subject to the uncomfortable heat and away from their familiar setting, becoming passive, some apathic, and unable to contribute to their own relief (MacDonald 2005).

Another problem girls faced post-tsunami is being pressured to marry earlier, and to have more children closer together. This practice has a clear negative impact on their education and health. (MacDonald 2005). Domestic violence has prior to the tsunami
been a noteworthy problem in several affected areas. The new strains on the family unit such as loss of livelihood and mental distress make domestic abuse a greater risk. A contributing factor to violence against women, also pre-tsunami, is the alcohol abuse of their spouses or other male adults in the family. (Oxfam 2005). This of course has direct implication on the well-being of children, as violence and alcohol abuse can lead to further traumatization.

Mentally ill
As previously mentioned, mentally ill survivors are often classified as category 3 survivors. People in need of psychiatric care often face stigma and social isolation, making them a group of high risk for abuse, neglect and/or punishment. (WHO 2003). They are thus viewed as the most vulnerable group and include children with special needs. Besides the risks of social isolation and abuse, there are also other factors contributing to their vulnerability. After the tsunami, there was a limited access to medicines which are crucial in stabilizing the mental state and avoid relapses. The tsunami likely triggered relapses of mental disorder, as the person faced high level of stress. Mentally ill persons often struggle with adapting to the changes that a disaster or conflict brings. This is often due to their dependence on mental health care, which becomes less available, were in need of psychological assistance themselves, or did not survive the tsunami. This limitation on mental health workers made it difficult to detect mental illness and many were hence left untreated. (Ghodse & Galea 2006). It is thus of utmost importance that teachers become involved in school-based intervention, and address the needs of their pupils - especially those with special needs and a history of mental illness.

3.5 Cognitive-behavioral therapy (CBT)
PTSD and other disorders, which may follow as a result of a trauma, are a mixture of physiological and behavioral symptoms, such as social withdrawal and aggression. These symptoms in turn are influenced by the cognitive processing ability of the child, and the parents’ or caregivers’ functioning. It is hence believed, that children who have experienced a trauma would profit from a model that takes their coping
skills into account – a model that would incorporate relaxation techniques together with cognitive and behavioral methods to address the physiological arousal, maladaptive cognitions, as well as the aggressive and avoidance behaviors. Cognitive-behavioral therapy (CBT) aims at just that – addressing symptoms of traumatized children and adolescents by using cognitive, behavioral and physiological skills. As I will verify in the section on CBT’s efficacy, the potential influence of the parents’ functioning on the child suggests that the best model of psychosocial intervention would include them. This would mean that CBT should be structured as a conjoint caregiver-child session, which includes the child as well as their caregivers in the treatment. (Brown 2005).

Even though I am aware that several other interventions can be effective in treating PTSD and trauma-related symptoms, such as pharmacotherapy, psychotherapy, and eye movement desensitization and reprocessing therapy (Taylor & Chemtob 2004), I chose to focus on CBT. This decision stems among others from the studies on CBT’s effectiveness, which I will present shortly, as well as the flexibility offered in CBT that allows the adaptation to various cultural contexts. In addition, the psycho-educational component of CBT shows great relevance to interventions in the school-setting.

**What is cognitive-behavioral therapy?**

CBT is grounded in the social learning theory and uses a variety of techniques. The theory of social learning is based on the belief that a person’s disposition, environment and situational behavior influence each other, and thus behavior is a dynamic phenomenon. In this view, the context shapes behavior and vice versa – influencing not only the behavioral outcome, but also an individual’s disposition, characteristics and preferences that lead to his/her behavior. (Friedberg & McClure 2007).

Five interrelated features contribute to conceptualize human psychological problems: the environmental context (including interpersonal relationships), the person’s physiology, cognition, behavior, and emotional functioning. These factors all change
and interact with each other, thus making up a complex and dynamic scheme. Physiological, cognitive, behavioral and emotional symptoms are experienced in an environmental context. Considering the individual’s situation, and addressing issues related to culture and context are thus vital for both assessment and treatment. Cognitive-behavioral therapy can then be summed up as trying to influence a person’s pattern of behavior, thinking, emotion and physiological reaction. (Friedberg & McClure 2007).

A child’s functioning and emotional reactions are greatly influenced by the way he/she interprets the experience. Thus, information is constructed by selecting, encoding and explaining what has happened. As a consequence, gaining insight of how a person views his/her experiences has a main central role in intervention. CBT serves as a guide to understand the distinct emotional states as they are portrayed by different cognitions. The various aspects of cognitive therapy have been thoroughly researched and are considered theoretically sound. Thus, therapies based on cognitive and behavioral theory offer a firm groundwork for interventions directed at children and adults alike. (Friedberg & McClure 2007).

**Cognitive-behavioral techniques**

Ellis (1979) categorized cognitive-behavioral interventions into elegant and inelegant strategies. *Inelegant* techniques are based on the aim to change a person’s thought through self-instructional techniques, whereas *elegant* methods aim to change reasoning processes, thoughts and structure by employing rational analysis. Each strategy is useful for a particular situation and can lead to a functional intervention. Thus, elegant techniques are not considered superior to inelegant strategies.

Inelegant techniques are often used early in the intervention process, and used mainly in treatments aimed at children and people who are in distress after a crisis. Elegant approaches are often employed with older children, who are able to express themselves more verbally and can make use of more abstract skills than younger children. When elegant methods are employed, the person who undergoes treatment
needs to utilize more cognitive-emotional processes. Thus, these techniques should not be relied on during crises when persons experience severe emotional distress.

There are several common methods of CBT that can be employed in the school setting. Among them are relaxation training, social skills training, problem solving, pleasant event scheduling, decatastrophizing and self-instructional techniques which are described below.

**Relaxation training** can be useful to a range of problems, including anger and anxiety. Progressive muscle relaxation entails the tensing and relaxing of particular muscles. Beidel and Turner (1998) propose that sessions for children are short and focus on fewer muscles than treatments aimed for adults. Often times relaxation scripts are used to bring about relaxation. These should be adapted to the child’s developmental stage and engaging. Wexler (1991) for example provides various creative ways to practice relaxation. One of such activities tells children to imagine ten lit candles placed in a row. Then, the child is asked to blow out the candles, one by one. This activity involves inhaling and exhaling, which are an integral part to relaxation techniques. Asking children to visualize candles keeps their cognition active and involved, which should be the aim for all relaxation exercises.

**Social skills training** helps children learn new skills with help of direct instruction, psycho-educational materials and demonstration of the skill. Then the skill is practiced, often in form of role play, and feedback is given. Role plays should strive to represent a realistic situation. After the child has grown confident by rehearsing the skill, it is applied in the real context. It is important that positive reinforcement is given to reward the efforts of the child. During the sessions, children can be taught many skills – how to make new friends, deal with aggression, ask for help and handle bullying. Assertiveness and empathy training are essential components to social skills training, in addition to learning to take perspectives. It also gives opportunities for children to acquire problem-solving skills and introduce them to other ways of behaving, thinking and feeling.
**Problem solving** involves five fundamental steps: 1) *identifying* the problem, 2) *brainstorming* various solutions, 3) *evaluating* the options considering the short-term and long-term consequences, 4) *implementing* the best solution, and finally 5) *rewarding* the child for solving the problem. As part of successful problem solving, children should be taught how to reward themselves for their effort. A good way to teach problem solving skills to children is through jokes, stories or games.

**Pleasant event scheduling** is often used with depressed children. It is utilized to boost positive reinforcement on a daily basis and to engage inactive children. Usually a schedule is made, listing the days of the week horizontally and the times of the day vertically on a piece of paper. Then the adult and the child try to plan as many enjoyable activities during the week as possible, which the child can undertake with family, friends, or teachers. As a consequence, the reinforcement in the child’s life is raised. Depression may be lifted through the experience of these enjoyable events. Commitment from both the child and adult is important in order to follow through and make the enjoyable events happen.

**Decatastrophizing** is often used to decrease children’s tendency to misapprehend the likelihood and degree of perceived threats. Often decatastrophizing includes a set of questions, asking children to evaluate the worst, best, and the most probable thing to happen. Frequently, problem-solving is part of the process, where children can develop problem-solving strategies that they can utilize when they experience a real threat. Through this, children become confident. Anxiety and fearfulness may also be reduced as a result.

**Self-instructional techniques** aim to alter a person’s internal dialogue, substituting maladaptive cognitions with alternative, more productive thoughts, without employing in-depth rational analysis. Thus, these techniques are considered part of the inelegant methods, but are nevertheless valuable in a variety of situations. Self-instruction includes three stages: preparation, encounter and self-reward. Children are taught how to guide their own behavior and manage distressing situations in each phase. In the preparation phase children are encouraged to get ready for a stressful
experience and focus on the things they need to do to get through it. Then children are taught how to decrease their stress through self-monologues in the encounter phase. When the children have employed the approaches for coping, they are taught how to reward themselves in the third stage of self-instruction.

**Efficiency of cognitive-behavioral therapy**
Quite a few research studies have evaluated the effectiveness of CBT on children with PTSD. Brown (2005) has established an overview of several such studies, many of which are based on sexually abused children who developed PTSD. Even though the cause of PTSD is different to what I will investigate in this master thesis, I find that these researches are important and valuable also in regard to children who experience PTSD symptoms after a disaster.

Cohen & Mannarino (1998) conducted a randomized clinical study of PTSD, including children of 8 to 14 years of age who were sexually abused. The result of the study showed, that CBT was superior to nondirective supportive therapy in reducing the children’s PTSD symptoms. In a previous study, Cohen and Mannarino (1996) concluded that a child’s behavior problems after a concluded intervention were related with the parents’ emotional response to the child’s PTSD symptoms. Thus the research revealed the potential significance of including caregivers in the treatment.

Deblinger, Lippmann and Steer (1996) have assessed the significance of caregiver’s participation in interventions. School-aged children who experienced symptoms of PTSD after being sexually abused were randomly categorized into one of four intervention groups: child only CBT, caregiver only CBT, conjoint child-caregiver CBT, or a community based control group. The results showed, that children who were part of CBT had a greater improvement of their PTSD symptoms than children in the community based control group. Children whose caregivers were included in CBT also showed a greater decrease in depression and externalizing behaviors in addition to the reduced PTSD symptoms.

Goenjian and colleagues (1997) have conducted a study which shows that school-based CBT in groups can lead to significant improvements for children with PTSD.
The effectiveness of trauma and grief-focused therapy was studied in adolescents who had experienced the earthquake in Armenia in 1988. Eighteen months following the disaster, schools were randomly categorized into two groups: one received intervention, whereas the other was a control group who received no treatment. After completion, children who received no intervention in the control group showed more symptoms of PTSD than they had before the trial. Children who were exposed to CBT however, showed a significant improvement.

Stein and colleagues (2003) also evaluated the effects of intervention. The treatments were aimed at reducing symptoms of PTSD and depression following the exposure to violence. The sample included in the study consisted of children in the sixth grade from an inner-city community. The children were of low socio-economic status and a greater part had a minority background. Also in this study, pupils were randomly categorized into two groups: one being an early intervention group who received ten sessions of trauma-focused therapy, whereas the other was a control group who received no treatment. Three months after the intervention was initiated, a self-report showed that children who received treatment showed a noteworthy decrease in their PTSD and depressive symptoms. Parents also reported that their children showed a decline in psychosocial problems.

Cohen and colleagues (2004) illustrated that CBT was superior to child-centered therapy in improving symptoms in all three symptoms’ clusters of PTSD in children who were sexually abused. In addition, children who participated in CBT showed a decline in depression, behavioral problems, anxiety and abuse-related symptoms. Parents who were included in CBT also showed a reduction in their own emotional distress and depression, which they experienced since their children’s abuse. They also engaged in more positive parenting and showed their children more support compared to parents who participated in child-centered therapy.

Taking these studies into account, one can conclude that it is effective to use cognitive-behavioral methods to treat trauma-related symptoms in children. The conclusions of the presented research are based on large samples, who were randomly
assigned to intervention groups, and imply that intervention is enhanced when both children and their caregivers are included. As far as my statistical and research methodological knowledge allows, I find that the studies were conducted with thoroughness and integrity, hence allowing for valid and reliable conclusions regarding CBT.

3.6 Relevance of culture and religion

There is increasing literature on the importance of culture, including religion, to the understanding and management of traumatic reactions such as PTSD. It has been argued whether the vulnerability to psychological disorders following a disaster is the same across different cultures, or whether symptoms are the same. Various factors make up a person’s identity and experiencing of self, which also plays a role in how one reacts to a traumatic event. Hence, an individual’s religion, social class, ethnicity, and gender are all relevant and shaped by the premises and attitudes in society and culture. Having this in mind, I will present several aspects of culture and religion that are relevant to intervention. First, I will review the concept of shattered assumptions, followed by a presentation on healing, reintegration and religious coping. Lastly, I will discuss Buddhism in regard to mental health.

Shattered assumptions
The experience of a massive trauma destroys the individual’s premises about the universe and self, referred to as shattered assumptions by Janoff-Bulman (1992). There are three basic premises: “(i) the world is benevolent; (ii) the world is meaningful; and (iii) the self is worthy” (de Silva 2006, p.282). A disaster can be reason to shatter these assumptions, where one no longer views the world as a safe or benevolent place and one no longer feels sheltered. The psychological responses after a traumatic event are partly due to one’s damaged worldview, which is greatly influenced by one’s culture and religion. Hence, it is likely that people from diverse cultures may have different fundamental assumptions than those presented by Janoff-Bulman (1992). Furthermore, it can be argued whether their reactions after a catastrophic event will reflect this difference in worldview.
Healing, reintegration and religious coping

Culture has a protective function in society. Establishments within its tradition facilitate healing and reintegration. Cultural interpretations can give rationalization of the event and its impact on the individual and the community as previously mentioned. Rituals and ceremonies performed by many cultures around the world can have a positive effect on a person’s psychological well-being. These traditions often include a process of purification, where one receives spiritual insights, personal growth, physical and emotional healing. Also forgiveness is often an integrated part of the rituals. An experiment by Wilson (1989) included a six-day-long Sweat Lodge ritual. Originally this ritual was performed by Native American tribes and is characterized by thanksgiving and forgiveness. In Wilson’s (1989) experiment, patients were given the opportunity to let go of their distress stemming from a previous war trauma. The study had remarkable results, as the distress was reduced and patients showed an overall improvement. (de Silva 2006).

Complex experiences, like the tsunami, call for good coping skills. Successful coping lessens the possibility of developing mental health problems or disorders. As previously stated, religion often becomes a means to understand the disaster, and turns into an instrument that helps people accept its results. Religious practices and rituals become coping mechanism, which can be observed by the way people interpret the traumatic event, in the goals they pursue and the means they use to reach them. (de Jong, Prosser & Ford 2005). This has also been empirically studied in recent years.

In Thailand for example, it is believed that every space has a ruler or spirit, who must be pleased and respected. Many hence viewed the tsunami as a revenge of the sea spirit for their exploitation of the sea by activities such as overfishing. Since Thais are predominantly Buddhist, they believe that one’s condition is the outcome of one’s previous actions, and hence, ones life is partially predisposed. This religious belief helped many people accept and triumph over the negative experiences they faced. This view might also have a protective effect on anxiety and depression. (van Griensven et al. 2006).
Seeing ghosts or hearing voices of dead ancestors was also common after the tsunami, and is viewed as a normal part of Thai culture and belief. In this cultural context, seeing ghosts is strongly associated with the loss of loved ones, and is hence a cultural specific way of coping with death, rather than a symptom of mental disorder. It is believed that the dead are reincarnated as malicious ghosts unless appropriate rituals are carried out for them. This view likely increases the distress in family members whose loved ones were never found or couldn’t be identified, and hence proper funeral rituals can not be performed. (van Griensven et al. 2006).

It becomes thus apparent that awareness of a person’s religious beliefs and coping is crucial when providing intervention. If we do so, it will likely improve our understanding of the struggling persons, of how they understand their distress, but also keeps us from misinterpreting cultural specific symptoms as symptoms of mental illness. In order to do this effectively, it is important to keep a close communication with the spiritual leaders of the community, who can share insights on the population’s religious coping. (de Jong, Prosser & Ford 2005). Thus, when a person’s religion is respected, and his/her coping skills included in the process, the overall intervention is improved.

Buddhism and mental health

There are several concepts of Buddhism that are relevant in the way people interpreted the tsunami. The idea that everything in the world is temporary, in addition to the thoughts on suffering and lack of permanent self will influence the way one interprets the event. Many survivors saw the calamity as a striking example of the impermanence concept. Also the concept of karma was seen as a partial explanation of the event – the disaster being the consequence of the people’s action. A crucial issue is whether these views of life make a person more able to acknowledge and deal with the traumatic experience compared to someone considering Janoff-Bulman’s (1992) assumptions as their own. Are Buddhist survivors, due to their beliefs, less prone to develop psychological disorders after a disaster? Even though no firm conclusions can be drawn on this subject, the experience from the tsunami shows that many Buddhists who were exposed to the
calamity developed the common psychological symptoms mentioned earlier: avoidance, intrusive thoughts and images, anxiety, sleep disturbances, and concentration difficulties. Extensive grief reactions were also seen in survivors who lost their loved ones. Due to little systematic empirical data, we do not know whether these reactions were significantly different compared to the reactions observed in other religious groups.
4. Presentation and Discussion

This chapter will discuss the tsunami’s effect on mental health and will present the outcomes of four research studies. After this presentation, I will discuss psychosocial support in disaster aid, followed by a discussion on the relevance of Buddhism. Lastly, I will present findings and thoughts on school-based intervention including strategies based on CBT that can be utilized in a school-setting, and a discussion on the teacher’s role. First, however, I would like to contemplate on the response observed following the tsunami.

4.1 Why such a response?

In a lifetime we hear of many disasters around the world, yet the tsunami was strongly perceived as personal. The disaster caused a vast devastation. Thousands of people were displaced – missing – dead. Millions were in need of assistance. The feeling of hopelessness and helplessness was felt not only by the ones experiencing the devastation close at hand but also by those abroad. Another reason for the tremendous response is found in the link between the Western world and the tsunami affected areas. Not only do many Western countries share historical links of colonization with the areas, many Asians have emigrated to the West throughout the years. Hence many who live in the West either have family, friends or knew people from the affected areas. Many areas devastated by the tsunami were known as tourist spots, and so numerous tourists were among the dead. Hence, the tsunami affected families beyond the geographical area.

The contrast seen in pictures pre- and post-tsunami was shocking. Beautiful sandy beaches and clear water was replaced by contaminated water and beaches overflowing with materials and human remains. Repetitive coverage of the tsunami made the disaster come alive in our living rooms. The trauma witnessed was overwhelming. It was in unbelief that we all watched the wave swallow everything around, without sparing anyone, over and over again. It is likely that many of those who watched the reports on television felt insecure, as they were reminded that life is
fragile and death often comes without prior warning. We watched in agony as people tried to hang on to poles and trees but soon lost grip of their children, family members and friends. Seeing the dead bodies and the way they were handled was on the borderline of being grotesque. To think that children watched these footages on television is extremely concerning.

The timing of the tsunami was also likely to contribute to the response, as it hit during the Christmas season. It is often a time of celebration for many - a tradition that is shared with family and close friends. It is also known as a time of giving. Keeping the big media coverage in mind, it is understandable that people were compelled to extend their giving beyond their own neighborhood.

4.2 Mental health

WHO (2007) describes health as a “state of complete physical, mental and social well-being and not merely the absence of disease”. Mental health is therefore an integrated part of restoring the health of survivors. However, the mental health aspect of relief work has been frequently overlooked in disaster initiatives (Becker 2007). The mental health effects of tsunami survivors play a central part in this master thesis, and will be discussed throughout the remaining sections. At this point, however, I would like to provide the reader with a brief presentation of the estimated effects, and share thoughts on the ongoing debate about PTSD.

*Estimated effects on mental health*

A disaster like the Indian Ocean tsunami is frightening to both children and adults. According to the American Academy of Child and Adolescent Psychiatry (2004) the child’s response to a disaster is influenced by: the child’s age, the parents’ response to the disaster, how much destruction the child witnessed during and after the disaster, and if friends or family members were killed or seriously injured. If the later is true, the probability of experiencing more difficulties will be greater.

Researches conducted in the West show, that about 20% of people require some form of professional psychosocial support in order to cope with stress and other
related symptoms after a traumatic event. 5% of people are expected to develop serious mental health disorders, which, as stated above, often are a combination of PTSD, depression and general anxiety disorders. These estimates were used in planning psychosocial programs of organizations such as Médecins Sans Frontières (MSF). (de Jong, Prosser & Ford 2005). Estimates from previous natural disasters are even higher than the number reported in Western research, stating that around 50% of survivors will suffer from psychological health difficulties from which 5-10% will require psychiatric support (WHO 2000).

**PTSD**

There is debate whether PTSD has been given too much focus after the tsunami. Is it incorrectly viewed as the biggest psychological disorder after a disaster? Through this literature review, I realize that PTSD is just one of many mental health challenges, including depression, anxiety and complex grief reactions. The question however is, if it is a waste of time to build PTSD-focused services, as it is viewed by WHO. In fact, WHO warned other agencies from falling into this trap, which might cause workers to overlook other mental health problems (Ashraf 2005). Even though it is important to keep PTSD in mind, it is obvious that other psychological problems should also be given attention when planning interventions and conducting research.

Several studies show that rapid needs assessment after a disaster is possible and important in order to direct proper mental health care (see section 4.3). Despite this fact, many are unsure if and how the exposure to a traumatic event affects the mental health of disaster-affected people. Critics often doubt the validity of PTSD, especially when applied to other cultures, and use the following rationales to support their view:

- Trauma is a Western concept, hence not familiar in other cultures.
- There is limited diagnostic accuracy to PTSD as different cultural communities do not share the same terms for its symptoms.
- Assessing PTSD may result in misleading outcomes, since the meaning of “symptoms” varies across cultures.
- Identifying PTSD may not be of main concern, as affected populations prioritize meeting their practical and social needs.
- Diagnosing persons with PTSD may promote passiveness and victimization, hence prohibiting them from taking part in the recovery of the community.
- What we view as symptoms of traumatic stress, may in fact be normal coping strategies that generally do not lead to impairment.
- PTSD intervention may emphasize a focus on the individual, which conveys an unrealistic message that all survivors should receive intervention.
- Interventions for PTSD are developed in the West and may not be effective in other cultures. They may also underestimate the culture’s customary ways of healing.
- It may be more important to focus on social, material, economic, cultural and human rights issues in providing natural recovery at a group level.
- Focusing on PTSD may blind us from recognizing other mental health needs.

The ongoing controversy has likely confused many, among others funding agency and those preparing mental health programs post-disaster (Silove & Bryant 2006). Whether the diagnostic mental health constructs are applicable across cultures give reason for concern. Diagnosing depression in the Western context is for example very different from its presentation and diagnosis in the areas affected by the tsunami. As stated above, there is an ongoing debate whether the diagnosis of PTSD is a Western construct of a normal reaction of distress. In line with this view, it would be an unwelcome exercise to bring awareness to PTSD. (Ghodse & Galea 2006).

Often there is a short time to gather quantitative data. Hence it is of value to accompany this set of data with qualitative information gathered through social mapping, key informant interviews, focus group discussions, and not least literature reviews. The information obtained through these various outlets, aim at correctly interpreting an individual’s perception of their experiences, as well as discovering positive coping mechanisms or levels of resilience. (de Jong, Prosser & Ford 2005). This practice can thus prevent the misinterpretation of mental health symptoms.
The awareness for appropriate intervention of good quality, which respects local culture, has been raised through experience from previous disasters. To impose Western approaches upon a society experiencing destruction is more likely to hinder its recuperation by diminishing its context and culture. In order to implement cultural sensitive approaches, one needs the support of the community. Consultation with community leaders and promoting partnerships between survivors and aid workers are the first steps to effective relief. In addition, aid workers need to be open not only to teach, but to learn from the knowledge and practices of the community as well. (Ghodse & Galea 2006).

In closing I want to leave the reader with the following thought: Finding the middle path in the PTSD debate, and adapting Western interventional models to the cultural context is crucial in order to achieve more good than harm.

4.3 Research studies

To shed some light on the mental health effects after the tsunami, I would like to present four research studies: the collaborative studies conducted by van Griensven and colleagues (2006) and Thienkrua and colleagues (2006), as well as the studies conducted by Bhushan and Kumar (2007), and Neuner and colleagues (2006). I will first present the study by van Griensven and colleagues, which focuses on adults, before I present the studies including children.

Van Griensven and colleagues 2006
Van Griensven and colleagues (2006) conducted a rapid mental health assessment on Thai adult survivors two months post-tsunami. Mental distress would have disappeared or become permanent by this time after the tsunami. The cohort study conducted as a initial mental health survey included a sample of 371 displaced and 322 non-displaced persons from Phang Nga, and 368 non-displaced persons from Phuket and Krabi. Three tools were used to assess mental health: the Medical Outcomes Study-36-Short-Form Health Survey, assessing a person’s perceived health, pain and social and emotional functioning; the Harvard Trauma Questionnaire,
including tsunami-specific trauma items; and the Hopkins Checklist-25, which identifies symptoms of depression and anxiety. With help of these instruments it was made clear that 11.9 % displaced persons in Phang Nga reported symptoms of PTSD, 36.9 % reported anxiety, and 30.2 % showed signs of depression. Furthermore, symptoms of PTSD, anxiety and depression in non-displaced persons in the same area were 6.9 %, 29.8 % and 26.5 % respectively. The prevalence in non-displaced persons in Krabi and Phuket was significantly lower, resulting in an occurrence of 3 % PTSD, 22 % anxiety and 10 % depression. Factors associated with symptoms of PTSD were seeing ghosts, having a family member killed, missing or contemplating suicide. In addition to these variables, being 35 to 54 years of age and being female, having a lower educational level, using drugs, hearing voices, being injured or having witnessed injury to family members, and not being of the Buddhist belief are associated with anxiety. Similarly, factors related to depression were being older and female, hearing voices, and having experienced injury or death. The loss of livelihood was considerably related to all three mental illness symptoms.

The follow-up survey conducted nine months later included 270 of the 371 displaced and 250 of the 322 non-displaced persons from the sample used in the first survey from Phang Nga. The outcome of the study showed a significant decline in PTSD, anxiety and depression symptoms. The prevalence of PTSD symptoms decreased from 11 to 7 %, anxiety from 36.9 to 24.8 % and depression from 30.2 to 16.7 %. The prevalence of mental health symptoms in non-displaced persons declined as well. The reported decline is from 6.8 to 2.3 % in PTSD, 29.8 to 25.9 % in anxiety and 26.5 to 14.3 % in depression.

Thienkrua and colleagues (2006) carried out a similar assessment of mental health symptoms among children 2 months post-tsunami in Southern Thailand. In all, 371 children between 7 to 14 years of age participated in the survey. Three demographic groups of children were identified: displaced living in camps (167 children); not displaced living in affected villages (99 children); and not displaced living in
unaffected villages (105 children). A follow up study was carried out 9 months post-
tsunami in Phang Nga province only, including a group of most affected children.

Three different scales were used to measure PTSD, depression and traumatic
experiences respectively: the University of California at Los Angeles PTSD Reaction
Index, the Birleson Depression Self-Rating Scale and a modified version of the
PsySTART Rapid Triage System. All items of the various scales were translated from
English to Thai. Bilingual local mental health professionals verified the translation’s
accuracy before they were administered to the children by psychologists, social
workers and psychiatric nurses.

The child version of the University of California in Los Angeles PTSD Reaction
Index (PTSD-RI) has previously been used to measure PTSD symptoms in
traumatized children after major disasters. The index includes 20 yes/no items that
are rated on a 4-point scale. A no answer scored 0, while a positive response could
range from 1 (a little of the time) to 4 (most of the time). A child was classified as
having PTSD symptoms if it scored higher than 40 when adding all items.

The Birleson Depression Self-Rating Scale is valid for screening depressive
symptoms in children. It consists of 18 items rated on a 3-point scale, measuring the
frequency of depressive symptoms experienced over the weeks post-tsunami. A child
was classified as having symptoms of depression if a total score of 15 or higher was
measured.

The PsySTART Rapid Triage System was modified and consisted of 13 yes/no
tsunami-specific questions regarding children’s trauma experiences. Topics included
among others having seen the tsunami wave, having been in danger, having seen dead
bodies and having felt panic.

Demographic characteristics, such as living in displacement camps, were not
significantly associated with having indications of PTSD. The prevalence of PTSD
symptoms was 13 % among children living in camps, 11 % among children from
affected villages, and 6 % among children from unaffected villages. Children who
had reported a direct exposure to the tsunami and its devastation were highly associated with PTSD symptoms. These variables were also significantly related to depression symptoms in older children. The prevalence of depression symptoms were 11 %, 5 %, and 8 % respectively. Moreover, children who had felt their own or family member’s life in danger had a six time higher risk for displaying characteristics of depression.

The follow up survey 9 months post-tsunami showed that the prevalence of PTSD and depression had not significantly declined in the 151 children who participated from Phang Nga. Therefore a future focus on assessing the long-term mental health consequences and the continuing need for mental health services is essential.

Whereas adults may find contextual interventions focused on restoring their livelihood beneficial, therapeutic interventions are more appropriate for children, where they receive help to understand and manage their feelings. This intervention is crucial to reduce the potential negative effect of the tsunami on their development. Schools are an example of where children can be identified and given intervention to reduce PTSD and depression. Teachers play an especially important role in referring children to mental health services, but also give them school-based support.

*Bhushan and Kumar 2007*

Bhushan and Kumar (2007) commenced the task of assessing distress and post-traumatic stress in children who survived the tsunami in India, reexamining the impact of the trauma from a cultural perspective. They embarked their research with four hypotheses: 1) children will score high on post-traumatic stress and emotional distress, 2) there will be a gender difference in regard to post-traumatic stress and emotional stress, 3) family support system will affect post-traumatic stress and emotional distress, and 4) loss of family members is a main contributor to post-traumatic stress and emotional distress.

130 subjects, 69 males and 61 females, from the province of Tamil Nadu in India were selected from the available population of 520 children one year after the tsunami. The sample’s age was between 10 and 16 years, with all children attending
middle school. 59.2% of the subjects belonged to a nuclear family, whereas the remaining 40.7% had a joint family background. Around 20% of the total sample (27.5% males and 11.5% females) had experienced the loss of a family member who lived with them prior to the tsunami.

To measure post-traumatic stress Bhushan and Kumar (2007) used the following measures: the Impact of Event Scale (IES) and the Children’s Revised Impact of Event Scale (CRIES). Both measures have been frequently used as screening tools for PTSD in the aftermath of wars and natural disasters. Furthermore, the Pediatric Emotional Distress Scale (PEDS) was used to measure emotional distress in the subjects, including 17 items on general behavior and four trauma-specific items.

The results of the study show that even after one year, the traumatic experience of the tsunami was still causing emotional distress in the subjects. Scores were determined as high if the subjects scored more than 9.5 on anxiety withdrawal, 8.5 on fearfulness, 13.5 on acting out, and 27.5 on other traumatic event related symptoms. On the PEDS, 94.2% of males and all females scored high on anxiety withdrawal. A similar high score of about 98% on fearfulness was reported in both genders. 20.3% of males and 24.6% of females scored high on acting out. Significant gender differences were observed in all measures, except for CRIES measure of intrusion and PEDS measures of withdrawal and acting out. The family type a child belonged to played a significant role in the IES total impact score, showing that the family support system had a positive effect on the children. Having lost a family member was, in light of the data considered, a good predictor of the scores achieved on all three scales. The experience of loss showed to have a high positive correlation with intrusion, avoidance, arousal and total impact.

The study of Bhushan and Kumar (2007) shows an unusual high level of distress in children considering that the data was collected one year after the tsunami. It is likely that the high percentages can be explained with the fact that many survivors were still experiencing many struggles and challenges to re-build their lives and overcome the grief and devastation that the tsunami brought. Even though females were generally
more affected by the disaster, there were no differences in withdrawal and acting out. The reason is probably more cultural than psychological, as acting out is not an acceptable behavior for women to engage in, and withdrawal might not be an option as females are responsible to obtain relief supplies and water for the family.

Bhushan and Kumar’s (2007) investigation once again confirmed that social support is crucial in order to cope with difficult events – the support that the family provides helped children remain active in their daily undertakings despite the loss and traumatic events experienced.

**Neuner and colleagues 2006**

Neuner and colleagues (2006) conducted an initial needs assessment for children in Sri Lanka. The study was carried out within the frame of a school-based psychosocial program that was developed three years prior to address the war traumas of children. Counselors who were trained in this regard where taught how to administer a standardized interview to assess the prevalence of PTSD in children. These interviews were conducted in January 2005 in three severely affected areas in Sri Lanka: Manadkadu, Galle and Kosgoda. The total sample included 264 children (134 males and 130 females) ranging from 8 to 14 years of age.

The child version of the University of California in Los Angeles PTSD Reaction Index (PTSD-RI) was the central instrument aimed to measure PTSD symptoms. The PTSD-RI had been translated into Tamil by a previous study, and the same principles were applied to translate the instrument into Sinhalese. The researchers added four yes/no items to the PTSD-RI that were specifically related to the tsunami, and also gave a score for family loss.

The results show that a majority of children felt that the tsunami was the worst event, and rather traumatic. They also reported seeing dead bodies, witnessing violence, and being in pain. Due to the civil war, previous traumatic experiences were high in the Tamil region, but also in the Sinhalese regions that have been peaceful in recent years. 8.5 % of children in Manadkadu, 5.9 % of children in Galle, and 4.6 % of children in Kosgoda fulfilled the criteria of PTSD related to a previous traumatic
experience. Furthermore, several children also fulfilled the PTSD criteria related to the tsunami experience: 33.8% in Manadkadu, 38.8% in Galle and 13.9% in Kosgoda. Due to the time of data collection, a diagnosis of PTSD can not be established so soon after the disaster. Predictors of PTSD related symptoms included the child’s experiences during its worst event, degree of exposure to the tsunami, loss of family members, and previous traumatic experiences. Age and gender did not predict PTSD symptoms. Children who were exposed to previous traumas are predicted to experience further distress post-tsunami.

**Discussion on research studies**

There are several limitations to both Thailand-based studies. The most prominent are the instruments used to measure symptoms of mental illness. The tools used, including checklists and surveys, are frequently used to assess mental and psychosocial needs, however they show considerable limitations. Questionnaires are often found somewhat inadequate, as a person may find it difficult to define their traumatizing experience in terms of a series of symptoms on a checklist. (de Jong, Prosser & Ford 2005). This is especially true for children, who may not be able to understand their feelings regarding the tsunami or verbalize their experience, hence creating a probability of underreporting PTSD and depression symptoms. At the same time, some symptoms displayed by children living in displacement camps may be related to the camp experience itself, not specifically to a possible trauma caused directly by the tsunami. (Thienkrua et al. 2006). The loss of loved ones can result in extensive sorrow, which can turn into complex grief reactions that create regressive behavior and may cause the child to show reduced attention towards the interviewer and the questions asked. In addition there may be some confounding elements that are distorting the interpretation of the data. An example of that may be the situation of children living in displacement camps and experiencing prolonged grief after the loss of caregivers. May prolonged grief be attributed to the original trauma or is it sustained by the living environment in a camp? This could likely have been a contributing factor to the little change observed over time in children by Thienkrua and colleagues (2006). These and other possible limitations in the dataset may lead to
bias in regard to the reliability and by that the generalization of the results. As elsewhere in supportive and therapeutic approaches, quite a large extent of evaluating of the situation and the means to solve the challenges is based on a broader perspective and can not only be mechanically administered as a result of data obtained from testing instruments used by researchers. (Belfer 2006).

Appropriate questionnaires are often not validated in the local context, and may therefore lack cultural sensitivity. The three questionnaires used in the study conducted by Thienkrua et al. (2006) for instance were all developed and validated in the West. Thus, the results of these questionnaires should be interpreted with caution to avoid misinterpretations and the under- or overreportation of symptoms (Ghodse & Galea 2006). Validating questionnaires for the local context is not impossible; however, the process takes a considerable amount of time and resources, which were not available at the time when the research was conducted as an urgent consequence of the disaster. Whether validated or not, however, the questionnaires may provide additional information. (de Jong, Prosser & Ford 2005). Thus, the data collected can give valuable information despite the mentioned limitations.

Looking at the results of both Thai studies, we need to ask several questions regarding the prevalence of PTSD symptoms: Does the prevalence propose correct information to help direct local mental health workers as they develop and carry out intervention plans? How should the results of the Thai studies be interpreted in regard to the high rates of trauma-related psychological symptoms? Both studies focused on studying the prevalence of symptoms, but did not measure to what degree these symptoms impaired the psychosocial functioning of the persons. This is a crucial limitation in my view. If the symptoms do not have an impact on the person’s overall functioning there might not be a pressing need for mental health support. There might also be a difference to the meanings various cultures attribute to the symptoms. Symptoms normally associated with PTSD may in fact reflect a way of meaningful and cultural specific coping mechanism after having lost a loved one in the setting of a particular local tradition. An example of this is seeing ghosts, which was quite often reported in Thailand. (Silove & Bryant 2006).
We also need to question whether persons who display symptoms of depression, anxiety and PTSD benefit from the psychological support offered – often brewing down to nonspecific counseling, which does not lower PTSD symptoms according to Western studies. Survivors might benefit far more from an attempt to bring security and predictability back into their life, and in doing so facilitating their natural healing process, resilience. The best support for survivors as a whole might in fact be to help them regain control over their lives and provide ways to gain a future income, thereby decreasing worry about the days ahead accompanied by psychosocial support. (Silove & Bryant 2006).

It is obvious to expect that disasters in the scale of the tsunami bring acute distress. However, symptoms of depression, anxiety and PTSD in adults decreased by half when measured 9 months post-tsunami. (van Griensven et al. 2006). Interestingly children showed little improvement over time. Is this due to grieving the loss of their parents and the lack of personal attention and care? This question was not brought up in the Thai studies, and hence we can only speculate to why children showed little change in symptoms 9 months post-tsunami.

It is unfortunate that the studies do not provide us with the following vital information: Which subgroup of survivors will likely recover with help of a good social environment over time? And whose symptoms will turn into mental disorders, needing professional interventions? Another concern not attended to in the two studies is whether the persons viewed themselves as ill. It is a fact that many in the West do not seek treatment for their mental health disorders. This is likely to be even more so in Asia, where mental illness is often even more associated with stigma and shame. Questions one can ask is if the survivors and victims of the tsunami received sufficient support from family, friends and community so that no formal interventions were needed, or if they were not aware of or did not have access to adequate services. (Silove & Bryant 2006). To answer all these questions there is a need to proceed from observational descriptive studies to more advanced study designs. Usually this entails concepts of analytic studies like interventional trials with parallel group design, where one group serves as control group and the other gets specific interventions.
I also wish to discuss the other two research studies, which address the same issue, but conducted their research in other settings which have different cultural and political backgrounds. Hence, they bring forth additional focuses. The study by Neuner and colleagues (2006) was conducted in Sri Lanka. They found that the tsunami was not the only cause for PTSD in children, but previous traumatic events of the armed conflict have caused strain on the children and increased their vulnerability for various psychiatric disorders. The researchers mention that their findings are in conformity with several studies supporting a general “dose-effect” model in the development of PTSD. This is an essential contribution to the aim of identifying children who are at risk of developing disorders; thereby focusing preventive measures to this at-risk group. As stated, many children showed high levels of psychopathology prior to the tsunami, and their psychosocial needs frequently not met over a long period of time. In the dramatic circumstances after a major disaster it is hence important not to forget to investigate the psychological stress present in the population before the traumatic event, which may contribute to making children more prone to psychological destabilization or to prolong the time of mental distress. Neuner and colleagues (2006) also found in their study, that age correlated positively with previous traumatic exposure, as the number of traumatic events experienced pre-tsunami and the number of family members lost in the tsunami were increased. The study was designed as a cross-sectional approach. There is a pressing need however, to conduct longitudinal studies, such as cohort studies or interventional trials, to find out more about what enhances or hinders the recovery of children, and find risk factors which identify negative psychological developments.

Bhushan and Kumar’s (2007) study consists of a relatively small sample size considering the population – this is true also in light of the other studies presented in this thesis. In their research study, they mention that only 20% lost a family member, which equals 26 children. Considering this fact, it seems quite evident that there is not only an issue regarding statistical significance, but also a challenge concerning the transference to practice. Therefore, the results of this study may be biased and not so easily generalized and applicable to other disaster affected populations. The
researchers found relatively high percentages of PTSD one year post-tsunami. In their study presentation there is considerable amount of attention given to the comparison of the scales administered, and the weighing of different symptoms of distress and PTSD in this population. There is no further description of the living conditions of the sample, other than what they refer to as “makeshift camp-cum-schools”. It may be that this environment was of questionable quality and may thus explain the high distress level in this population. It may be of concern, that the research article does not show how the scales have been administered, and thus it is not known whether the children’s responses or the results were influenced by the researchers in any way. It is therefore a possibility that the data presented by Bhushan and Kumar (2007) may be skewed. Furthermore, applying three different scales measuring similar symptoms may present a statistical problem in this small sample. By doing so, the chance of finding something seemingly relevant but not significant is increased. This is similar to the problem of repeated measurements. In addition, the researchers have used cut-offs for various scores, which are not further explained. All together, I could not get too much more valuable information out of this paper. This leaves the impression that the conclusions are scientifically biased, which I can not agree to. However, the study presents an example of the necessity to studying this highly affected population further, to find out more about the mental health effects and what kind of help is required.

4.4 Psychosocial support in disaster aid

The massive humanitarian assistance observed during the tsunami was astonishing, but yet also raised concerns of poorly organized, duplicated and inappropriate relief efforts (de Jong, Prosser & Ford 2005). In this section, I will present aspects of psychosocial support found to be crucial after the tsunami. Following this presentation, I will establish an overview of the four phases of disaster aid and discuss some issues of psychosocial support.
Aspects of psychosocial support

Psychosocial support attempts to meet both immediate and long-term mental health needs of disaster survivors, giving emotional support along with practical assistance (Becker 2007). Each response to a disaster is unique and challenging as interventions take place in a social and cultural context. Building post-disaster efforts on culture, religion and social cohesion is beneficial, as they provide a sense of faith, social reintegration, and much needed hope for the future (Silove & Bryant 2006).

Immediately after a disaster, where many families are torn apart, it is part of psychosocial support to help reunite families and loved ones. This includes assisting survivors as they grieve the dead – providing them with opportunities to do so in culturally appropriate ways that can ease their distress. Funeral ceremonies and other traditional rituals are also ways in which social structure and inclusion can be strengthened, and are thus essential to psychosocial support. (Rao 2006). Linking survivors with available aid is crucial. After the disaster, Médecins Sans Frontières (MSF) for example carried out needs assessments, followed by a community-based psychological care program. The main goal of the program was to enable survivors in resuming daily activities and to motivate them to participate in their community. (de Jong, Prosser & Ford 2005). Establishing a sense of being in control in the survivor, giving them opportunities to impact their own situation in constructive ways, has a positive impact (Rao 2006).

The maybe most vital role of psychosocial care is to give social support – helping people cope with their distress (Stevens & Slone 2008, de Jong, Prosser & Ford 2005). The support can also contribute to preventing the full development of PTSD, and aids in recovery and adjustment. It should be noted, that the person’s perception of being helped, and the efficiency of support received is crucial. (de Silva 2006). Surviving a natural disaster often leaves the victim not only afraid, but also lonely and isolated. Social networks of support provide security and comfort. Thus, reconnecting the individual with his/her community is very important. (Rao 2006).
After the tsunami, it was clear that social support systems have been left devastated. Entire communities were wiped away, family members and friends lost and hospitals ruined (Stevens & Slone 2008). After initial rescue efforts the experience of the traumatic event often starts to settle in. In this time, survivors often wish to share their experiences and feelings, and memories they have from happier times. Thus, opportunities to share emotions should be made possible, but should not be forced on the person. (Rao 2006). Culturally adapted interventions can enhance people’s coping mechanisms if their religious beliefs and cultural traditions are acknowledged (de Jong, Prosser & Ford 2005). Beyond this, it is also crucial that provisions are gender sensitive. It is recommended that one arranges homogenous gender groups for psychosocial intervention, rather than mixed gender groups in the cultural context of the affected regions (Ghodse & Galea 2006).

It is important that persons are not stigmatized by disorder labels early after a disaster, or let them be exposed to the curiosity of the media and researchers. Providing survivors with safety and protection is crucial. There were instances where young victims of the tsunami were interviewed, likely causing harm as they repeatedly had to share their traumatic experience to different reporters. Also in attempts of providing intervention, one needs to keep the victims safe. Trauma-focused debriefing sessions can result in further trauma, or can be re-traumatizing, and should thus be discouraged in the aftermath of a disaster. (Ghodse & Galea 2006). Instead of debriefing, individual and group counseling were used by MSF to help survivors cope with the traumatic events. Self-help and self-control mechanisms were fostered through health education activities, addressing issues of both physical and mental health. MSF staff worked together with psychologists as well as spiritual and village leaders during these activities. (de Jong, Prosser & Ford 2005). The cooperation with local mental health authorities is essential as most interventions require an understanding of the socio-cultural context and need to be adapted in order to be effective (Ashraf 2005). At the same time, incorporating local mental health workers and teachers ensures that interventions are upheld also after the international aid workers have left the area. (Silove & Bryant 2006).
Active listening is important in psychosocial support and entails showing interest and concern by maintaining eye contact and focus on the person. Being empathetic and sensitive by accepting the person, the experience and the feelings associated with it is also essential. This is in contrast of being moralizing and/or condemning, which should be avoided during psychosocial support. Practices of relaxation are also crucial, as they are effective in reducing symptoms of distress. They are often based on simple breathing and muscular relaxation, and practices of meditation. Such methods are often incorporated in the culture and religion of many Asian people, and hence will strengthen their natural way of coping. (Rao 2006).

Events like the tsunami change a person’s life completely within a period of seconds. A comfort during this difficult time is having faith in a higher power, which is in control of life’s events. It is believed that cultures which have a strong religious frame are able to deal with difficulties more efficiently than cultures that focus on the individual person as being in charge of his/her destiny. Activities that involve spiritual rituals can be of comfort and contribute to establish hope as the person goes through the stages of grieving. (Rao 2006).

**Phases of disaster aid**

Disaster aid is often classified into four phases, with each phase catering to different needs of the affected communities. These phases will be described now.

**The rescue phase:** The phase begins immediately after a disaster, enduring for about two weeks or more depending on the scale of the event. It can also be defined as the “heroic phase”, a time where altruism is at its peak and people come together for a common goal: to prevent loss of life and property. Other initial priorities are to provide food, water, shelter and sanitation, to identify bodies and arrange their burials. (Ashraf 2005). Psychosocial care in this phase consists of psychological first aid, which aims to provide those in need with immediate physical and medical assistance. This includes identifying those who are most vulnerable and at risk. Thus, setting up clinics is important, as well as providing them with credible information, which they can rely on. Rumors can lead to panic and other undesirable
consequences. (Rao 2006). Many survivors who had suffered great loss worked side by side with aid agencies. However, not all people who were present in the affected areas after the tsunami were driven by an altruistic spirit. Looting, plundering and pursuits to exploit the vulnerable were reported as well.

**The relief phase:** This phase takes place about two to six months after a disaster. It is also referred to as the “honeymoon phase”, where the tremendous amount of help, support and promises result in a high level of hopefulness in the affected populations. However, many people are likely to be still living in relief camps at this stage. The result of living in camps is often loss of identity and disorientation. Thus, psychosocial care is supportive and directed at problem solving, reducing emotional discomfort and normalizing the situation in the relief phase. (Rao 2006). An essential part of instilling a sense of normality in children is the reopening of schools, as worldwide experiences from natural disasters, wars and tragedies show. UNICEF for example provided enough school supplies for 560,000 children across the Aceh Province (UNICEF 2005a). In some affected areas, teachers were taught ways in which they can manage the grief and distress in their pupils. The general feeling however is that non-governmental organizations (NGOs) offered many opportunities for children to play, without systematically addressing their disturbing memories, which often result in poor concentration, which in turn will affect their learning abilities. (Penrose 2005).

**The rehabilitation phase:** This phase lasts up to one or two years after a disaster, or longer. It is also known as the “disillusionment phase”, where it is revealed that promises are not kept and expectations not met. This, together with delays and legal barriers, often leads to skepticism and criticism, often directed at international aid agencies and governments. The disaster-affected people recognize that they need to take their problems into their own hands, instead of waiting for assistance that might not come. In comparison to the relief phase, most survivors would have moved to their homes again and established a sense of normality. However, many will still seek the group-based activities offered in many relief camps, which enables victims to get involved in their communities. The participation does not only provide the support
they need, but also gives them a sense of identity and belonging. The main focus of psychosocial initiatives in the rehabilitation phase is creating reciprocated emotional support, sharing problems and discussing solutions, learning more efficient coping skills, and encouraging community participation. (Rao 2006).

The rebuilding phase: This phase is the longest of all four phases. Rebuilding the homes and lives destroyed by a disaster can take many years, even a life time. It is also known as the “reconstruction phase” where individuals work together with the community to restore normal functioning. This includes coming to terms with the disaster and its effect - realizing that life must continue despite the great loss. An important aspect in this period is to develop disaster preparedness that can prevent a future disaster or minimize its devastating impact. This can be achieved by strengthening the communities’ resources and increasing the people’s resilience. Developers of psychosocial support programs will thus devote their time in building competence - training staff who can act quickly in the event of a natural disaster or after an otherwise traumatic event. (Rao 2006).

Discussion of psychosocial support
It is clear that psychosocial interventions are needed after a catastrophe like the tsunami was, and have to be tailored to needs of individuals and directed to specific vulnerable groups. Hence, programs intended for children will be very different from the support given to others like for example widows. The eagerness of individuals and professionals willing to help in the disaster aid was astonishing. This can however cause more burdens to the already limited resources, unless the help is carefully managed. Unless the input given by aid agencies is sensitive to and integrated with the existing services, it is likely to disrupt the recovery process. Hence, coordination is the key to effective aid. The lack thereof can result in more harm and can worsen the already existing chaos. (Ghodse & Galea 2006). Trying to meet all needs of a community, or wanting exclusive privilege of working with a specific survivor group can often lead to gaps in the services provided (Ganesan 2006). Victims benefit from a close coordination and working relationship between
the organizations. Through this, competition will be reduced; duplications or gaps in services can be avoided, and as a result more can be achieved.

After the tsunami, programs were often started in a rush to meet the psychosocial needs of the victims, which likely lead to questionable quality and appropriateness of the projects. Frequently training sessions were conducted to cover for the lack of qualified health care workers. The training was given by various organizations, and differed greatly in both quantity and quality. The question is how much a person can really learn about giving psychosocial care from a training lasting from three days up to two weeks if no previous knowledge is in place? Is it even possible to gain appropriate practical skills in such a short period of time? It is clear, that staff who received training needed both supervision and support when working out in the field. However, most trainers only remained at the site for a short period of time, preparing project proposals, give training and then moving on to a different project. Hence, there was very little supervision, if any at all. (Ganesan 2006).

Many organizations confirmed that they were engaged in psychosocial work, including trauma specific counseling. However, based on the information given by many aid agencies, it is difficult to get any insight of what their psychosocial care programs entailed. Even more challenging is the task of finding out what competence their staff had in regard to counseling and as good as no information is available on how efficient their programs were in regard to increasing the well-being of the affected groups. I agree with what William Yule (2006, p.263) has to say on this matter: “Evidence-based practice has yet to enter the vocabulary of most NGOs.” These are strong words, but quite fitting to the challenge found in providing effective psychosocial support under extremely difficult circumstances.

It is obvious from the information available on the tsunami and psychosocial support applied that many came with good intentions, but did not know how to go about turning their willingness into beneficial actions. Some individuals even came from abroad, intending to conduct “therapy” for a couple of days. This was of course done without any previous insights of the situation and local culture, or awareness of the
services already available to meet the mental health needs of the survivors and affected persons. It is hence not unimaginable that this lead to a somewhat chaotic state, where some persons were provided with aid from several organizations, while others received none. (Yule 2006). The potential risk of delivering inappropriate psychological intervention to individuals undergoing major trauma has thus been of concern. Even though altruism is always applauded, lack of competence and sensitivity can cause more harm than potential good. (Ghodse & Galea 2006). It is also of experience that societies based on a close relationship with one another may only accept help from within their fellowship, thus teachers can be a great resource. Psychosocial interventions that do not meet the cultural norms will likely fail and are at risk of diagnosing the normal feelings of loss and fear as depression and PTSD. (Bhugra 2006).

Unlike the relatively good mental health care in Thailand, mental health services in other affected areas have had the previous challenge of civil war, like it is the case in Sri Lanka and in the Aceh Province, Indonesia. Especially in these areas, the delivery of untested short-term interventions for PTSD conducted by various international aid organizations has been criticized. Cooperation between international and local professionals is crucial in order to prepare and carry out culturally sensitive interventions. The post-tsunami need was an opportunity to develop more effective mental health services in the long term, not merely addressing the short-term mental health problems caused by the tsunami. (Ashraf 2005). Having a long-term perspective, where psychosocial support programs can be put into action by local mental health workers, is crucial in achieving this long-term goal (Silove & Bryant 2006).

4.5 Relevance of Buddhism

Temples played a crucial part in sheltering and providing the basic needs for the affected people in the rescue phase, whether victims were Buddhist or not. Buddhist monks were driven by compassion as they responded to the suffering around them. Despite lacking proper evaluation, there have been informal discussions on the
relevance of Buddhism in regard to understanding and coping with the aftermath of the tsunami. De Silva (2006), among others, writes about this issue, and has since been used as a framework for this section, which discusses Buddhism in light of intervention.

**Buddhism in intervention**

Can Buddhist ideas and practices be adequately used in intervention? The notion of impermanence as stated above is an idea of Buddhism that can be of influence. When working with Buddhist survivors, it is crucial to offer support for their views on life and nature, even though these might go against your own convictions. A survivor needs help to accept the immense loss experienced, but also motivation to regain control of his/her life and make an effort to rebuild it. The idea of impermanence does not call for inaction, but rather promotes the acceptance of reality for what it is. Neither does the notion of karma call for helplessness and passiveness, but gives hope that one’s deeds can lead to modifying outcomes in one’s life.

The concept of compassion provides an obvious value to psychosocial interventions. It can be expected that genuine compassion will enhance the work of any mental health professional. However teachers and mental health workers are not the only ones expected to be compassionate. Even survivors can direct their compassion towards helping others, and in doing so, decrease their own psychological distress. Foremost, it is important that one has compassion towards oneself, which can help survivors in managing their guilt, shame and self-blame more effectively. Compassion in intervention, and as a self-help tool, has thus a clear appeal and would provide an interesting perspective for future research.

In recent years, the concept of meditation has been frequently adopted in the West. More literature also suggests its therapeutic significance. Meditation, as practiced in Buddhism, is a path of personal growth, as well as a coping strategy, when faced with adversity, such as grief following the death of a loved one. There is especially therapeutic relevance to meditation as a part of the “mindfulness” concept in psychology. It is a process of growing more aware of one’s emotions, cognitions and
sensations as they occur in one’s life. It has also as important aim to reestablish life in the presence. Being mindful can have a positive effect on depression, anxiety and pain. It is also relevant to other symptoms of mental distress, such as intrusive memories and images. The value of this concept has in recent years been adopted by CBT in form of mindfulness therapy, which aims to adapt people’s cognition by helping them examine and detach themselves from maladaptive cognitions. (Bryant & Njenga 2006).

Other practices often employed by Buddhists to improve well-being are protective chanting and the giving of alms, the later being particularly performed after someone’s death. Both of these practices were a part of the tsunami’s first anniversary, and are culturally accepted coping strategies that encourage social unity and reintegration.

I can see a clear advantage of using these strategies with Buddhist survivors, since they are an integrated part of their cultural tradition. Therefore, intervention will not be seen as foreign, enhancing not only it’s applicability to the victims, but increasing the probability that victims will consider treatment. It is also probable that victims become more active in their own intervention, and comply more eagerly with the recommendations of a mental health caregiver. It can further be beneficial to combining Western models with Buddhist coping methods to assist distressed survivors after the tsunami. This practice of adding cultural or religious components is already increasingly utilized in psychological therapy and counseling in the West like the concept of mindfulness, and is hence not an unfamiliar practice. However, evaluation on effectiveness should guide ones decision about which techniques one should to employ.

### 4.6 School-based intervention

Children benefit from learning cognitive and behavioral skills that will help them improve their emotions, cognitions, behaviors and their social relationships. In addition, cognitive-behavioral strategies can assist children in feeling safer and regain
stability. In this section, I will discuss some creative applications of CBT, including storytelling, play activities, worksheets and craft activities. In addition, examples will be given of specific issues and how one can address these. Lastly, I will present the role of teachers regarding crisis education and intervention.

**Cognitive-behavioral strategies**

Several controlled studies confirm that CBT is the best psychosocial approach for PTSD, depression, anxiety and grief intervention. Nevertheless, interventional strategies need to be adapted to the cultural context and the professional group who aims to employ them. Cognitive-behavioral strategies are flexible enough so that they can be continuously adapted to the various cultural and social contexts in which they are utilized. (Bryant & Njenga 2006).

Meeting the basic needs of children and reuniting families should be completed before cognitive-behavioral techniques are initiated. Scholars however agree that early intervention is crucial. Aid agencies often do not share this view, as they believe that the rebuilding of homes should take priority over interventional efforts. It is clear that the grieving process takes time, and that cultural and religious rituals can support this process. Cognitive-behavioral strategies utilized in crisis education are reported to be meaningful tools. However, CBT cannot be applied successfully if it is viewed as an imported Western approach. Therefore, it is needed to provide local people with academic background, as teachers are, brief training in cognitive-behavioral strategies. The interventional methods should be viewed as an extension of the teachers’ educational efforts to psycho-educational endeavors. Through this it may be much easier to adapt the interventions fully to the cultural settings and utilize them in the existing frameworks. This has to be followed up by evaluation and supervision of the teachers’ practices. In addition, research to validate this procedure is essential to adjust future programs or develop new ones. (Bryant & Njenga 2006).

There are many cognitive-behavioral strategies that can be used creatively both in a formal therapeutic and school setting. Below, I will present some strategies that can be used by teachers to address the needs of their pupils.
**Storytelling:** Many clinicians are of the opinion that storytelling has therapeutic effect with children. Recently, also CBT has realized its potential. For many, childhood is characterized by stories and imaginary play that have natural narrative themes. Therefore, children’s interest in pretend play makes storytelling an unforced activity for them. (Trad & Raine 1995). During storytelling, children are asked to construct their own story, consisting of a beginning, middle, end, a problem and lesson. For children who struggle with telling a story, an opening line of a story can be provided to get children started. Often, the adult will tell a story as a responds to the child’s story, which provides a more productive solution to the problem. Focus is given on how the pupils describe relationships, environments, emotional reactions, and how problems are solved. The inner worlds of children are often revealed through the main character’s wishes and fears. Thus, the stories give insight to the child’s thoughts and emotions. (Friedberg & McClure 2007).

**Storybooks:** Encouraging children to make a storybook can be a good follow-up activity to the storytelling method, where children are asked to compile their stories in a notebook. This provides an opportunity for parents and teachers to review the child’s stories and address the progress made. Ideally storybooks include a section that describes what was learned from each story, which provides a great reference point for children to revisit later. Also storybooks which are based on themes that the pupils struggle with can be of great assistance. Common themes aim to build self-esteem and tolerance, and increase the coping and problem solving skills of the pupils. The advantage of using storybooks is that they often include guidelines for parents or teachers, so they can be not only employed in schools, but also in the homes by engaged parents. (Friedberg & McClure 2007).

**Play activities:** Play is an important part of childhood, having not only the effect of enjoyment but also learning. Through goal-directed play activities, change in the thoughts, feelings and behaviors of children can be brought about. Play is thus used as an instrument to teach more effective coping skills by addressing inaccurate cognitions. Concrete and visual depictions help children get involved, and are therefore crucial. Examples of visual tools one can employ during play are puppets,
clay and animal figures. Popular children’s games can also be employed, since they often require problem-solving skills and are emotionally arousing. Thus, games can help identify the thoughts and feelings of pupils, and can improve the children’s social skills. “Thought-Feeling Hoops” is an example of a play activity that consists of matching thoughts and feelings with shooting a basketball. The game teaches children basic self-monitoring skills in an enjoyable way by connecting situations, thoughts and feelings. It is also an activity where the adult can address the pupil’s inaccurate predictions including performance anxiety and fears of receiving negative feedback, and provides an opportunity to attend to the child’s negative emotions. (Friedberg & McClure 2007).

**Workbooks:** There is a variety of workbooks that can be effectively employed as part of CBT for children and adolescents. Workbooks often include a range of exercises that match the pupil’s developmental level, including crafts and stories. A well-known example is the Coping Cat series developed by Kendall (1990) – a compilation of activities and methods aimed to help children between the ages 7 to 13 who experience anxiety.

**Craft activities:** Craft-oriented activities can also provide cognitive-behavioral components. An example of this is the “Thought-Feeling Watch” developed to raise pupils’ awareness of changeability. In this activity, children make a paper wristwatch that has a mad, sad, scared and happy face at 3, 6, 9 and 12 o’clock of the watch circle. Then, the child’s feelings are communicated by the hands on the watch. The wristwatch helps the child become aware, that just like time, feelings change as well. The pupils are commonly asked to describe their thoughts, every time the hand of the watch points to a different face. This exercise helps teachers take a closer look at the child’s “world” and thus creates a bond between the teacher and pupil that is essential when addressing maladaptive cognitions. (Friedberg & McClure 2007).

It is clear that many cognitive-behavioral strategies need prior knowledge and understanding of the techniques and how to utilize them in an appropriate way. Thus, some training in addition to supervision and guidance is vital to ensure their effective
use. However, many activities come with clear instructions for the adult who aims to employ them, and therefore maybe more practice is needed than training. It is important that strategies chosen by the teacher have relevance and are meaningful to the child. For younger children, the techniques can often be referred to as fun games. Older children, however, have often more understanding regarding the purpose of the activities. It is thus important for the teacher to communicate to them that the goal is not to change their beliefs but rather help them think about their feelings, experiences and their future outlook in different ways. Creating a safe environment where children can share their thoughts and feelings, and learn to think in new ways, should be the main goal for teachers when applying cognitive-behavioral strategies.

**Exemplifying applications of cognitive-behavioral strategies**

Baggerly (2006) presents some examples on how cognitive-behavioral strategies can address several challenges after a disaster, including normalizing symptoms, managing hyperarousal and intrusive re-experiencing, increasing accurate cognitions and effective coping, how to seek social support and foster hope. The strategies presented may be utilized by teachers without needing extensive training in CBT. Thus, these approaches may effectively be employed in a school setting.

**Normalize symptoms:** Children may display several behaviors of distress that may be of concern for adults and may be embarrassing to the child. Examples of such distress include aggression and bed wetting. These symptoms can be normalized after a disaster by informing both the children and their parents. Adults need to become aware of the normal reactions after a disaster, so that they can address these behaviors more efficiently. At the same time, children need to gain insights of what has happened and receive reassurance. This can be effectively done through storytelling and puppet shows. During the tsunami for example, a puppet show was used to explain the normal reaction after the tsunami and how one could determine if another tsunami was on its way by seeing the physical changes of the tidal waves.

**Manage hyperarousal:** Hyperarousal after a traumatic event is a common experience for many pupils. Children are unable to come to rest, avoiding stimuli
associated with the disaster to manage their distress. To help children with these symptoms, teachers can employ relaxation techniques, and teach self-soothing methods such as practicing deep breathing through play activities, muscle relaxation by pretending to be a rag doll, and focusing on positive images by drawing happy places. Primary caregivers should also be taught how they can sooth their children by rocking, massaging or singing to them. In many affected areas, children were afraid to be close to the ocean. Through comforting songs, positive images and breathing techniques, children were able to gradually return close to the sea.

**Manage intrusive re-experiencing:** Other symptoms experienced after the disaster were intrusive thoughts related to the traumatic event. It is important that children are taught how they can deal with these invasive images. Techniques teachers can teach their pupils include how they can replace thoughts with a previously determined phrase or song. Teachers can also use games that help children re-focus and view their environment as safe.

**Increase accurate cognitions:** After a disaster, children may have some misattributions, such as the thought that the disaster is a consequence of their behavior. It is important, that teachers try to identify these misinterpretations and replace them with correct information. Ways to do this is for example to make a Q-sort, where children have to sort out true statements from false ones. For younger children, it can be beneficial to draw out what they think is to blame for the disaster, and thereafter make a drawing together of what the real cause is. In some areas after the tsunami, puppet shows were created that addressed some of the common misinterpretations and corrected them by giving explanations, which could be understood by young children.

**Increase effective coping:** Children often times do not have a wide variety of coping strategies, and may not have the cognition to evaluate whether the coping skills they do have are efficient. Symptoms of depression are shown to be related to negative coping including self-blame and withdrawal. Thus, teachers need to help pupils in sorting out ineffective strategies from effective ones. Teachers can then correspond
the children’s coping styles with the interventions given, thereby decreasing negative symptoms associated with the aftermath of a disaster. Ways that teachers can increase efficient coping may include games where children match adaptive coping strategies and disregard maladaptive ones. After the tsunami for example, children made bracelet stating an effective coping skill they could utilize when needed.

**Seeking social support:** Social withdrawal or clinging behaviors are common after a disaster. Older children may also begin to act in disruptive ways. As a teacher, one should aim to instruct children how they can seek social support, and thereby reducing social withdrawal. One way to assist children in approaching others for help is by making support tokens, stating the child’s request for help, which they can hand to an adult or peer when they are in need of assistance or support.

**Foster hope:** As a consequence of a disaster, a child’s world of safety, order and meaning is shaken. Therefore, many lose hope when they witness destruction and experience loss. A teacher’s role in this circumstance is to foster hope and promote positive outlooks for the future. One way to do this is through songs and poems that express hope and affirm the rebuilding efforts. Some pupils were encouraged to find objects after the tsunami, which they placed in a box to represent the rebuilding of their community.

Interventions that are employed after a disaster have as a goal to further resilience and reduce distress. If pupils have a history of unstable mental health, or have experienced previous traumas, special care needs to be taken by teachers and mental health workers not to cause more harm. When teachers identify children who have been previously exposed to traumas, it is often in the best interest of both, the pupil and the teacher, to refer the child to a mental health professional. Teachers are not expected to conduct therapy, and to deal with extensive and complicated traumas. However, as the strategies above show, teachers may contribute in a positive way in helping children cope with their symptoms, give support and foster hope.
The role of the teacher

Teachers often find that planning and carrying out lessons keeps them from being fully engaged in the well-being of their pupils. Thus, they do not have the time, nor feel qualified, to utilize interventional strategies. As a result of this attitude, children’s apparent or hidden signs of distress are often ignored. It should not be an aim for teachers to become therapists in the classroom, nor should they have to employ difficult therapeutic strategies that are beyond their capabilities. Rather, the struggles of the individual child should receive more attention. Teachers are therefore challenged to use familiar psycho-educational strategies in a systematic and goal-oriented way, so that the pupils’ psychosocial needs can be met. As a consequence, teachers, through their daily interaction with children, can be able to identify those, who despite their psychosocial efforts, still experience distress, and can thus take the important step of referring them to a mental health care professional. (Raundalen & Schultz 2006)

Teachers are on the front lines - dealing with pupils' emotional needs on a daily basis. In the aftermath of the tsunami, where pupils and teachers likely suffered from emotional distress, it can be difficult to know what to say or do to improve their condition. Staying calm is an obvious asset in crises, as it helps teachers think clearly about what their duties are and act upon them. This calmness may likely affect pupils, providing them with more security, and thus addresses the children’s fearfulness and possible panic. Furthermore, a crisis plan and manualized approaches to the challenges can be of great assistance, helping overwhelmed teachers of all experiential levels to obtain control and take step-by-step actions. At the same time, such a plan helps prepare all school employees and volunteers to assist with crisis intervention. (Heath & Sheen 2005). However, the schools often do not have such plans, especially in developing countries. Teachers are, therefore, frequently unprepared for the emotional distress they witness in their pupils. Training teachers and instructing them how they can conduct crisis intervention is crucial in providing them with the necessary preparation, and establishes a sense of confidence as well.
In India, a training over three days was provided to, among others, local teachers. They were taught to identify normal responses to the tsunami, such as initial shock, disbelief, panic, guilt, and despair, distinguishing them from more severe reactions. In addition, they were taught how to apply useful interventional skills, such as empathy, active listening, and relaxation. Materials for drawing, role playing and storytelling were distributed to teachers so that they could employ them in schools to assist distressed children. In all, more than 1,200 teachers and community workers were trained in India, providing important mental health support for thousands of survivors. (Becker 2007) This is a great example that confirms the place of teachers in disaster aid, through psychosocial support. Teachers need to be informed about their specific roles are after a crisis, and whom they can turn to for guidance. Improving the skills and effectiveness of teachers requires however not only training, but also supervision and guidance throughout the implementation process.

The concept of “crisis education” describes the classroom as a place where problems can be solved through teacher-pupil interactions, and pupils’ interactions with each other. Since children spend so much time in the school setting, intervention should be aimed to be conducted with the help of teachers, who know their pupils well. The concept of crisis education is not new, rather it focuses on organizing the knowledge that already exists and can thus be utilized more frequently by teachers. Crisis education consists of four phases: articulation phase, information phase, action phase, and follow-up phase. (Raundalen & Schultz 2006) As I will describe below, the teacher has an active role in all four phases as they employ educational and cognitive-behavioral strategies to meet the needs of their pupils.

**Articulation phase:** Communication is important, especially in the aftermath of a crisis, where children face many uncertainties regarding the event and their subsequent feelings. Thus, teachers should try to facilitate the expression of their pupils’ thoughts and emotions associated with the event. Cognitive-behavioral techniques, among others, can be important tools that teachers can employ to achieve this. An essential part of the teacher’s role is to be approachable; being the source children can turn to when they have questions, doubts or fears – to be a good listener.
Even before children ask for help, teachers should start a dialog. To begin this communication about the event, teachers are encouraged to use direct questioning, which is easier to manage and answer for pupils. Teachers can for example question the pupils where they were when the tsunami hit, what they thought, and how they reacted. Through this discussion, pupils will become aware that they were not alone, but that their classmates and teachers share their experiences and reactions. At the same time, the teacher offers reassurance - conveying that they are here to care for and support their pupils. In this phase, drawing can be extremely helpful for children to share their experience and feelings. This is especially true for pupils who are not able to articulate their experiences due to their immense distress or children who are generally less verbal due to their developmental stage or personality traits. Pupils can for example be asked to draw or write the most important, and the worst element of the event. This activity leads to the next phase, where the pupils’ drawings and writings can be used as a platform for sharing accurate information. (Raundalen & Schultz 2006).

**Information phase:** How do you tell a child that its loved ones have died? As it can be expected, many adults tried to avoid the topic of death by telling more convenient untruths, such as explaining that the child’s parent has gone abroad to find work. This lie was upheld even when the child had witnessed the parent drown in the wave. To avoid that children become subjects to these fictions, it is important to discuss to which degree children have an understanding of death. Children have the right to obtain information and receive support. It is thus an essential part of the teachers’ role to urge adults to be honest with their children, and involve them in the rituals of grieving. (Yule 2006). Incorrect or misinterpreted information and disturbing rumors often lead to elevated worry, anxiety and sometimes panic. Therefore, teachers should access accurate information and convey it to their pupils in an age-appropriate way. To address the misinterpretations and maladaptive cognitions, teachers can efficiently employ cognitive-behavioral strategies, which can reduce stress and anxiety. Explaining difficult events like the tsunami can be challenging and an emotional process, especially when teachers themselves have lost loved ones. It can hence be
beneficial that two teachers help each other in this task - supporting each other emotionally and assisting one another to answer the difficult questions pupils may ask. Examples of information that should be conveyed are how the tsunami occurred, and how many were killed or missing. It is also important that pupils are informed about the rescue and relief work, and become familiar with the support available to their families. This phase offers therefore also an opportunity for learning and reduces distress. (Raundalen & Schultz 2006).

**Action phase:** Children can have an active part in collecting and organizing information regarding the disaster. In addition, this phase should engage pupils to become aware of disaster preparedness. Important issues to convey to children are how they can detect early warning signs, and how they should act, in the event of a recurring tsunami. This information can reduce pupils’ fearfulness, as many children worry about a possible tsunami returning in the near future. Giving pupils insights about natural disaster detectors and how they function may contribute to the reduction of children’s insecurity. The action phase offers also opportunities for teachers to instill a sense of empathy, compassion, and companionship in their pupils by helping them become engaged in caring for one another, and others who are suffering. Thus, they teach children, that despite their young age, they can make a difference in their community. Besides this, teachers can also help pupils begin an important process of reducing their own distress through the help of coping strategies that can be taught by employing cognitive-behavioral strategies. (Raundalen & Schultz 2006).

**Follow-up phase:** As mentioned in the section on psychosocial support, there are several phases that attend to the different needs of the affected people at various times after a disaster. This is similar to the emotional process. After the event, many feel the need to share their experiences and feelings with one another, trying to make sense of what has happened and comfort one another as they grieve. It takes time to acknowledge the event, to realize the impact it has on the presence, but also on the future. Most children will benefit greatly from the activities and cognitive-behavioral strategies teachers may employ in the three previous phases. However, teachers may find, by observing and interacting with their pupils, that some may require more help
to cope than they receive in the classroom setting. It is then advised, that teachers articulate their concerns to mental health professionals and/or school counselors, so that the pupils in need can receive more individualized attention. (Raundalen & Schultz 2006).

Throughout the four phases, it is an important role of teachers to adapt their teaching according to the learning style and capacity of their pupils. Knowing that many children experience distress will thus have an impact on their teaching, as children’s learning abilities will likely be undermined in face of their struggles. It is therefore of great importance that teachers are proactive and aware of the issues and problems that occupy the minds of their pupils. Addressing the school children’s distress early may have protective effect on the development of anxiety, depression and PTSD symptoms. Thus, teachers play a central role in the well-being of children, as they employ cognitive-behavioral strategies that can bring about the defining effect. Teachers also have an influence on the school environment by initiating frequent interactions of support between them and their pupils. Social support, as discussed in section 4.4, has a positive effect on pupils’ distress and is a medium by which recovery can take place. Teachers by offering social support, play thus a vital part in helping children deal with the events and reestablish normality.

Cultural sensitivity is crucial in crisis intervention, and who has more potential for taking cultural sensitive actions than local teachers? Good teachers are aware of the individual needs of their pupils, can easily recognize behavioral changes and as a result tailor interventional strategies to fit their needs. Good teachers also share a frequent report with parents, which facilitates the sharing of information. Through this, teachers have the opportunity to help parents in managing the distress in their children and assist parents in becoming better caregivers. Thus, teachers can have a positive affect not only the school environment, but the home environment as well. Foremost however, teachers are the parents’ allies – being trustworthy adults who can lend support as they face future challenges as a team. It is hence the teacher’s role, to give support to both parents and children - playing a crucial part in facilitating their adaptive coping and improving their overall well-being.
5. Conclusion

Millions of people were affected by the tsunami. Due to human resilience, majority of them recovered without lasting effects. Nevertheless, natural disasters can be extremely traumatic for children and adults alike. Symptoms of distress, including PTSD, depression and anxiety, were observed in several studies conducted in the affected regions. Risk factors include: level of exposure to the event, personal injury or loss of loved ones, level of parental support, dislocation from community, and previous exposure to traumatic events.

Evaluation of the intervention efforts following the Indian Ocean tsunami is necessary. Until now, little has been done in evaluating and assessing the effectiveness of interventional techniques and methods employed. Thus, I find that future research on disasters should not only concentrate on the prevalence of mental health effects, but also help to establish and evaluate the mental health methods utilized. It is essential that one answers the following questions: Which interventions employed made a real difference? What impact do social functions like culture and religion have on recuperating from traumatic stress, both on the individual and collective level?

Through the investigations necessary for writing this master thesis, I have come to understand the importance of matching adequate interventions with the needs of culturally diverse survivors of different ages and cognition levels. This includes incorporating their cultural and religious background in the intervention utilized. Maximizing the effects of our efforts through acknowledging the coping mechanisms of the affected persons is essential. I also want to emphasize the importance of supporting the victims and survivors by providing opportunities to strengthen their coping skills, whether it is through cultural rituals and traditions, religious ceremonies or other socially acceptable activities. As I have come to know, there is also immense potential in employing cognitive-behavioral strategies, especially since they can easily be adapted to various cultural contexts. Cognitive-behavioral methods also have great relevance to the psycho-educational context of the school-setting.
Teachers are a great, but often ignored, resource in disaster aid. The four phases of crisis education define their role in helping children cope with difficult events and establish a basis on which to build further psychosocial support. Teachers are not expected to act as therapists and apply the more complex methods of cognitive-behavioral therapy (CBT). Furthermore, it is unreasonable to believe that all teachers in the affected communities can receive extensive training. However, the actions they do undertake can without a doubt have therapeutic effect if they are carefully planned and systematically employed. At the same time, simple cognitive-behavioral strategies such as reading a story that shares a specific lesson, putting up a puppet show that addresses misconceptions or engaging children in matching adaptive coping skills, can be utilized by teachers. These are activities that call on the competence and skills that good teachers already possess. Thus, they can use them confidently without having to be trained cognitive-behavioral therapists.

The experience of the tsunami strengthened the view, that community-based mental health initiatives have immense value. Research also shows that there is great importance in taking quick actions, both in regard to disaster aid facilitated by aid agencies and interventional efforts employed by mental health professionals. It is clear that the strategies should be chosen based on their effectiveness. All children have the right to evidence-based treatment, which is however limited in developing countries. Thus, more research in this field is needed to lead disaster aid and crisis intervention in the right direction for future practice. In the meantime, it is essential that we employ existing strategies, such as cognitive-behavioral techniques, proven to be effective in non-Western contexts and adapt them to the cultural and religious context of the crisis. At the same time, we need to acknowledge the great value of an open dialog with community and religious leaders, and include local professionals and teachers in the disaster aid and interventional processes.

Cultural sensitive training and manualized plans have to be developed and integrated into the occupational and postgraduate education of teachers worldwide, so that they can rely on them in time of need. It is essential for governments and aid organizations to become proactive and remain aware of these issues, implement them as preventive
means like we are accustomed to from other areas of life – such as fire prevention. Last but not least, it may be an interesting topic also for Norwegian multicultural classrooms, where we find pupils who may have experienced traumatic events related to disasters in their country of origin.

I hope that this master thesis has provided you, the reader, with a reasonable overview of the tsunami, the mental health needs it presented and the possible ways in which the field of special needs education can contribute to the provision of psychosocial interventions in future disasters. If there is political willpower and engagement, it is possible to establish a better preparedness to the advantage of children who may become traumatized and may require psychosocial assistance in developing countries, as well as in Norway.
6. Bibliography


Herman, J 1997, *Trauma and recovery: The aftermath of violence – from domestic abuse to political terror*, Basic Books, New York.


MacDonald, R 2005, “How women were affected by the tsunami: A perspective from Oxfam”, *PLos Medicine*, vol.2, no.6, e.178, pp.474-475, EMBASE.


Raundalen, M & Schultz, JH 2006, *Krisepedagogikk*, Universitetsforlaget, Oslo


