

The Tree of Life: a community approach to empowering and healing survivors of torture in Zimbabwe

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Abstract

The article explores the effectiveness of the use of an empowerment workshop, called the Tree of Life, in the treatment of torture survivors. The approach is based on a survivor-to-survivor model of assistance.

The Tree of Life is a group-based approach to the healing and empowerment of survivors of organized violence and torture. It is facilitated by survivors themselves who have been trained and supervised in the methodology. It uses the metaphor of the tree to provide a framework for understanding the trauma experience, and, through a series of inter-related processes, leads the survivor into an appreciation of his or her strengths and the support of the community in surviving.

Research into the effectiveness of the method is carried out using pre and post measures in a psychiatric screening instrument measuring depression and anxiety. Participants were also asked for feedback in a structured self-report upon completion of the workshop. In addition, an exit interview was conducted after follow-up, three months after the first workshop session.

A total of 73 persons attended the workshops, and detailed follow up data was only available for 33. 36% showed significant clinical improvement, and the sample as a whole showed significant changes in their psychological state. More

complete information was available for a smaller sample (19), which showed 39% having significant improvement.

On follow-up, 44% were still experiencing difficulties, with most (72%) experiencing economic difficulties. On the positive side, 56% reported coping better, only 9% reported health problems, and most were still connected to the group with which they participated in the process. All felt that the process had helped them find new things, and had changed the way that they felt about their torture.

The Tree of Life appears to be a useful, cost-effective, non-professional method of assisting torture survivors.

Keywords: torture survivors, group psychotherapy, para-professional, SRQ-20, Zimbabwe

Introduction and background

Torture in Zimbabwe since 2000

Torture has been documented across the last three decades of Zimbabwe's history.¹ One study, of a province that experienced severe human rights violations in the Liberation War of the 1970s, showed that one adult in 10 over the age of 30 years reported torture and was suffering from a clinically significant psychological disorder as a consequence.² High rates of torture and consequent psychological disorder were found in a study of former guerilla soldiers from the same period.³

Even higher rates of torture and its se-

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quelaes were found in studies of the Gukurahundi period of the 1980s in Matabeleland.⁴ Here it was found that more than 80% of the sample reported torture, and the prevalence rate for consequent psychological disorder was 50% of all adults over 18 years.

Subsequently, there was a long period – from 1987 to 1998 – where there was little or no gross human rights violations reported. However, organized violence, torture, and intimidation were seen during the periods leading up to important political events such as elections. There is a strong correlation between reports on the patterns of violence in Zimbabwe that records of torture and other forms of organized violence and the lead up to elections. In June 2000, parliamentary elections were held and the period leading to the elections was marred by physical violence and political intimidation by the government sponsored war veterans against anyone who was perceived to be the opposition. Despite these drawbacks the MDC won nearly half the seats in parliament.⁵ Since the 2002 Presidential election, there has been no appreciable improvement

in the human rights climate during elections.⁶

During the period from July 2001 to August 2008, the Human Rights Forum reported 4,765 allegations of torture. The Forum also recorded, during this period, over 39,000 violations. There has been a steady increase in violations from 2006, with it being apparent that 2008 may well be the worst year for human rights violations, and possibly torture as well, since 2000.

These figures are a clear under-estimation of the incidence and prevalence of torture by an unknown order of magnitude, and an accurate assessment of the likely need can only come from a community-based study. Thus, it is difficult to posit the need for rehabilitation services for the survivors of torture as well. But what does seem evident is that there are likely to be very large numbers of survivors both requiring medical and, particularly, psychological assistance.⁷

Psychological assistance to torture survivors
The treatment and management of torture

Table 1. Numbers of human rights violations reported to the Human Rights Forum, July 2001 to October 2007.

	2001	2002	2003	2004	2005	2006	2007	2008
Abduction	116	223	52	62	18	11	19	117
Arrest & detention	670	274	627	389	1286	2611	2766	430
Assault	0	86	388	401	530	486	865	1723
Attempted murder	0	2	10	10	1	3	0	8
Death threats	0	12	80	35	9	7	7	47
Disappearance	0	28	4	0	0	0	0	0
Displacement	0	11	208	189	609	55	0	627
Freedoms	12	39	809	760	1036	1866	3500	2161
Murder	34	61	10	3	4	2	3	107
Political discrimination	194	388	450	514	476	288	980	2379
Property violation	356	807	153	132	61	55	16	381
Rape	0	7	6	3	4	1	0	6
School closure	0	45	1	0	0	0	0	26
Torture	903	1172	497	389	136	366	603	699
Total	2285	3155	3295	2887	4170	5751	8759	8711
Monthly average:	381	263	275	241	348	479	730	1089

survivors can be said to be in its infancy in many respects. Although there is an enormous literature on the field, and the field has grown considerably since its beginnings in the 1970s, there is little in the way of evidence-based treatment methods for the psychological disorders that almost invariably follows torture. Furthermore, most research on psychological treatment is generated in treatment centres in countries playing host to refugees, with markedly fewer studies in the countries of origin of the refugees.⁸

In the advent of very large numbers of victims, as is the probable case in Zimbabwe, there is a need to find cost-effective methods of providing psychological assistance to the victims, and this is an area that has been given considerable thought. Perhaps the simplest way to think about Zimbabwe currently is to use the term “complex emergency”. Although the term is derived mainly to describe situations following war or civil war, its utility is that it can also be used to describe a wider variety of situations. As used by Mollica et al,⁹ following the World Health Organization,¹⁰ the term can be defined as follows:

A complex emergency is a social catastrophe marked by the destruction of the affected population's political, economic, sociocultural, and health care infrastructures.

There are a small number of studies indicating that psycho-social interventions may be effective in complex emergencies. A study of Cambodian refugees showed that opportunities for economically productive activities could reduce psychiatric morbidity in camp residents.¹¹ A study in Bosnia-Herzegovina and Croatia showed higher rankings for group meetings and shared activities than for individual therapeutic provision.¹² A case-control study showed a reduction in

intrusive memories and higher self-ratings of wellbeing in traumatized mothers in Bosnia who participated in weekly group meetings compared with those who received a basic package of medical care.¹³

In Zimbabwe, there have been attempts to test brief interventions suitable for the community setting, and at least one study has suggested that brief interventions may be efficacious for the psychological treatment of torture survivors.¹⁴ However, in the situation of a complex emergency, it is doubtful that approaches based on individual treatment would be cost-effective, a conclusion also reached by Mollica and others. Thus, it was decided to attempt to implement a group-based treatment approach that has been previously used and examine its efficacy. Similar approaches have been used in Namibia with some success.¹⁵

Healing and empowerment of torture survivors

The Tree of Life was originally developed as an approach for assisting unemployed youth. It was adapted to the needs of Zimbabwean political violence victims living in exile in South Africa in 2002.¹⁶ This process was introduced to victims in Zimbabwe in 2004 as an attempt to address the psycho-social difficulties faced by survivors in Zimbabwe, most of whom still live under threat, and many of whom are internally displaced.

The Tree of Life is a healing and empowerment workshop that combines the concepts of story telling, healing of the spirit, reconnecting with the body and re-establishing a sense of self-esteem and community. This process was developed from traditional ways of dealing with difficult issues in communities, notably amongst the Native Americans, and shares common features with many similar circle processes.¹⁷ It is usually carried out over a period of two to three days with a group living and sharing meals together.

During the course of the workshops, it was discovered that the victims are more at ease when they are all from the same community rather than a group of strangers; this allowed them to gain the trust and respect sooner rather than later. The participants themselves stated that it is easier to maintain confidentiality if they are familiar with each other. At the beginning of the workshop the participants were asked to keep everything that is said in the circles confidential. Security reasons were also given for having the group coming from one area, as they said that it was easier to identify an impostor or informer amongst them, which it is not a trivial concern. This emphasizes how the culture of fear that has been perpetuated by the Zimbabwe government has caused mistrust and fear between people.

The process was facilitated by two trained facilitators whose duties were to hold the circles making sure that all the workshop agreements were being respected. *A talking stone* is always used in the circles. This ensures that the person holding the stone is the only person who could talk and everyone else is obliged to listen until the person had put down the stone in the centre of the circle. This has been shown to be crucial to creating a framework for both open, respectful listening and confidence in talking.

At the beginning of the process, both primary and secondary victims were participants at the workshops, but it was later decided that the programme should concentrate on primary victims due to the high numbers of such victims.

Working with nature

The workshops preferably take place in a rural setting, where participants live together in community, and can spend time outdoors in nature, both as a group and on their own. As the name, the Tree of Life,

suggests, the participants are reminded of the healing properties of nature, the trees, grass, water and mountains. The relationship with nature is felt to be critical as the assumption is that most people have an instinctive response to its healing powers.^a Through being in nature, people reconnect with their fundamental abilities for connectedness and inter-dependency. This social aspect has a particularly powerful cultural and spiritual relevance to all Zimbabweans, and is also held by many traditional cultures around the world.

The tree is also used as a device for the telling of stories, and participants communicate their lives through drawings of a tree, with the soil (culture), roots (family), trunk (early development), branches (later development), leaves (important people), fruits (high points), and bugs (disappointments/trauma), providing the frame for this communication.

Body work

At the beginning of each day of the workshop, there is a session on body work. This consists of simple exercises using breathing, balancing, and relaxation as a means of reconnecting with the body and releasing tension. The process of being violated – through torture, intimidation, beatings, and rape – has the frequent effect on the “victim” of becoming disconnected from their bodies. The participants find these exercises very useful and they become more holistically aware of their bodies, not just the aches and pains resulting from the abuses they suffered.

Story telling

The telling of individual stories takes place in a circle which offers a step-by-step process of building on trust and respect. It allows participants to share the accounts of their experiences and listen to one another

in an atmosphere of openness, understanding and forgiveness. The concept of using the circle was welcomed, as it was similar to the traditional method of talking about problems within a family or a community. This is known as *dare* in the local language, Shona.^b

The first circle is an introductory one, giving the participants and the facilitators a chance to get to know each other and the process. Before getting to the trauma circle, the participants have an opportunity to talk about themselves, their background, their family history, their hopes and dreams, and where they are today. This is the initial step-by-step building of trust and respect before launching into sensitive stories of abuse and trauma. This “community witnessing”, particularly for individuals who have been through traumatic experiences, helps re-frame their perspective from that of “isolated victim” to members of a caring community. These are the first steps towards healing and empowerment.

The most important circle is the trauma circle, where the participants talk about the political violations they suffered, and are encouraged to be as open as possible for the process to be most effective. This circle is usually the longest one as interruptions are not permitted; this is in a bid to ensure that each person feels that they have been given a chance to talk. Some break down and are given the space to recompose themselves.

Even with all this preparation, not all participants were ready to talk about their trauma. Some feared that their stories, especially of rape and sexual abuse, would become public knowledge, and they were not prepared to talk about it in the circle. In most cases, this was usually because their own close family members did not know of the abuses. The women especially had not told their partners because of the stigma as-

sociated with rape. It is compounded by the HIV/AIDS stigma resulting in most women being reluctant to report the incident and to be tested, and, therefore, they do not seek medical attention immediately after the assault. In most cases where the assault involves married women, they do not talk about it for two main reasons: women fear their husbands will divorce them, and/or that they will be blamed for the attack, particularly where the women are activists.

The participants who had suffered sexual violence were nonetheless prompted to talk, and some of them eventually agreed to talk to the facilitators on a one-on-one session outside the circle. This is still considered therapeutic, as the aim of the tree of life is to give a person an opportunity to talk about the trauma they have undergone.

The story telling is hard, not just for the participants, but for the facilitators as well, and they run the risks of vicarious trauma. Thus, de-briefing sessions were held for all facilitators with a person experienced in the running of the Tree of Life (BR), who offered this service as a volunteer.

Empowerment

The workshop ends with the group gathering the “gifts” that they have found in themselves, and re-framing themselves and their community in a new way – as a group of people with power, and not as isolated and damaged individuals. There is also a short session dealing with the value of circles, “open systems”, as opposed to hierarchies, with the aim of reinforcing the power of groups. This always evokes considerable comment amongst the participants. Finally, the workshops always ends. With a spiritual ceremony during which the participants burn symbols of their abuse and celebrate the finding of their gifts, and their healing and empowerment.

What is the process of healing and empowerment?

The effect of torture, intimidation and fear, isolates and separates people, making them feel alone with their problems. One of the most important aspects of healing is breaking these patterns of isolation and rebuilding a sense of belonging. Thus, in the Tree of Life workshop, participants go through a process of reclaiming:

- *Reclaiming personal power*
Telling personal stories and having them witnessed
- *Reclaiming the body*
Bodywork – breathing, stretching, relaxing, dancing etc
- *Reclaiming connections between nature and oneself*
Expanding the view of oneself – connecting with the natural system in which one lives
- *Reclaiming the connection to the community*
Viewing oneself as part of a larger system – as individual trees in a diverse and interconnected forest community

This metaphoric framework has been seen to have considerable salience for the survivors, and it has been frequently observed that the participants begin to use the frame in their everyday lives. Certainly the diversity of the forest has strong evocations for the tolerance of diversity needed in democracy. This is a very important aspect of the reasons for the participants becoming activists.

The study

Study design

With the anecdotal evidence of the Tree of Life process providing both healing and empowerment for the victims, it was then decided to assess the process in a pre and post design. All participants were assessed prior

to attending the workshop, and were then re-assessed on follow-up, usually about three months after the workshop. Additionally, the workshops themselves were evaluated by the participants, using a standard questionnaire, incorporating both quantitative and qualitative items.

Selection of participants

As indicated above, all potential candidates for the workshops were given an initial assessment by one of the trained facilitators. There were two sets of criteria for being selected:

- Positive history of the experience of organized violence and torture;
- Positive score on the Self-Reporting Questionnaire (SRQ-20).

The former was gained from an interview with the prospective candidate. This was not complex since the potential candidates were being chosen from amongst the activists known to the facilitators. Since there was appreciable risk in contacting known activists, the facilitators used their local networks or networks known to persons who themselves were well-known to the facilitators.

The Self-Reporting Questionnaire (SRQ-20) is a widely used psychiatric screening instrument.¹⁸ The instrument has been widely used in Zimbabwe, both in general mental health settings as well as with survivors of organized violence and torture, and has been shown to have both validity and reliability.¹⁹ The instrument has been previously translated into Shona, and was administered in the form of an interview.

Those who did not have a history of organized violence and torture, or who did not score above the cutting score on the SRQ-20 (score in excess of seven out of 20) were mostly excluded from the workshop. One

individual with a score of less than 7/20 was included in order to make up the numbers, but this individual nonetheless had a clear history of organized violence and torture.^c No individual was excluded due to disability, and all individuals that showed serious physical disability or psychiatric disorder were referred subsequently to a rehabilitation centre that specializes in trauma disorders.

110 individuals were assessed initially, but only 74 finally attended a workshop. Seven workshops were held overall. It was intended that pre and post workshop SRQ-20 scores would be collected in order to provide a measure of the success of the workshop. Unfortunately, due to the extreme mobility of the participants, many were in hiding or were subsequently forced to move, complete follow-up was only possible for 33 participants. The post workshop test with the SRQ-20 was intended to be carried out two months after the workshop. However, difficulties in the follow-up meant that some were assessed later than this, and, as indicated above, was not possible for some. The timing of the follow-up was set at two months, rather than at the end of the workshop, in order to assess possible changes more accurately, and to avoid any kind of halo effect from the workshop.

Participants

These workshops were mainly conducted with victims from Mashonaland West, one of the areas that experienced terrible violence between 2000 and 2003. The participants were either opposition supporters, opposition office bearers, or had family members who are office bearers of the opposition. This was the reason why they were targeted. The attacks were allegedly carried out by either state officials – the police, central intelligence officers, army, or by state-sponsored proxy groups – war veterans, youth militia,

and Zanu PF party supporters. There were many instances of severe beatings, falanga, sexual abuse (of both men and women), rape, arson, and property destruction.

The groups were all mixed by gender – X males and Y females.

The facilitators

The three facilitators were previously trained in the methodology and were all experienced. All were survivors themselves, and had participated in the first Tree of Life workshops run in Zimbabwe during 2004. They ran the workshop in pairs, with the two male facilitators alternating with the one female facilitator, so that there was always a gender balance. The facilitators were supervised by the person who originated the Tree of Life process [BR], and met after each workshop to both de-brief and assess the workshop.

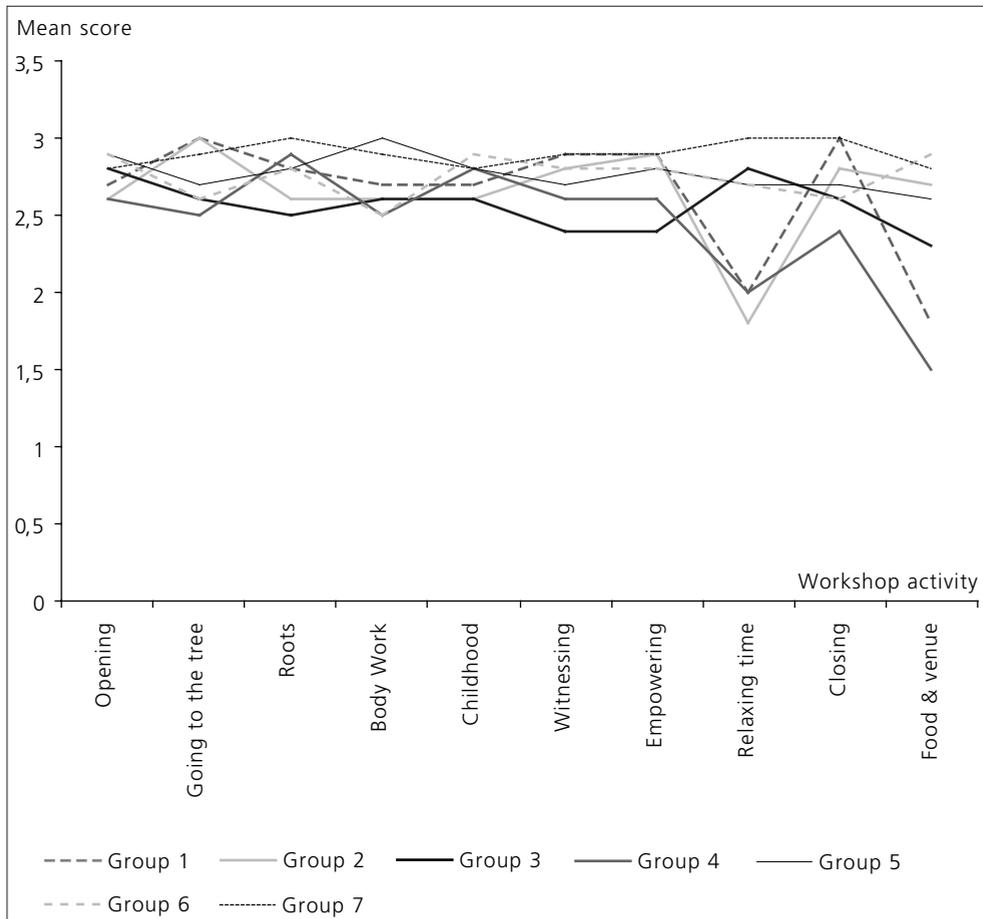
Results

Two sets of data were available for evaluating the success of the Tree of Life workshops. The first set was the data derived from the evaluations made by the participants after each workshop. A feedback questionnaire was given to each participant at the end of the workshop, which was completed anonymously. The questionnaire was comprised of both structured and open-ended questions, and this was entered on a purpose-built data base. The open-ended questions were then assessed independently by two assessors using a simple coding system (“positive response” or “negative response”⁹ and inter-rater reliability was calculated. This gave an inter-rater reliability on the open-ended questions of 96%, which was highly satisfactory.

Evaluation of the workshop process

A total of 73 persons attended seven work-

Figure 1. Evaluation scores for workshops.



shops over the project period. As can be seen from Appendix 1 and the table below, their evaluations of the workshop were highly positive. For each phase of the workshop process, participants were asked to rate that phase on a three-point scale (1=poor; 2=fair; 3=good).

As can be seen from Figure 1, the mean group rankings for each part of the workshop process were highly consistent, with the exception of *relaxing time* and *food & venue* where there was some marked variance.

However, it is noteworthy that all groups on all items reported mean scores were all in the range *fair* to *good*. This can only be interpreted to mean that the participants found the work useful at the least. This conclusion is bolstered by the findings reported in Table 2.

As can be seen, all groups produced overall rankings for all aspects of the workshops very close to a *good* rating.^d

In addition, the participants were asked a number of open-ended questions as follows:

Table 2. Mean group ratings for the group processes

	Workshop Phase						
	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7
Overall Average:	2.9	2.6	2.6	2.4	2.8	2.6	2.9

Table 3. Ratings and inter-rater agreement for open-ended questions.

	What did you learn about yourself in this workshop?		What did you like about this workshop?		What did you not like about this workshop?							
Positive ratings	16	94%	16	94%	17	100%	16	94%	8	47%	10	59%
Inter-rater agreement	17 100%		17 100%		15 88%							

- What did you learn about yourself in this workshop?
- What did you like about this workshop?
- What did you not like about this workshop?
- Is there anything you would appraise or anything else you would like to say?

Two raters read all the answers to these questions separately, classified the responses as either positive or negative, and then the agreements between the raters were calculated (total number of agreements divided by the number of agreements plus the number of disagreements \times 100). This gave an overall inter-rater reliability of 96%, which is highly acceptable.

As can be seen from Table 3, there was a strong trend for all questions to give positive answers, even for the question about what was not liked by the participants, where nearly half still gave positive responses.

Thus, it can be concluded overall that the workshop process was felt to be of value by all participants, at least at the end of the workshop. There were some complaints, but these were mostly about the quality of the food at one of the venues used. However, enjoying a workshop is not the same as the

workshop having some longer term impact, which was assessed on follow-up through the repeat of the initial assessment.

Improvement due to the workshop

A total of 110 individuals were initially assessed for their suitability for the workshops, but only 73 were finally selected. As indicated above, the rationale for selection was whether the candidate was a primary victim of torture, and hence those rejected were largely secondary victims. The follow-up sample had significantly higher SRQ-20 scores than the selected sample.^e

Follow-up was only possible for 33 individuals, since this is a highly mobile population under significant threat and forced to move frequently. As can be seen from the table below, there was a decided mean shift downwards in the SRQ-20 scores for the follow-up group.

The difference in the pre and post-SRQ scores was statistically significant, indicating a real improvement in the psychological state of the participants. Additionally, 36% showed a drop in the post-scores below the threshold for “caseness”, which indicates a return to psychological health.

More complete data was available for 19

Table 4. *Changes in psychological status due to the Tree of Life.*

	Total sample (Pre-SRQ20) (n=110)	Workshop Participants (Pre-SRQ20) (n=73)	Follow-up Sample (Pre-SRQ20) (n=33)	Follow-up Sample (Post-SRQ20) (n=33)
Mean	10.77	10.85	12.55	8.36*
Standard deviation	3.63	3.82	3.00	4.60

*) $p=0.005$

of the 33 follow-up cases. This involved the completion of a follow-up evaluation questionnaire, in which a number of open-ended questions were asked.^f Again, for this smaller subset of the follow-up group the difference in the pre and post SRQ scores was statistically significant, with 39% improving below the threshold for “caseness”.^g However, this was a group still living in adversity, and, as can be seen from Table 5, nearly half were still experiencing difficulties in life, with economic problems unsurprisingly being the major difficulty reported.

However, the quantitative changes were the most interesting, as can be seen from Table 6.

Everyone felt that the Tree of Life process had helped them, had helped them find something new about themselves, and had changed how they felt about their previous experience of organized violence and torture. The kinds of comments are summarized in Appendix 2. For example, participants stated that “I can leave the past behind”, “I can forgive and look to the future”, and “I have

lost fear and have a positive attitude”. It was also gratifying to see that the oft-reported consequence of social isolation had been remedied in the majority of cases, and that the one aim of the tree of Life, to create mutual support groups, was achieved.

Clearly the feedback from participants indicates that they have benefited in many ways from the workshop. Their comments record feeling courageous and more focused in their lives, that they have been relieved by telling their stories, and many recorded being able to forgive their perpetrators. They have understood that an effect of trauma is a forced sense of isolation, and have found themselves being able to connect and communicate with their communities and families. The fact that they have kept meeting

Table 6. *Positive changes noted on follow-up interview.*

Change noted	Number
Do you think that the Tree of Life workshop helped you in any way?	18 100%
Did you learn anything new from the workshop: What was that?	18 100%
Has anything changed in the way that you feel about the bad things that happened to you?	18 100%
Do you meet others from your Tree of Life group?	17 94%
Meet often	13 72%
Meet occasionally	4 22%

Table 5. *Responses on follow-up interview.*

Change noted	Number
Coping better	10 56%
Experiencing difficulties	8 44%
No difficulties	4 22%
Economic difficulties	13 72%
Health problems	1 6%

with their fellow participants indicates that they have put this into practice.

These findings would have been strengthened by an independent assessment of the social bonding that took place, but this was both difficult and risky to undertake. Clearly this would be a priority when the political situation allows more open follow-up and meetings within the community, but this was not possible here.

The act of witnessing stories in a contained circle which has agreements of equality, respect, and security, has an empowering effect on the participants. Because of the simplicity of the process, it can be translated into every sort of community issue where the intention is to heal and empower in the aftermath of trauma. Recent workshops carried out in Mabvuku with community leaders had the same efficacious effect of increasing trust and co-operation and a deeper sense of empowerment in groups working with the effects of HIV/AIDS on orphans, widows and youth groups.

Conclusions

On the basis of these results, it seems fair to conclude that the Tree of Life offers both effective healing and empowerment for victims of torture in Zimbabwe. The findings are similar to those found in the Namibian setting²⁰, but it should be pointed out that this Zimbabwean work has taken place in what can only be described as a seriously destabilized situation, effectively similar to a low-intensity conflict or a complex emergency. This work took place in a setting in which there remained appreciable risks for all the victims.

The participants rated the workshop process as efficacious, and this was supported by the follow-up that demonstrated a significant decline in psychological dysfunction. 36% of the sample improved below the

threshold for psychological disorder, a score less than seven on the SRQ-20. However, it is fair to comment that this was not a case-control or waiting-list design, and more comprehensive empirical testing should use one of these designs before it can be conclusively asserted that the Tree of Life is beneficial. Nevertheless, these are impressive preliminary results, and certainly indicate that the Tree of Life is deserving of more attention as a method of assisting victims of torture.

As regards the approach itself, it commends itself to ordinary survivors, is easy to implement, and can make use of survivors themselves as facilitators, which is important in the current Zimbabwean setting where the health services are in disarray and mental health professionals are extremely scarce. The approach was culturally acceptable and followed traditional methods of dealing with psycho-social problems. The participants gave high rating to the sessions dealing *with witnessing the trauma and empowerment*.

Whilst the process of re-engaging with one's trauma is undoubtedly distressing, this study did not suggest that it was unduly so or noxious in any way. It should be pointed out here that, as Mollica and others have suggested in respect to mental health services in complex emergencies, care for the caregivers is an important aspect of any system that is put in place.²¹ This was observed here: the Tree of Life team met regularly to process the work and their own response to it, both in the immediate aftermath of the workshops and subsequently. Here the team used the same methodology of the circle to process their feelings and understandings about the effects of the work under the guidance of two supervisors who were highly familiar with the methodology, but who did not participate in the actual workshops with the survivors.

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Notes

- a. It has become apparent in later workshops that the emphasis on having the workshop in a natural setting is not necessary, and that the process can still be effective in less conducive settings. However, there still are good reasons for trying to hold the workshop in a natural setting.

- b. Although the traditional dare is strongly slanted towards men having greater importance than women, women's opinions are always sought at the dare. The Tree of Life process is more sensitive to gender differences and ensures equality of the sexes.
- c. Scores of seven or more are strongly suggestive of psychological disorder, whilst scores of ten or more have been shown to indicate the need for the assistance of a mental health professional. All scores in excess of seven indicate increasing severity of psychological disorder, and most need mental health care.
- d. For the full results on the ratings, see Appendix 1.
- e. On a test of means (t test), the difference was highly significant ($p=0.005$).
- f. For the full answers to these questions, see Appendix 2.
- g. On a test of means (t test), the difference was even more significant ($p=0.0001$).

Appendix 1

Mean ratings of workshop sessions.

Workshop	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7
Opening	2.7	2.6	2.8	2.6	2.9	2.9	2.8
Going to the tree	3	3	2.6	2.5	2.7	2.6	2.9
Roots	2.8	2.6	2.5	2.9	2.8	2.8	3
Body work	2.7	2.6	2.6	2.5	3	2.5	2.9
Childhood	2.7	2.6	2.6	2.8	2.8	2.9	2.8
Witnessing	2.9	2.8	2.4	2.6	2.7	2.8	2.9
Empowering	2.9	2.9	2.4	2.6	2.8	2.8	2.9
Relaxing time	2	1.8	2.8	2	2.7	2.7	3
Closing	3	2.8	2.6	2.4	2.7	2.6	3
Venue & food	1.8	2.7	2.3	1.5	2.6	2.9	2.8
Mean	2.9	2.6	2.6	2.4	2.8	2.6	2.9

Appendix 2

Responses to follow-up evaluation interview.

How did the Tree of Life workshop help you?

- It helped settle my mind/alleviate my trauma/lifted my burden/relieved my nightmares.
- I understood the power of circles and people working together.
- I understood how to bring my gifts into my life.
- I have regained my power/courage/hope.
- I have learned to forgive.
- It helped to focus my mind.
- I have learned to speak out about what happened to me.
- It helped to know the value of sharing ideas/listening/community.
- I have learned the power of love/God.
- I have changed from a victim to a survivor.
- I have felt counselled/listened to.

Did you learn anything new for the workshop? What was that?

- I have understood that power must be shared/ power of circle/I feel part of society.
- I have learned about sharing with others/to communicate.
- I have learned about the comparison with life of trees.
- I now have the courage to speak/to be open /the importance of listening.
- I have learned about togetherness/that sharing overcomes.
- I am no longer alone/isolated.
- I know others suffered as I did.
- I now have the courage to help others/ take a role in community.
- I have learned about self esteem/the gift of love.
- I have learned to face difficulties and not give up.
- I have learned that I can forgive.

Has anything changed in the way that you feel about the bad things that happened to you?

- I can communicate/ am not alone/ am not an outcast.
- I fit into my community.
- I can leave the past behind.
- I can forgive and look to the future.
- I have lost fear and have a positive attitude.
- I am confident.
- I know people care.
- I am free from fear.
- I can communicate with family.
- It helped to know trauma happened to others.

Questioning western assessment of trauma among Tibetan torture survivors

A quantitative assessment study with comments from Buddhist Lamas

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Abstract

Our study falls in line with the numerous studies providing a critique of the use of western diagnostic instruments for assessing trauma in a cross-cultural context. Our purpose has been to give evidence for the Tibetan torture survivors' degree of traumatisation and for their use of spirituality to overcome their difficult situation. In addition, we wanted to question the use of our western methods in an Asian context.

102 tortured refugees attended a formalised needs assessment including neuropsychological and psychological measures of Post Traumatic Stress Disorder (PTSD) and the Hopkins Symptom Checklist – 25 (HSCL-25). Even though significant correlations between the amount of the measures of organized violence and neuropsychological and psychological distress were found in

our data, the division of the material into different subgroups according to e.g. religious and non-religious groups, did not have an influence on the level of distress. After the assessment study, eight Tibetan Lamas were interviewed about their views on our methods and results. They questioned the validity of our western rating scales and explained that our results might be influenced by the Tibetan culture, which among other things can be characterized as having a view and articulation of suffering much more complex than the units of our study's rating scales.

Keywords: India, imprisonment, refugees, Tibet, torture, trauma

Introduction

Even though Tibetans have been heavily traumatized, surprisingly few empirical studies have investigated post trauma reactions, possibly reflecting the various difficulties using western diagnostic instruments for assessing trauma in a cross-cultural context.¹⁻⁴

In 1949, the People's Republic of China moved its troops into Tibet. As a result of Chinese acts of war, imprisonment, labour camps, executions and starvation, it is estimated that 1.2 million Tibetans have died in Tibet.⁵ More than 120,000 Tibetans, including 18,000 Buddhist monks and nuns, have sought refuge in Bhutan, Nepal or India.⁵ For most of the refugees, the experience of violence, terror and destruction has not been

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limited to a single life event, but is composed of multiple devastating occurrences in their recent histories. Coupled with this is an ongoing uncertainty about the future.

Westerners, and even the Tibetans themselves, have claimed that symptoms related to traumatic stress are rare among Tibetan survivors.⁶⁻⁹ This statement may be a result of having a Buddhist outlook. Others, however, have argued that the incentive to deny distress might also be a way to extract much needed western political and financial support from admirers of Tibetan Buddhism, romanticizing it as supposing to make one resilient.¹⁰⁻¹²

This study has the purpose of: 1. To give evidence for the Tibetan torture survivors' degree of traumatisation by using well-known quantitative assessment methods. 2. To question the use of western methods in an Asian context by interviewing Tibetan Buddhist Lamas after the assessment study about their view on our methods and results.

Previous assessment studies on Tibetan refugees in India

Holtz¹³ compared 35 imprisoned and tortured refugees with 35 closely matched, non-imprisoned, non-tortured refugees, using HSCL-25. Those imprisoned and tortured were more likely to suffer from elevated anxiety. The groups did not differ in terms of depression or number of somatic symptoms. Holtz's study contributes to the knowledge of the impact of the history of torture and imprisonment on Buddhist nuns living in a stable institution, acknowledging that the experience of other imprisoned refugees who did not live in such relatively ideal circumstances may be different.

Terheggen et al¹⁴ studied the applicability of western conceptualizations of reactions to traumatic events. A randomly selected sample of Tibetan refugee camp students

was assessed as to psychological and physical complaints and the impact as well as the severity of traumatic experiences. More than half demonstrated symptoms of intrusion-avoidance. Those with more traumatic experiences reported more symptoms of anxiety and depression, although symptoms of depression were not strongly correlated with the experience of traumatic events.

Crescenzi et al¹⁵ examined the impact of political imprisonment on anxiety, depression and somatic symptoms in newly arrived Tibetan refugees in India by comparing 76 previously imprisoned refugees with 74 never imprisoned refugees using the HSCL-25. Previously imprisoned refugees reported more anxiety than non-imprisoned refugees, but the groups were similarly high in terms of depression and number of somatic complaints.

Ketzer & Crescenzi¹⁶ suggest from clinical experience that high anxiety and depression rates among both imprisoned and non-imprisoned refugees may be related to experience of traumatic events among both groups, material, social and cultural losses associated with being a refugee, acculturative stress, disappointment with life in exile, and the experience of culture-bound syndromes and idioms of distress.

Mercer et al¹⁷ interviewed stakeholders of a psychosocial care project for Tibetan torture survivors suffering from psychological distress. Even if the study did not assess the symptoms of distress, all interviewees considered that mental health was an important issue among the survivors, and that the current project has developed a beneficial psychosocial support service. However, a majority expressed that the psychological traumas were not a top priority and that other ways of dealing with such problems using traditional Tibetan approaches or local health services were adequate.

All these studies show that the Tibetan people do indeed show distress. But none of these former studies focus especially on the validity of their assessment methods, and there is no reference to the views of the Tibetans' reaction to the western studies.

Material and methods

Participants

The inclusion criteria were having been exposed to torture (being imprisoned and exposed to one or more torture methods) and having attended a pre-treatment assessment at the Tibetan Torture Survivor Program (TTSP – see below) during the period of January 1, 1998 to January 1, 2001. The intake might not be representative of the total population exposed to torture, but was dependent on the resources of the program. Several participants could neither read nor write Tibetan, therefore the introduction and the questions were read aloud by the staff members who spoke both Tibetan and English. The participants were reassured about confidentiality and were told that they were not obliged to answer any questions that they did not wish to answer.

The first author (PE) is Danish and was coordinating and supervising the collection of data as well as being present at the programme office for part of the study period (1998: one month, 1999: two and a half months, 2000: two months). During these periods all survivors with whom the staff had contact were included in the study. PE checked all the assessment data and if information was missing due to incomplete handling of the data registration by the staff, the torture survivor was contacted.

102 complete cases were involved in the analysis. The average number of years in exile was 6.6 years (SD 4.13). In all 266 tortured refugees attended a pre-treatment assessment during the period from 1998 to

2001. 115 were excluded from the study because of their non-contactability during the periods of PE's presence. 49 were furthermore excluded because of lack of compliance with western assessment procedures. Even though the excluded numbers were big, there were no statistical differences between the excluded group and the included group on any of the demographic variables.

Setting

The study was conducted in Dharamsala, a village in the foothills of the Himalayas in India. Before settling in one of the various Tibetan settlements in South Asia, the vast majority of new refugees first travel to Dharamsala for a blessing by His Holiness the Dalai Lama, the exiled religious and political leader of Tibet.

Interdisciplinary rehabilitation program, Tibetan Torture Survivor Program

In 1996, the Department of Health of the Central Tibetan Administration, established a program, TTSP, working with an interdisciplinary approach. The aim was to take care of the mental health care needs of the clients through a collective, integrated system of both Tibetan traditional medicine and modern allopathic medicine, depending upon the choice and the needs of the clients. The TTSP program was supported by the two projects: Tibetan Danida Project, and Tibetan IPSER/TPO project. One of the main objectives of the TTSP was to resettle and rehabilitate the victims of torture to a new socio-cultural environment. TTSP provided cost-free medical, psychological and social assistance.

Data collection

All participants were interviewed by the Tibetan office staff who spoke both Tibetan and English and had clinical experience with

dealing with traumatized people. All data were collected and coded by the staff and then translated into English. The first author checked all the assessment files with members of the staff, and if data were missing, the staff contacted the survivor. The other co-authors JC and KJ are Danish and were never present at the project locations, but mainly did the statistical analysis. The co-author KP is Tibetan and the main organizer of the rehabilitation program.

A formalised needs assessment consisting of a one hour interview was done for every torture survivor concerning demographic data (social and family background, livelihood in Tibet and in exile), and data on organized violence in Tibet (reason for flight, prison experience, torture experience, hardship during flight) were collected. A medical assessment (actual health problems and medical evidence of human rights violation) was also carried out. A social assessment was performed gathering data on impaired work ability and problems in family and community life. The psychological assessment included assessment of 7 DSM-symptoms of PTSD graded in a five-point scale (no, little, sometimes, often and always) and the use of HSCL-25.

Hopkins Symptom Checklist-25

The HSCL-25 is a questionnaire measuring symptoms of depression (15 items) and anxiety (10 items). Each item is rated on a four-point scale according to how much the person has been bothered by the symptoms during the preceding week. An average score is calculated by adding the scores of all the answered items and then dividing by number of items answered. The HSCL-25 has been widely used among traumatised refugees in community and out-patient settings. It has been proven a valuable instrument in many cultures and in a number of languages.¹⁸⁻²¹

The Tibetan translation and cultural adaptation of the HSCL-25 was done by the co-author KP. Firstly, translations of HSCL-25 into written Tibetan language were performed and tested. Secondly, bilingual Tibetans provided a blinded back translation. Thirdly, focus groups were organized to discuss those items that had changed meaning during the translation process and those items of which the translators had been uncertain. After each focus group discussion, discussed items were back translated to identify errors in translation and to determine the need for further focus groups. The final version of the interview schedule was tested in a pilot study (n=20) and found satisfactory.

In previous work with refugees displaced within the developing world, an average score of ≥ 1.75 in the HSCL-25 subscales for anxiety and depression or in the total scale score was used to identify people with high levels of emotional distress or depression.^{13, 18, 22} However, the 1.75 cut-off score has never been validated for the Tibetan population.¹⁵

Statistical analysis

Because of the uneven sampling of the data, non-parametric tests were used. Chi square tests were used to test differences between distributions of qualitative variables. Wilcoxon's signed ranks test was used to test differences between correlated variables, while Spearman's rank correlations were used to evaluate bivariate associations between quantitative variables.

Interviews with spiritual leaders

The results of our quantitative analysis were discussed with eight spiritual leaders. During visits at the Tibetan settlements in both North and South India, English-speaking Lamas of Geshe status were contacted by

the first author PE and presented with the results of the study. The semi-structured interviews had a duration of one to two hours and dealt with the following subjects: 1. How they would interpret our results of psychological reactions to torture; 2. Their commentaries on western psychology with specific focus on the design of the questionnaires; and 3. Their reflections on the western system of diagnoses, anxiety, depression and trauma. In all cases, the interviews were conducted individually with a Tibetan translator, who checked for form and content of the questions and answers. All interviews were fully transcribed.

A traditional qualitative analysis has not been applied, but rather a systematic reading and recording of units of meaning derived and grounded from the eight interviews. Units of meaning in the interviews have been identified and categorized, guided by our hypothesis in: 1. General problems of the study, 2. Specific problems with the items in HSCL-25, 3. Items not mentioned in the HSCL-25 and 4. Problems with our method of graduation.

Results

The material was divided into categories with regard to education, network, and religious practice, which gave a hypothesis regarding the influence of demographic factors on Tibetans' reactions to torture.

In Table 1, background and pre and post migratory data of the 102 tortured refugees are presented. Of the 102 participants, 66 were active, practising Buddhists as nuns or monks and had an education and a present occupation in the monasteries. The 36 laymen also considered themselves Buddhists. All stated that His Holiness Dalai Lama was their spiritual leader.

In Table 2, the exposure to organized violence is presented in length (weeks) in

Table 1. Background, pre and post migratory data ($n = 102$).

	No.	%
<i>Gender</i>		
Female	36	35
Male	66	65
<i>Family status</i>		
Married	25	25
Having children	16	16
<i>Social background</i>		
Monks	38	37
Nuns	28	27
Lay persons	36	35
<i>Education</i>		
School	34	33
Monastery	38	37
College	3	3
Illiterate	18	18
<i>Network in Tibet</i>		
Parents/siblings	94	92
Spouse/children	4	4
<i>Network in exile</i>		
Parents/siblings	24	24
Spouse/children	18	18
<i>Present occupation</i>		
Monastery	42	41
Secondary school	22	22
Government employment	11	11
Private business	6	6
Unemployed	18	18

Table 2. Organized violence in Tibet ($n = 102$).

Prison	Mean	Min-max	SD
Length of imprisonment (weeks)	146.5	1-460	242.37
Number of torture methods	3.57	0-7	1.762
Length of solitary confinement (number in weeks)	9.01	1-156	21.327

Table 3. Psychological symptoms graded in 1: no, 2: little, 3: sometimes, 4: often, and 5: always ($n = 102$)

	Mean	SD
<i>Neuropsychological distress</i>		
Nightmares	2.25	1.343
Flashbacks	2.88	1.105
Concentration and memory problems	3.03	1.548
<i>Psychological distress</i>		
Restlessness and anxiety	2.61	1.284
Feeling of loss and sadness	2.58	1.278
Loneliness	2.15	1.289
Irritability and anger	2.42	1.292

Table 4. Hopkins Symptom Checklist 25 (HSCL – 25) (n = 102).

	Cronbach's Alpha	Mean	Min-max	SD	> cut-off* (%)
HSCL – 25 Total	0.86	1.83	1–3,15	0.50	51.1
HSCL – 25 depression	0.82	1.76	1–3,44	0.56	39.0
HSCL – 25 anxiety	0.78	1.94	1–3,30	0.56	61.1

*) The cut-off scores used are HSCL – 25 1.75

Table 5. Spearman rank correlations between symptoms and data on traumatic events (n = 102).

	Length of imprisonment	Length of solitary confinement	Numbers of torture methods
Neuropsychological distress	0.331**	0.149	0.462**
Psychological distress	0.361**	0.282**	0.308**
HSCL – 25 total	0.202	0.299**	0.399**
HSCL – 25 depression	0.223*	0.319*	0.391**
HSCL – anxiety	0.154	0.149	0.360**

*) Significant at 0.05 level (two-tailed)

**) Significant at 0.01 level (two-tailed)

prison and solitary confinement. All participants had been exposed to torture, and as an arbitrary measure of torture, the number of torture methods is given. The population had been heavily tortured and imprisoned for an average of 2.8 years. The torture methods presented include techniques from simple beating to sophisticated electric and pharmacological torture.

In Table 3, the amount of both neuropsychological and psychological symptoms is presented.

In Table 4, it is shown that the participants in the HCL-25 scored high on the anxiety subscale, and depressive symptoms were comparatively less pronounced. The standardized cut-off scores in HSCL-25 showed a population less affected by severe organized violence than other groups. There were 51.1% with total scores above the cut off score, 61.1% with scores above the cut off in the HSCL-25 anxiety subscale, and 39.0% in the HSCL-25 depression subscale.

Table 5 shows that a dose-response was found between the amount of organized violence in terms of both length of imprison-

ment and number of torture methods and the subsequent various findings of neuropsychological and psychological symptoms and HSCL-25 total score and its depression subscale.

Table 6 shows that when the study group was divided into different subgroups according to education, network, belief system (nuns, monks or laymen), gender, and years in exile, no significant differences were found in the neuropsychological and psychological symptoms and HSCL-25.

In Table 7, the eight Tibetan Lamas' critical remarks are shown within the four categories of the semi-structured interview: 1. General problems with the study, 2. Specific problems with the items in HSCL-25, 3. Items not mentioned in the HSCL-25 and 4. Problems with the method of graduation. From each of the eight interviews a sentence is selected which condenses the lamas' reflections on the four parts.

All eight lamas questioned whether the suffering of their people could be sufficiently represented in our questionnaires. 1. The general problems with the study consist in

Table 6. Differences in neuropsychological, psychological and HSCL – 25 in subgroups divided according to education, network, belief system, occupation and gender (n = 102).

	Education	Network	Belief system	Present occupation	Gender
Neuropsychological distress	0.353 ns	1.443 ns	0.331 ns	0.761 ns	0.912 ns
Psychological distress	0.107 ns	0.770 ns	0.373 ns	0.394 ns	0.629 ns
HSCL – 25 total	3.342 ns	1.720 ns	1.808 ns	2.293 ns	1.987 ns
HSCL – 25 depression	3.672 ns	2.692 ns	1.427 ns	3.105 ns	2.174 ns
HSCL – 25 anxiety	4.468 ns	1.009 ns	1.900 ns	1.932 ns	1.747 ns
Education:	School, monastery/college, illiterate				
Network:	relatives in exile, yes or no				
Belief system:	monk/nun in exile, other livelihood in exile				
Present occupation:	unemployed, employed/school, monk/nun				
Statistics:	Kruskall-Wallis (chi-square value indicated)				
ns = not significant					

it being too limited and not probing their spirituality and culture sufficiently. 2. The more specific problems of using the HSCL-25 items consist in them being too simple. Tibetan people do not talk about their feelings and have much more complex names for the western subcategories of depression and anxiety. 3. The HSCL-25 misses the fact that the Tibetans' reaction to trauma is expressed in Buddhist terms, and that their main distress consisted in not having a focused mind expressed in terms of e.g. "Despair is suffering without meaning". 4. Furthermore, there were problems with the method of graduation. Tibetans are "midpoint seeking". Other people should not get the impression that the person in question is better or worse in feeling states.

Discussion

Our study supports that Tibetan torture survivors are highly prone to having psychological distress. However our study remains too limited in sample size and in recruitment methods to be representative. We have though found a dose-response relationship between amount of torture and scores in HSCL-25 and neuropsychological symptoms, but our questionnaires are not sufficiently validated to confirm our hypoth-

esis that Tibetan torture survivors are less affected than other ethnic groups. Holtz¹³ and Terheggen et al¹⁴ observed lower rates of HSCL-25 than in our study, but the differences are perhaps due to the use of different translations and differences in the sample composition. The standardized cut-off scores in HSCL-25 showed our population less affected by severe organized violence than other groups. There were 51.1% with total scores above the cut-off score, 61.1% with scores above the cut-off in the HSCL-25 anxiety subscale, and 39.0% in the HSCL depression subscale. There are however two related difficulties with arguing that this population is less affected than other groups: The 1.75 cut-off score was not validated for this translation and context, and Likert scores might not be compared across cultures.²³

It is also questionable if the Tibetan survivors do have a special psychological profile with e.g. less depression than is observed in other ethnic groups. Considering that our study was conducted in a help-seeking group of refugees, the mean scores on the HSCL-25, especially the depressive sub-scale, seem lower than in other studies on clinical populations.¹⁸⁻²¹ Given that the subscales have not been validated and are thus not neces-

Table 7. Reflections from the eight Tibetan spiritual leaders.*General problems with the study*

- Interesting results, but to us spirituality is of the utmost importance and it is not something which can be measured. It is an activity and a daily practice
- We are very shy people, we don't like to talk about ourselves
- You should have some questions about how our experience of torture spoiled our Buddhist practice
- It is an unusual situation for us to sit in front of a westerner and answer questions
- You don't ask questions about our spirituality. Spirituality is the most important part of our life
- You only ask about our problems and symptoms
- We have to make a lot of effort to make us understandable to you and your translator
- How can you document our suffering without talking about Buddhism

Specific problems with the HCSSL-25 items

- The categories in your questionnaire are too simple
- Depression is not a Tibetan concept. We consider it a very complex feeling comprising many states
- Depression and anxiety are western concepts and might be a reaction to your very complex form of life, our life is more simple
- Some of the concepts in your questionnaire are understandable, but we never use them alone, always with other concepts, because feelings are so complex
- We do not talk about our feelings
- We have a lot of names for depression and anxiety. You should ask your questions more precisely
- What do you mean by the concept of depression
- Your questionnaire does not reveal our joy of life

Missing items in the HCSSL-25

- If we feel sad and start crying, it is because we are unable to focus our mind and unable to think in a positive and sharp way
- The results show that our people are suffering after the Chinese invasion, but we continue to find meaning in life because of His Holiness Dalai Lama
- Our main problems are not feelings of anxiety and depression but problems of concentration and difficulties with having a focused mind
- Our reactions can only be understood from a Buddhist point of view
- Suffering is important to us, but we concentrate our mind to give meaning to the suffering, so it will not end up as despair
- For us despair is suffering without meaning
- No Buddhist concepts in the questionnaire
- We have other concepts of health than you do

Problems with the method of graduation

- We never graduate feeling states, because we don't wish that other people should feel that their experiences of feelings are more or less intense than ours
- We will often consider how other Tibetan people will answer the same questions and place our reaction in the middle category
- We are not used to questionnaires
- How do you western people graduate your feelings?
- To evaluate and graduate is not common in our culture
- What do you mean with more or less and none and extreme
- We don't evaluate each other
- I would answer in a way so other people don't feel that they are different from me

sarily normed equally, and given that the mean differences are not that big, we have little confidence that depressive symptoms are really less pronounced. With the use of our self-made scale of seven PTSD symptoms, there is likewise a tendency that the

symptoms were more noticeable in the neuropsychological forms as concentration and memory problems than in the psychological measures of distress. But also this tendency has to be confirmed with the use of a more validated PTSD scale than ours.

Our assessment procedures did not include specific items concerning spirituality and religion to analyze the significance of Buddhist attitude regarding amount of distress. When the study group was divided into a religious and a non-religious group according to their Buddhist practice as nuns and monks and as laymen, no significant differences were found in organized violence and migratory variables. Even though significant correlations between the amount of measures of organized violence and neuropsychological and psychological symptoms were found in our data, the division of the material into different subgroups according to religious and non-religious groups did not show any influence on the level of distress. This might probably be an effect of the HSCL-25 insensitivity to context of the Tibetan culture, not only with regard to spirituality and religion, but also with regard to other demographic variables. But it might also reflect that the Tibetan people are an homogenous group with a profound religious attitude despite being nuns, monks or laymen. Divisions of the study group according to education, network and employment did not show any significant differences in measures of distress either.

A more sophisticated statistical analysis was precluded because of our uneven sampling methods and the non-representativity of our so-called natural study. It could have been interesting to look at item-total correlations and on inter-items correlations. We found satisfactory high Cronbach's alpha (Table 4), but these values can sometimes be high due to large numbers of items rather than good inter-item agreement.

We truncated our statistical analysis because our interviews with the Tibetan Lamas profoundly questioned the validity of our method in a non-western context. Their general comment was that in a Buddhist society,

suffering is such a complex concept that it was considered meaningless to grade people's level of distress according to our western categories. The torture survivors didn't reveal much of their "experiential self" and were not very eager to verbalise this critique. The interviews with the Lamas showed that the Buddhist attitude is so fundamental that the questionnaires' purpose of measuring and comparing symptoms in a population are too reductionist. To them the assumption that one's own degree of suffering is more or less than another person's suffering is meaningless. As several Lamas said: "The categories in your questionnaires are too simple". "We never graduate feeling states, because other people should not have an experience that they are better or worse in feeling states." Two Lamas said they would select the mid-point of the rating scale when knowing that other people were investigated. This "midpoint seeking tendency" was not found in our data, where all participants without exception in one part or another of our questionnaire responded by using the ends of the Likert scale.

Our expert interviews illustrate the complexity of the Tibetan conceptualization of symptoms. One important dimension of the Buddhist view of suffering is the so-called empathetic suffering, meaning that it is important to empathize with other people's suffering in a way that you identify with it as your own. This thorough, sweeping, empathetic attitude is part of the belief in Karma, where some of the interviewed Tibetans even expressed pity with the Chinese tortmentor, because his participation in torture had spoiled his Karma, and the tortured was in a way such part of this relationship that he could not feel resentment.

By performing interviews with Tibetan spiritual leaders, it was concluded that our methods of measuring psychological distress

are not adequate to the Tibetan culture and probably not to several other non-western cultures. Tibetan torture survivors' psychological distress and Buddhist spirituality are much more complex than the representation given in western constructed rating scales and questionnaires. It is an oversimplification to state that the Tibetans are a happier people with a bigger resilience to torture. As the Lama Pema Dodjee said: "We Tibetan people are as much in suffering as other suppressed people, but our amount of despair might be less."

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Testimonial therapy

A pilot project to improve psychological wellbeing among survivors of torture in India

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Abstract

Introduction: In developing countries where torture is perpetrated, there are few resources for the provision of therapeutic assistance to the survivors. The testimonial method represents a brief cross-cultural psychosocial approach to trauma, which is relatively easy to master. The method was first described in Chile in 1983 and has since been used in many variations in different cultural contexts. In this project the method has been supplemented by culture-specific coping strategies (meditation and a delivery ceremony).

Methods: A pilot training project was undertaken between Rehabilitation and Research Centre for Torture victims (RCT) in Copenhagen, Denmark, and People's Vigilance Committee for Human Rights (PVCHR) in Varanasi, India, to investigate the usefulness of the testimonial method. The project involved the development of a community-based testimonial method, training of twelve PVCHR community workers, the development of a manual, and a monitoring and evaluation (M&E) system comparing results of

measures before the intervention and two to three months after the intervention. Twenty-three victims gave their testimonies under supervision. In the two first sessions the testimony was written and in the third session survivors participated in a delivery ceremony. The human rights activists and community workers interviewed the survivors about how they felt after the intervention.

Findings: After testimonial therapy, almost all survivors demonstrated significant improvements in overall WHO-five Well-being Index (WHO-5) score. Four out of the five individual items improved by at least 40%. Items from the International Classification of Functioning, Disability and Health (ICF) showed less significant change, possibly because the M&E questionnaire had not been well understood by the community workers, or due to poor wording, formulation and/or validation of the questions. All survivors expressed satisfaction with the process, especially the public delivery ceremony, which apparently became a "turning point" in the healing process. Seemingly, the ceremonial element represented the social recognition needed and that it re-connected the survivors with their community and ensured that their private truth becomes part of social memory.

Discussion: Although this small pilot study without control groups or prior validation of the questionnaire does not provide high-ranking quantitative evidence or statistically significant results for the effectiveness of our version of the testimonial method, we do find it likely that it helps improve the well being in survivors of torture in this particular context. However, a more extensive study is needed to verify these results, and better meas-

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ures of ICF activities and participation (A&P) functions should be used. Interviews with human rights activists reveal that it is easier for survivors who have gone through testimonial therapy to give coherent legal testimony.

Keywords: torture, trauma, testimony, psychosocial interventions, cross-cultural psychotherapy, brief therapy, community-based interventions, psycho-legal counselling

Introduction

In many parts of the world where torture is perpetrated, the human rights organizations providing psychosocial and therapeutic assistance to the survivors have few if any staff resources, such as trained psychologists, social workers, or doctors, and are often only able to see the survivors a few times on an individual basis. It is, therefore, important to identify community-based cross-cultural psychosocial interventions methods, which can be implemented by community workers or human rights activists, and which are brief and do not require large staff resources. This article presents a brief therapy method, testimonial therapy, which was explored in a pilot collaborative project between People's Vigilance Committee for Human Rights (PVCHR), in Varanasi, India and the Rehabilitation and Research Centre for Torture Victims (RCT), in Copenhagen, Denmark.

In the following, we first explain why RCT chose to start a project with this particular approach. Thereafter, different ways of dealing with trauma are discussed, including non-western, cross-cultural, and collective methods. Truth telling or testimony falls within this category. The development of the testimonial method is then presented, including the introduction of mindfulness, ceremony and ritual in our version of the testimonial method. The preliminary results are discussed.

Developing knowledge

Included among RCT's mission targets is the collection of new knowledge about the alleviation of human suffering and other consequences of torture.¹ The partner organisations of RCT work in different cultural contexts in various parts of the world. They undertake counselling interventions to assist survivors of torture, but the concept of counselling has different meanings for different organisations.²

In the spring of 2007, an RCT team visited a number of human rights organizations in India and found that short-term legal counselling was the rehabilitation method of choice for survivors of torture.³ Most of the counselling methods observed were, in fact, variations of "psycho-legal counselling", which has been the subject of an in-depth study by RCT and the Indian human rights organization, Jananeethi.⁴ Psycho-legal counselling is most frequently performed by individuals with relatively little mental health training.

In psycho-legal counselling, "justice" constitutes the therapeutic entry point and is an important element in the healing process. It, therefore, made sense to apply the testimonial method in India. It is an approach that emphasizes the denunciation of human rights violations and advocacy to obtain justice. The method is also brief and can be used both in individual and community interventions, and by non-professionals with specific training in the methodology. Giving testimony about one's suffering is probably a significant component in the healing of trauma across cultures, whether the frame of reference is psycho-legal, psychodynamic, existential, spiritual, political, cognitive-behavioural, or narrative.

Therapeutic approaches to trauma

There are a great variety of culture-specific

therapeutic approaches to therapy for survivors of traumatic experiences. Wilson⁵ asks if “there are culture specific and universal mechanisms to help persons recover from psychological trauma” (p. 14) and wonders how “cultures develop rituals, medical-psychological treatments, religious practices” (p. 13) to assist the survivors. He notes (p. 16) that at present “we do not have standardized cross-cultural treatment protocols for persons suffering from posttraumatic syndromes”.

Clancy & Hamber⁶ ask what constitutes “best practice” for cross-cultural psychosocial interventions and note that “psychosocial, rather than psychotherapeutic, approaches are often better suited to address the ‘extreme traumatization’ brought about by political violence” (p. 2). Extreme politically motivated trauma is not just a health problem, but also a socio-political problem, and Posttraumatic Stress Disorder (PTSD) is just one language of suffering among many others. These authors find that a rights-based approach can facilitate grieving and mourning processes through its fact-finding and testimonial methods, but will need to be complemented by political advocacy, grassroots and government initiatives, and culture-based therapeutic approaches. They define psychosocial projects as:

“...those which explicitly recognize the link between social agency and mental health through the utilization of a medical and/or psychological intervention to promote a social end, and/or a social, cultural or political intervention that promotes medical and/or psychological wellbeing”. (p. 19)

Sales & Beristain⁷ suggest that because in Latin America, the centre of social life is in the family and the community, trauma should be understood from this perspec-

tive. They cite the importance of the various victim movements, such as the Association of Family Members of the Disappeared. Political violence causes social trauma, which is an “imprint on the collective identity of a people” (p. 15). The significance of Truth, the fight for Justice and Reparation are important aspects of a peace process and involve the whole community.

In recent decades in South Asia, Western trained psychiatrists have dominated the treatment of emotional distress with a medicalised approach. Shah⁸ suggests that the incorporation of culturally specific South Asian “technologies of the self”,⁹ such as yoga, meditation, pranayama, and ayurveda guided by spiritual teachers can promote healing. Sonpar¹⁰ emphasizes the need to understand trauma induced distress from a non-western perspective. She suggests³ that spirituality and religion have been neglected in the western understanding of trauma, and that religious beliefs, prayer and pujas are important coping strategies (p. 16). She also finds that Narrative Exposure Therapy (NET),¹¹ in which testimony is an important component, has the advantage of being a brief therapy and a technique for which non-professionals may be trained in situations in which professional help is limited.

Igreja¹² has shown that protracted civil war in Mozambique has profound and traumatic consequences for individuals, families and communities, and that suffering is collective in cultures with a community oriented self in contrast to cultures oriented toward an independent self. In these community oriented cultures, the suffering is not seen as an individual medical “illness” (such as PTSD) but as a social experience (social trauma), which requires a collective approach to promote healing.

According to Hamber,¹³ coming to terms with human rights violations requires a dis-

inction between healing or reparation at the individual or micro-level, and the granting of reparations at the societal or macro-level. It “is difficult to measure, if not impossible to satisfy” (p. 564) whether reparations at the macro-level lead to reparation at the micro-level. Lykes & Mersky¹⁴ have criticized a purely biomedical approach to survivors of organised violence, and suggest that questions of justice and truth must also be addressed. They see narrative, testimony, truth telling, and story telling as important resources for understanding and accompanying the survivors.

Development of the testimonial method

In the version of testimonial therapy developed for this project, an attempt has been made to include a meditative, and ceremonial element (an “honorary delivery ceremony” in which the survivor receives his or her written testimony) so as to reinforce a culturally sensitive aspect of the method. Survivors of torture are often lonely and isolated from their community, group, friends and family. They feel that their dignity has been destroyed by a police force that has stigmatized them as “criminals”. They badly need to regain their dignity and honour through a form of social recognition in which their private truth is openly recognised and becomes public truth, and their suffering is acknowledged and becomes part of social memory. A general silence often surrounds political repression, as if it only exists in the minds of the survivor, but the narratives of the survivors will preserve history.¹⁵ It is the hypothesis of this project that the ceremonial element represents the social recognition needed and that it re-connects the survivors with their community and ensures that their private truth becomes part of social memory.

Testimony therapy was first described in

1983 when two Chilean therapists¹⁶ writing under pseudonyms presented and analysed testimony as a specific therapeutic technique used with torture victims and their relatives. The testimony was tape-recorded by the therapist and revised jointly by therapist and patient into a written document. The aim of the testimony was to facilitate integration of the traumatic experience and restoration of self-esteem. However the authors note that, “communication of traumatic events through testimony may also have been useful (...) because it channelled the patients’ anger into a socially constructive action – production of a document that could be used as an indictment against the offenders. The possibility of putting their experiences to use resulted in the alleviation of guilt” (p. 50).

The method was further described in 1990 as a ritual both of healing and of condemnation of injustice. “When political refugees give testimony to the torture to which they have been subjected, the trauma story can be given a meaning, can be reframed: private pain is transferred into political dignity”¹⁷ (p. 115).

A 1992 textbook on counselling and therapy with victims of war, torture and repression¹⁸ recommends the testimony method as a brief psychotherapy for motivated clients, or as a supplement to other treatment approaches for clients with multiple problems besides the sequelae of torture.

In 1994, a research project studying psychotherapeutic treatments for women victims of sexual torture¹⁹ utilized the testimony method, and in 1996 testimony was studied in a Chilean context as a therapeutic tool developed in the political framework of an active human rights movement during the Pinochet dictatorship.²⁰

In 1998 the testimony method was studied in a South African context where

public testimony constituted the central mechanism in the South African Truth and Reconciliation Commission (TRC) process.²¹ The authors locate the testimony method within the broad framework of social constructionism and they find that “thematic analysis revealed that ... overall, the narratives affirmed the therapeutic value of the testimony method”, and “the connectedness between individual healing and national reconciliation” (p. 257).

The same year, the testimony method was utilized with a group of traumatised Bosnian refugees²² and provided “preliminary evidence that testimony psychotherapy may lead to improvements in PTSD and depressive symptoms, as well as to improvement of functioning in survivors of state-sponsored violence” (p. 1720).

In 2002 Narrative Exposure Therapy (NET), integrated by components from the testimony method and cognitive behaviour therapy, was utilized with a small group of severely traumatized Kosovar refugees.²³ The conclusion was that this case study “indicates that Narrative Exposure is a promising and realistic approach for the treatment of even severely traumatized refugees living in camps. In addition, it can provide valid testimonies about human rights violations without humiliating the witness” (p. 205).

In the Netherlands, the testimony method has been applied in the treatment of traumatized asylum seekers and refugees.²⁴ The therapy, consisting of 12 sessions, is described step-by-step and the working mechanisms of the testimony method are reframed in cognitive-behavioural terms, as “exposure to the traumatic memories, as well as the adjustment of inadequate cognitions” (p. 368-9).

In 2003 in Germany, a testimony project for traumatized Bosnian refugees living with uncertain asylum status for many years was

carried out in which the testimony method was used in combination with supportive therapy and advocacy.²⁵ The authors concluded that “by giving testimony, survivors benefited psychologically and became better able to cope with the difficult present. Feelings of self-worth and dignity could be regained and a trusting relationship between the survivor and the listener facilitated the therapeutic process. The testimony material documented human rights abuses both in the country of origin and in exile, helped us to perform informed advocacy for this group and informed a larger public on the psychological costs of refugee resettlement policies” (p. 393).

In 2004 the effectiveness of the testimony method was explored in a rural community in Mozambique with survivors of prolonged civil war.²⁶ The study included an intervention group (n=66) and a control group (n=71) and trauma symptoms were measured during a baseline assessment, post-intervention and at an 11-month follow-up. A simple version of the testimony method was applied with only one session for most participants. It is concluded in the study that, “a remarkable drop in symptoms could not be linked directly to the intervention. Feasibility of the intervention was good, but controlling the intervention in a small rural community appeared to be a difficult task to accomplish” (p. 251). Concerning clinical implications of the study, the authors find that the “introduction of the testimony method in a relatively small and isolated rural community was feasible and associated with the decrease of reported psychiatric symptoms” (p. 257).

In the same year, testimonial therapy was used with traumatised Sudanese adolescent refugees in the United States who lacked experience with or interest in psychiatric care.²⁷ “Testimonial psychotherapy’s unique

focus on transcribing personal, traumatic events for the altruistic purpose of education and advocacy make it an acceptable interaction by which to bridge the cultural gap that prevents young refugees from seeking psychiatric care” (p. 31).

Also in 2004, a study was published comparing Narrative Exposure Therapy (NET) with supportive counselling and psycho-education for the treatment of Sudanese refugees living in a Uganda refugee settlement.²⁸ “The results indicated that (it) was a promising approach for the treatment of PTSD for refugees living in unsafe conditions”.

In 2005 the testimony method was also used for injured humanitarian aid workers who had survived the bombing of the UN Headquarters in Iraq.²⁹ The method was found to be an effective tool: “The testimony method provided a safe structure to recall the traumatic event, while assisting in the reconstruction of the traumatic memories and associated emotions, and offered an acceptable motivation to do so” (p. 57).

Also in 2005, testimony therapy was reframed³⁰ as “an African-centred therapy that focuses on the personal stories of those who consult with the therapist, as well as the collective stories of the African experience in the United States” (p. 5). In this narrative approach “testimony therapy emphasises the person within community and is social constructionist in its outlook” (p. 5).

The same year, Schauer, Neuner and Ebert published a systematic analysis and manual on the use of testimony in Narrative Exposure Therapy (NET),³¹ reviewing their theoretical background for understanding traumatic stress and the cognitively oriented therapeutic approach of NET.

Including meditation, ceremony and ritual in the testimonial method

The importance of cultural rituals and ceremonies for survivors of torture and organized violence (TOV) has also been emphasised by Somasundaram,³² who addresses the many problems following the exposure to conflict, war and disaster in Sri Lanka. The multi-level community approaches needed when assisting these survivors include (p. 19): Encouragement of indigenous coping strategies, support of cultural rituals and ceremonies, and community interventions (including support groups and the use of expressive methods).

Somasundaram describes how culturally appropriate relaxation exercises can be taught to large groups in the community. These originally spiritual practices, such as meditation not only reduce stress, but also “tap into past childhood, community and religious roots and thus release a rich source of associations that can be helpful in the healing process” (p. 20). The holistic approach represented by the traditional relaxation methods work at the physical, mental, social and spiritual levels, promoting wellbeing and mental health.

Mindfulness-based stress reduction (MBSR)³³ and mindfulness-based cognitive therapy (MBCT)³⁴ have developed in the U.S over the last twenty years, and have good empirical support for their effectiveness. MBSR and MBCT are inspired by Eastern traditions such as Buddhist meditation and yoga. Mindfulness is defined by Kabat-Zinn as: “paying attention in a particular way: on purpose, in the present moment, and non-judgmentally”³⁵ (p. 4). Mindfulness has proved effective for “narrative integration”, whereby the life story is “weaved together” in a process of “reflection and neural integration”³⁶(p. 309-10).

*Community-based psychosocial
and psycho-legal work in India*

People's Vigilance Committee for Human Rights (PVCHR) in Varanasi was started in 1996 as a membership based human rights movement. It operates on the grass-root level in 45 villages in Uttar Pradesh, one of the most traditional, conservative and segregated regions in India. Human rights activists in the villages work as volunteers with PVCHR and document cases of severe human rights violations.

PVCHR works to ensure basic rights for vulnerable groups in Indian society, e.g. children, women, Dalits and tribes, and to create a human rights culture based on democratic values. One of the severest violations of human rights in India is the widespread use of torture in police custody, which is closely linked to caste-based discrimination. In crime investigation suspects are tortured to force confessions. There is no independent agency to investigate cases, so complaints are often not properly reviewed and perpetrators are not prosecuted and punished. PVCHR investigates and documents human rights violations, and, in cases of custodial torture, also provides legal aid. To raise public awareness PVCHR is co-operating with media as well as national and international human rights networks. It also requests that local authorities initiate action to prevent further human rights abuses. The documentation is used for advocacy, and is published through local, national and international organizations.

PVCHR helps provide education in the villages, reactivating defunct primary schools, encouraging the education of girls and promoting non-formal education to bridge the gap between marginalized children and children in government schools. PVCHR also focuses on organizational development of vulnerable groups and the implementation

of village committees. In some of the villages a community centre has been established, forming the base for development activities. People are also actively engaged in community-based counseling, in the form of "Folk Schools", one of the core activities in the model villages. In community meetings of the Folk Schools *people can testify about their suffering and receive support from the group*. Folk Schools also deal with conflicts with the village head or experiences of torture. Special forums for women focus primarily on health, but sometimes include such things as dowry issues. The statements of the villagers are recorded and their demands are forwarded to administration and governments.

PVCHR has been a key partner in the European Union (EU) and Friedrich Neumann Stiftung supported the "National Project on Preventing Torture in India" which was implemented by People's Watch Tamil Nadu. The aim of the project, 2006-2008, was to initiate and model a national campaign for the prevention of torture in India, with a deliberate focus on torture practices employed by police. The project was carried out in nine states.

Methods

Development of a specific testimonial therapy model

The testimonial method is not one, well-established method, but has been used in many variations and settings as described above. Usually its brief format has had the objective of alleviating symptoms, helping the survivor to re-establish emotional and social bonds and recover his or her resources. The testimony can be seen as a "map of pain" on which survivors can recover their history, working with chaotic fragments of memory of the past experienced as a traumatic present.¹⁵

For this project, a new version of the

method was developed containing the following key elements:

1. A brief format (only 3-4 sessions).
2. Non-professional therapists (human rights activists or community workers).
3. Teams of therapists (one interviewer, one note taker).
4. A public or community-based delivery ceremony (normally in the third session).
5. Mindfulness/meditation included at the beginning or end of the first two sessions;
6. A context-specific manual to guide the teams.
7. A monitoring and evaluation system included in the testimony process.
8. A ten days training course for the therapists, with five days of theory and five days of supervision while taking testimonies with survivors.

The testimonial procedure

The testimonial therapy procedure in this model is performed over four sessions:

- Session one: Opening the story
- Session Two: Closing the Story
- Session Three: The delivery ceremony
- Session Four: Follow-up.

The testimonial method can be used with survivors of torture only if they have complete *trust* in the therapists. Therefore, the therapists must be part of an organization the survivors already know and with which they have established a bond of trust. This will most likely be a human rights organization, which has already made legal testimonies with the survivors and supported them in their fight for legal justice and reparation.

The duration of each session is normally from 90 to 120 minutes. The survivor should be informed before the session starts about the number and duration of the sessions.

The first and second session includes a meditation (“mindfulness”) experience guided by the therapists, in which the survivor and the two therapists sit together for ten minutes in silent concentration on their breathing and with awareness of their thoughts and feelings. The meditation will usually take place at the end of a session.

The testimony is written in note form by the note taker during the sessions. After the sessions, the interviewer and note taker collaborate on filling-in the missing parts of the story and produce a computer version of the narrative. The story in the written testimony is in the first person (“I experienced”, and not “he experienced”). The story about the traumatic events is in the past tense, while sensations and feelings produced by telling the story are in the present tense. In the training course, the steps for writing a good testimony is explained and practiced. A testimony should include detailed information about the torture experience, the perpetrator(s), emotional reactions of the survivor to the experiences at the time when it happened and now, the impact of the torture on the survivor’s life (impact on relation to family and community), and the steps taken by the survivor to obtain justice.

Session One: opening the story^a

When starting the first session the testimony procedure is explained, beginning with a psycho-educational introduction to the survivor in which his or her symptoms are explained both as a result of the torture and of the violation of universal human rights, which has taken place. A preparatory introduction to the therapeutic approach is given: the testimony should not be seen by the survivor as directly related to expectations of obtaining immediate justice and reparation but as a way of healing the psychological effects of the torture. Then the M&E ques-

tionnaire is completed, and it is explained that the data are confidential and will only be used for developing methods for helping survivors of torture.

The survivor is then asked to give a short description of personal background and individual history prior to the first traumatic event or persecution. With open questions the survivor is asked to briefly describe the stressful events s/he has experienced and choose one major, overwhelming traumatic event. The therapist gives an overview of the different events to help the survivor trace one of the experiences and help him/her really begin the re-construction of the story. The therapist separates overlapping stories (if the survivor wants to tell about more than one event). The therapist organizes the themes and helps the survivor to explain unclear elements in the story. It is important that the therapist is "in control" of the situation and leads the survivor in getting to the main points of the story. The survivor narrates the facts concerning this event (time, place, duration and people involved), the survivor's role during the event (observer, participant, active or passive), the individual and social dimensions of the experience, the survivor's perceptions and feelings at the time of the event, and the survivor's perceptions and feelings at the time of the testimony therapy.²⁶ The therapists (interviewer and note taker) are empathic and warm. Contradictions are clarified, and the survivor is urged to describe the torture in as much detail as possible and to disclose his or her emotions and thoughts at that moment. The therapists may use culturally appropriate touch, e.g. a hand on the arm of the survivor. A mindfulness meditation experience ends the session.

Session Two

One of the therapists starts the second ses-

sion by reading the written testimony to the survivor in a loud voice so that the survivor hears that his or her story has been given voice. It often has a strong supportive effect on the survivor to hear his or her story of suffering told with another voice. The survivor is asked to correct the story or add any additional details that may have been missed, and the therapists continue the session as during the first session. They focus on the relationship between the stressful experience and the present situation and the survivor is encouraged to express his or her feelings about the future (individual, family and community). A mindfulness meditation ends the session. After the session, the therapists correct the document to produce a final version of the testimony.

Session Three: the delivery ceremony

The delivery ceremony can be performed in different variations according to the wishes of the survivor and the circumstances: a public ceremony (with a wider audience in the streets) or a more private ceremony (with the community, support group or family), a political ceremony (a demonstration), or a spiritual ceremony (with emphasis on cultural ritual and purification). In the ceremony, the interviewer (or note taker) reads the testimony out to the audience, and the survivor is presented with a printed copy of his or her testimony. Speeches could be given praising the courage of the survivor, who might be awarded flower garlands or some other symbol of honour.

In this project, PVCHR held a public delivery ceremony in honour of the survivors. The ceremony was also a political demonstration against torture and was held in front of the District Government Headquarter of Varanasi where 14 testimonies were read out in public and delivered to the survivors who were also honoured with a cotton shawl

(a symbol of honour in India) and a speech which praised their bravery and encouraged them to continue fighting for justice. Many of the survivors and their family members cried when they heard their stories read out, and said afterwards that they felt very happy. At the end of the ceremony the 14 survivors spontaneously sat down in a circle and spoke with each other about their feelings. The ceremony was transmitted by local TV networks and written about in the press.

Session Four: follow-up

The fourth session is a post-therapy testing to monitor and evaluate the outcome of the testimony therapy. One of the therapists meets with the survivor one to two months after the last intervention (public ceremony, community meeting, or delivery of the testimony), and the M&E questionnaire is filled-in.

Development of a training course in testimonial therapy

The participants in the training course were human rights activists and community workers from PVCHR. The workshop was divided into two main parts with an equal balance between theory and practice: 1. five days of theoretical input, and 2. five days of practical work. The theoretical part contained both theory and role play exercises in which the participants worked with communication (“active listening”), the filling in of questionnaires, the interview process and the group process. During the second part of the workshop, the participants took testimonies from survivors and received supervision and feedback.

Development of a monitoring and evaluation system

The questions that constituted the M&E were derived from a standardized instru-

ment, WHO-Five Well-being Index (WHO-5),³⁷ from the application of International Classification of Functioning, Disability and Health (ICF) Activities & Participation categories,³⁸ and from the utilization of items from standardized questionnaire information already in use by PVCHR. The experiences of the RCT epidemiologic field study in Bangladesh, recently conducted by Dr. Sharlenna Wang,³⁹ were also reviewed. The M&E questionnaire was formulated in Copenhagen, but translated and contextualized in Varanasi.

Results

Twelve human rights workers from PVCHR were trained by RCT through an interpreter. The ages of the trainees ranged from 24 to 38 years. Six of them were male, and four were female. Six of the participants had an MA degree (in social work, sociology, history or human rights); three had a BA (in ayurvedic medicine, sociology or Hindi); and three had an intermediate school education. Seven understood English, and three spoke it well. Two did not understand any English.

The trainees collected 23 testimonies as part of the training in a supervised process. The 23 torture survivors who gave their testimonies were known to PVCHR. They had all previously given legal testimonies for use in court cases against the perpetrators (mostly the police). They were selected out of a group of approximately 80 clients of PVCHR because they had shown evidence of psychological distress. Nineteen of the twenty-three were male, and two belonged to the upper castes, while 13 belonged to the “backward” castes and eight to the “scheduled” castes. Twenty-one of the twenty-three were Hindus, while 1 was a Muslim and another was a Buddhist. There were 17 primary victims, and six secondary victims.

A manual for community workers and

human rights defenders in Uttar Pradesh, India on how to use the testimonial method was developed in collaboration with PVCHR.⁴⁰ The manual has been illustrated by a local artist and it has been distributed to a large number of human rights organisations in PVCHR's network and has also been posted on the RCT international website. The manual has been translated into Hindi and was published in Varanasi in January 2009. An English edition will be published in the RCT Praxis Paper Series.

Results of monitoring and evaluation process

The majority of the individuals who participated in this pilot study were primary victims of torture (17 out of 23, 74%).^b Prior to participation in testimonial therapy, most victims were having difficulties functioning under stress. Many were able to work and support themselves with mild to moderate difficulty, but all had been doing better before they were tortured and had much more difficulty with income generating activities immediately after being tortured. Quite a few had residual pain (high pain analog), and a low sense of wellbeing (low WHO-5 score). Many of them had three or more residual psychological symptoms subsequent to the torture event. Many did not understand the issue of basic human rights, or could not appropriately answer questions about issues related to politics and human rights. Most of them had received very low levels of health care after they had been tortured, even though many of them had experienced fairly extensive physical injuries. All had seen an attorney, reflective of the fact that they were involved with the PVCHR.

After testimonial therapy, almost all survivors demonstrated significant improvements in overall WHO-5 score (pre-therapy average 7.7; post therapy average 14.9). Four

out of the five individual items improved by at least 40%.

ICF items showed less significant change, possibly because the M&E questionnaire had not been well understood by the community workers and/or survivors. This is a common problem while working with questionnaires not validated to a specific context or culture. The questions that are derived from work done by western researchers might not be applicable to non-western populations. In the effort to get a more reliable clinical assessment, the questionnaire may have been too schematic in its design, resulting in many invalid answers. Because it was not field tested prior to use in the pilot study, the pilot study was the field test for the finalized M&E questionnaire, and it revealed certain problems with the questionnaire. Nevertheless, certain trends were noted. "Handling stress and other psychological demands" (D-240) demonstrated a trend toward improvement after therapy (i.e., a shift from "complete" or "moderate" difficulty toward "mild" or "no" difficulty). There was no decrease in the number of psychological symptoms (asked as items on a checklist) after therapy, but more sensitive psychological measures were not employed. However, the results are not statistically significant.

Spontaneously, all survivors expressed satisfaction with the process of therapy, especially the public delivery ceremony.

Discussion

This pilot study suggests that testimonial therapy adapted to a local context provides benefit to survivors of torture, as reflected by improvements in a measure of wellbeing as well as by informal interviews with the therapists and survivors. It is admittedly a preliminary project with a small number (23), and without a control group. The

monitoring and evaluation questionnaire demonstrated certain shortcomings and therefore did not provide high-ranking quantitative evidence for the effectiveness of our version of the testimonial method. However, feedback from the therapists and note takers who participated in the study supports our impression of the cross-cultural applicability and effectiveness of the testimonial model developed in the collaboration between PVCHR and RCT during this project. The integration of meditation, yoga and mindfulness in the testimonial therapy needs to be further developed.

Usually the justice process in India takes more than ten years, and many plaintiffs who are survivors of torture become discouraged and give up. However, our interviews with the survivors who had gone through testimonial therapy suggested that they felt more confident in pursuing their claims. The therapy appeared to have created new dynamics in the justice process. In some cases the pain and the agony expressed in the testimonies helped convince the judiciary and human rights institutions of the injustice committed against the plaintiff. An investigator from an international human rights organisation who, coincidentally, interviewed some of the survivors that had completed testimonial therapy, observed that it was easier to elicit a coherent story from them and it seemed less painful for them to narrate the torture story.

Twenty-two of the twenty-three survivors participating in the study have become involved in the human rights movement, supporting other survivors, participating in demonstrations, and telling their stories in community meetings.

However, a more extensive study is needed to verify these results, and better measures of ICF A&P functions should be used with a preliminary field test after con-

textualization and more intensive training in the use of the M&E questionnaires. Testimonial therapy offers a brief format to access a population in need. It can be delivered by trained non-professional personnel, and can contribute to improved emotional well being as well as better documentation of human rights abuses.

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Notes

- a. Part of the procedures in Session One and Session Two has been inspired by Narrative Exposure Therapy (NET)³¹ and Igreja et al.²⁶
- b. As the sample size is relatively small, the results will be expressed in qualitative terms. Most of the results are not significant on a 5%-level due to the small sample size.

Assessment of the psychosocial and mental health needs, dysfunction and coping mechanisms of violence affected populations in Bireuen, Aceh

A qualitative study

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Abstract

Qualitative research is important due to the shortage of literature in understanding cultural influences on psychosocial and mental health syndromes and their presentation, especially in developing countries. This qualitative study aims to investigate the psychosocial and mental health needs of populations in Aceh, Indonesia affected by over 30 years of conflict, their dysfunction, and their positive coping mechanisms. Results from this qualitative assessment indicate the presence of depression, anxiety and somatic symptoms. The data provide local terminology and ways in which the local population describes their own distress, which is an important addition to the understanding of the mental health consequences of this conflict. The data has been used to develop appropriate intervention strategies and adapt and

validate assessment tools to measure psychological distress, dysfunction and coping mechanisms.

Keywords: violence, qualitative, psychosocial, dysfunction, coping

Introduction

The problems and needs of survivors of violence in Aceh, Indonesia are closely connected with the conflict between The Free Aceh Movement (GAM) and the Indonesian Government that went on for over 30 years. As GAM struggled for independence and the Indonesian government tried to curb it through military operations, the people of Aceh experienced and witnessed significant violence. During the Suharto regime (1967 to 1998), the people of Aceh faced a lot of violence, and were hopeful after the fall of Suharto in 1998 that they would see peace. Unfortunately, the conflict continued, and in 2003, Aceh was put under martial law following the failure of the Cessation of Hostility Agreement (CoHA) that was signed on Dec 9, 2002 by the GAM and the government of Indonesia. This continued the conflict until the devastating tsunami in December 2005. After the tsunami, both the GAM and the Government of Indonesia established a truce, with peace finally realized

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in September 2006 when GAM was allowed to be a political party and participate in elections and local and national government.

A study conducted around this time by the International Organization for Migration^{1,2} in high-conflict communities across Aceh found that nearly three-quarters of those assessed reported living through combat, with more than one-quarter reporting having been beaten and nearly forty percent reporting a family member or friend being killed. With this exposure to violence, they also found high rates of depression symptomatology, post-traumatic stress disorder and anxiety.

While this study indicates high rates of mental health problems among the general population, it does not provide us with sufficient information to develop targeted interventions and locally useful assessment tools. To get the necessary information, we used qualitative methods to explore important mental health problems, dysfunction and coping strategies from a local perspective. Data from this type of assessment consist of how local people view their problems in terms of the nature of these problems, their severity, their causes, and how people deal with them. Program implementers can use this information to select problems that match local priorities, and to design and adapt interventions that are likely to be effective in terms of local feasibility and cooperation. The information is also useful in designing indicators and assessment tools to evaluate both the need for, and the impact of, programs and to monitor their implementation.^{3,4} In this report we present the results from our qualitative study that identifies targets for intervention including the salient mental health problems, indicators of functional impairment, and coping strategies that could be enhanced.

In the context of this qualitative study,

“violence” refers to all acts of intentionally inflicted physical and/or psychological injury, whether by a person acting on their own initiative or under the direction of another person, and excludes accidental injury. The term “survivors of violence” includes not only those who were injured but also others who have been affected by these acts either by indirect exposure (such as witnessing an act) or by having to live with their consequences (such as family members).

Study purpose

The primary purpose of this qualitative assessment was to understand how local people affected by violence perceive their current psychosocial and mental health problems resulting from these experiences, including the variety, importance and severity of these problems, the nature and terminology used to describe these problems, their perceived causes, and what people do to help themselves when they have these problems. In addition, data were gathered to identify what constitutes the most important aspects of normal daily functioning in order to design locally-appropriate measures of functional impairment. Finally, data were also collected to understand the various coping skills used by the local population to minimize their excessive negative emotions and to deal with daily life stress.

Study location

The interviews for this qualitative study were conducted in three villages in Bireuen district, one of the hardest hit districts in Aceh.¹ These three villages were representative of the region in terms of nature and severity of conflict experiences, social economic status, and size of the villages. All the interviews were conducted in these three villages at people’s homes, under trees, or at local mosques.

Methodology

This study draws on methods developed by Bolton and colleagues,^{5, 6} that have been applied in other under-resourced and fragile environments. Local interviewers were trained in the use of open-ended, non-leading methods of interviewing in which the respondent is probed for as much information on a topic as they know and are willing to say. Everything the respondent says is recorded verbatim, without summarization, paraphrasing or translation. Respondents were chosen to represent the diversity of the population and for their particular knowledge of the issue being assessed.

The study involved two weeks of training, data collection and analysis. Twelve interviewers, who were native Acehnese language speakers, received training and daily supervision throughout the interview process. Interviewing was done by means of three qualitative methods used sequentially: Free listing, key informant interviews, and focus groups, with all interviewers working in pairs.

Free listing interviews

Seventy-one community members (36 male, 35 female) were interviewed using this first technique. Respondents included those exposed directly to the violence and members of their families, as well as locally respected persons (community leaders and well known local people). Respondents were asked the primary question: "What are some of the problems that people affected by violence in your community face?" Interviewers probed each respondent for as many problems as the respondent could think of. For each problem, interviewers recorded its name and a short description, in the exact words of the respondent in their local language.

At the end of the interview, interviewers reviewed the list for potential mental health

or psychosocial problems, defined as problems referring to *thinking, feeling or relationships*. For each of these problems, they asked the respondent for the names and contact information of local people who are knowledgeable about that problem and/or who people with these problems go to for help. The focus was on identifying key informants who come from the local area (in contrast to professionals such as health care or social workers who work in areas but often come from elsewhere). This contact information, and the problem each "expert" was said to be knowledgeable about, was recorded separately from the interview.

To analyze the free lists, the interviewers condensed all of their lists into a single composite list of all the psychosocial and mental health problems. Two problems (fear and too many thoughts) were selected for further investigation with the key informants (described below) in that they appeared frequently, were interpreted by the interviewers to relate to many of the other problems mentioned, and the project implementers thought they would be able to address those two problems with their counseling program.

Four additional free lists were generated from each respondent, gathering information about the important day-to-day activities and tasks that men and women do to care for themselves, their families, and their communities, and on the coping strategies they use to deal with their problems. This information was sought with the intention of formulating locally appropriate indicators of functioning and coping.

Key informant interviews

A total of 22 key informants (KI) were interviewed using the second interviewing technique. The KIs were identified through the names and contact information provided by the free list respondents described above and

by “snowball sampling” (i.e. referral by one key informant of another key informant). In addition, some of the free list respondents who were identified as clearly knowledgeable were enlisted as key informants. Fourteen (64%) of the KIs were interviewed between 2 to 4 times in order to record as much information from them as possible. Five of the KIs were only interviewed once because upon review of their responses they were deemed to either be unknowledgeable about the problems and/or the population of interest.

Key informants were asked to tell all they knew about each of the two problems fear and thinking too much, with particular reference to the nature of each problem, its causes, effects, what people do to address each problem, and what could be done by others to help. Like with the free list interviews, the study interviewers conducted the analysis of the KI interviews. The interviewers reviewed the text of the interviews to identify all the different signs and symptoms mentioned for each problem area, indicating how many different KIs reported each sign and symptom. Items that the interviewers identified as meaning the same thing (i.e. don't want to talk and quiet) were grouped together. For signs and symptoms that were grouped together as meaning the same thing, the interviewers were asked to come to a consensus as to one of the terms that could be used to capture the overall meaning of the group of terms. The end product were two lists, one each for fear and thinking too much, with all the different signs and symptoms and the frequency with which each was reported.

In addition to the analysis of the signs and symptoms, the interviewers also reviewed the KI interviews to identify local ways that people coped with the problems they had.

Focus groups

To further explore functioning among the local population, one focus group was convened. During the focus group, the participants were provided with a summary of the results of the task lists from the earlier free list interviews. The participants, consisting of 5 male and 5 female KIs, were asked to confirm if these were the activities and tasks that men and women regularly do across all three domains (care of self, family, community) and if there were other important activities not listed. To complete the discussion, the group was asked to identify the most important tasks for each gender, understanding that all of the identified tasks were activities that both men and women do regularly.

Results

This qualitative assessment was completed in two weeks in September 2006. Table 1 presents the mental health problems mentioned by at least 10% of the free list sample (n=71). The problem of fear was the most mentioned problem (44 respondents) followed by heart pounding, heavy heart, shaking and trembling and thinking too much. Reviewing the results, the interviewers thought that the problems of heart pounding, shaking and trembling were all encompassed within the problem of fear, with fear being the emotion and the other three being the symptoms that accompany fear, which is consistent to the cluster of symptoms of anxiety in the Western model. Heavy heart was encompassed within thinking too much by the interviewers, and the study team also thought this might be the theme for Depression from the Western model. Therefore, the in-depth key informant interviews focused on the primary problems of fear and thinking too much.

For the analysis of the KI data separate

Table 1. *Mental health and psychosocial problems identified from the free listing interviews (71 respondents).**

Problem Description	Frequency
Fear/afraid	44
Heart pounding	31
Heartache/Heavy heart	15
Shaking, trembling	14
Too many thoughts/ thinking too much	12
Body pain/stiffness	10
Anger/feelings of revenge/resentful. . .	9
Worried, anxious, stressed	8
Chest pain (broken chest).	8
Sad.	8
Trauma	8
Remember the loss.	7

*) Problems mentioned by 10% or more of the respondents are presented.

Table 2. *Signs and symptoms of "fear" and "thinking too much" from the KI interviews (22 respondents)**

Symptoms	Frequency "thinking too much"	Frequency "fear"
Body is sick/body pain	12	11
Weak body/no energy	12	10
Heart pounding	5	15
Not calm/can't sit still/ restless	8	
Spacing out	15	4
Loss appetite/forget to eat	8	4
Easily get angry	9	3
Can't sleep/sleep difficulties	6	5
Shaking	1	10
Unhappy/sad	8	2
Broken hearted/heavy heart	2	7
Isolation	7	0
Quiet	4	3
Fever/body feel cold/body feel hot	2	6
Remembering the loss	2	6
Feels like everything done is wrong (guilt)	3	1

*) Symptoms mentioned by two or more of the KIs are presented.

lists were generated for each problem: fear and thinking too much (Table 2). Review of the KI interviews indicated significant overlap and that each primary problem often showed up as a symptom within the descrip-

tion of the other problem. The overlap in symptoms can be seen clearly except for "isolation" which is only seen for the problem of "thinking too much".

Table 3 provides information on what the KIs indicated that the survivors of violence and their families do to help themselves when they experience distress. The identified strategies ranged from things the individual does by him/herself (i.e. go for a walk) to things he or she does with others (i.e. have discussions with friends or family). We did not ask the KIs to identify which of the coping strategies they considered "positive" or "negative." Thus, the strategies need to be evaluated by program staff for what they would consider to be coping strategies that could be promoted, or leveraged, in an intervention strategy.

Table 4 presents a summary of the daily tasks and functions, separated by gender, generated from the free lists and identified as important in the focus group discussion. These items will be used to develop an assessment of functional impairment that would measure an individual's inability to carry out the specified tasks and activities.

Discussion

For assessment of mental health and psychosocial problems in non-Western environments, it is typical for programs and researchers to translate standard Western assessment tools and conduct screening.² Field practitioners often express concerns over such methodology. The author's own experience (BP) includes a situation when survivors of torture and violence answered that they always have recurrent memories of the traumatic event when screened through a translated Harvard Trauma Questionnaire,⁷ but on further probing, the recurrent memories were actually of loss of cattle and property, and not the recurrent memory of

Done by self	Done with others
Pray	Recite Koran with others
Work	Discussions with family/friends
Find recreation	Kenduri (cook for others during ceremonies)
Sit at home not going anywhere	Play football and volley ball
Do more fasting (religious)	Listen to lectures by religious leader
Go to look for money	Avoid fights and arguments with others
Go for a walk	Get involved in community work
Vow (make promises to God about making amends if he granted the wish)	

Table 3. Coping strategies identified during the Key Informant interviews (22 respondents).

Table 4. Female and Male Task and Activity List.

Female tasks and activities	Male tasks and activities
Take shower	Earn money
Put on make up	Eat rice
Iron clothes	Pray
Eat rice, meals	Sport (volleyball, football)
Sit around for relaxation, chat with others	Take a bath
Pray	Help clean up the house/fixing the house
Cook	Go to the market to shop (buy rice, fish)
Prepare the children to go to school	Shave
Wash clothes	Religious art (recite traditional poetry in Arabic language)
Work	Recite Koran
Take care of self (wear clothes, comb hair, take a nap, cutting nails)	Community work
Wash dishes	Community meeting
Fetch water	Go to kenduri (ritual/ceremony meals)
Look for woods	Music art (related with prayer and religion)
Educate children	Brush teeth
Kenduri/cooking for people having ceremony or ritual	Brush hair
Clean up the house	Visit people who experience calamity
Take care of children	
Earn money	
Take care of elderly	
Participate in Family Welfare Program (making cakes, sewing traditional fan)	
Learn/recite Koran regularly	
Community work (clean up mosque)	
Visit people who experience calamity	

the torture or violence they experienced, as purported by the question. Another example is the issue of asking about nightmares. Our experience is that people respond positively to the question on nightmare when they might have a dream that culturally signifies bad luck (i.e., dreaming of your tooth falling out). When further probed, they might not be distressed by the dream, but are worrying constantly about other things, like how to send their child to school. This raises the challenge of the assessment tool's validity in the local context, which cannot be assessed without understanding the local language, expressions of distress and what is considered problematic.

These challenges emphasize the importance of understanding what is distressing to the targeted population first.⁸ Understanding local idioms of distress is a valuable way to gain a more in-depth understanding of local mental health symptomatology. For example, in this study conducted all in Acehnese, we identified several expressions of distress like "Ule Mekerlep", which literally translated means 'cockroaches running around in your head' and "Jantoeng ie meu en", which literally translated as "heart is playing." When the Acehnese interviewers were asked to describe what these idioms meant, the former was described as meaning having "too many thoughts" and the latter as being restless.

Beyond just generating local idioms of distress, the study also gathered signs and symptoms that define the mental health problems experienced by the local population. The study results showed a lot of general psychological symptomatology but did not generate any evidence that these problems are grouped together within individuals as a specific syndrome or set of syndromes. The study team was open to finding symptomatology of Post Traumatic Stress Disorder (PTSD) or Major Depressive Disor-

ders as might be expected from the literature on post-conflict populations.^{9, 10} However, if we use the Western clinical model, then comorbidity of anxiety and depression symptoms, together with somatic presentations of distress, appears to be the most appropriate way to define the mental health problems faced by this population. This finding is also consistent with published literature where anxiety and depression are the most common mental health problems with people exposed to extreme stressors.¹¹ Besides the mental health problems, economic problems and general health problems also stood out as an important problem in the community.

Promoting positive coping mechanisms for people exposed to extreme stressors is a recommended intervention strategy.¹² It is assumed that all populations have their own ways to deal with distress, informed by cultural, economic, and environmental influences. The study team investigated the coping mechanisms of the targeted population to understand what people do to cope to reduce their levels of distress in their context. Among the strategies that were important to this population included a variety of religious practices (praying, reciting Koran, fasting, making vows) as well as activities that promote interaction with others (playing sports, community work). Identifying what the local population already does, both positive and negative strategies, is important for ensuring interventions fit within the local context and build upon strategies that are already used locally.

In recent years, the focus of researchers and field practitioners has shifted beyond only focusing on symptomatology to including assessing dysfunction as well. Standard tools, like the WHO-DAS II¹³ exist. However, upon exploration with the local experts, it was found that some items like "standing for long periods of time" and

“walking a long distance” were vague and very subjective, depending on the local context. Additionally the tool does not address the different roles and tasks of men and women within the local context. With the assumption that local tasks and roles may vary from culture to culture, the research team relied on local people to identify the important specific tasks that an adult man and woman needs to do to care for themselves, their family, and participate in their community. Using this locally specific information allowed us to develop tools to measure functioning that get at the important things local people need to do, rather than a more general measure of impairment.

This study explored the psychosocial and mental health symptoms and problems, indicators of functioning, and coping strategies and did not investigate the domains of economic problems and general health problems that were also mentioned as major problems by the community. Understanding how the economic situation and general health issues impact mental health and how mental health problems impact economic and general health issues is an important issue for future research.

Conclusions

Based on the study results the community perceived psychosocial and mental health problems as major problems, along with general health and economic problems. The psychosocial and mental health problems for this population fell within the domains of anxiety and depression problems combined with somatic presentations of distress. These general results are similar to those found in a psychosocial needs study conducted by International Organization for Migration,¹ yet this study adds the local description and expression of these problems rather than relying on the Western models defined by

the standard instruments used in the IOM study. In addition to symptomatology, this study also adds the dimensions of functionality, and local coping mechanisms.

The importance given to the mental health problems identified by people in the community led the researchers to develop a community-based psychosocial counseling program that was implemented by locally based NGO staff trained and supervised by ICMC. The local idioms of distress and the important signs and symptoms were used to adapt standard Western tools, making them more appropriate to the local population than basic translation methods would have done. These assessment tools were then used to screen people into the psychosocial program and evaluate its impact. The validated mental health assessment tools and measures of dysfunction and coping are available from authors by request.

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A study of aggression among mass-evacuated Kosovo Albanians

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Abstract

Aggression among a sample of traumatized, mass-evacuated adults from Kosovo was studied, using a prospective design with a baseline study, follow-ups at three months and six months in Sweden, and an additional follow-up after one and a half years in both Sweden and Kosovo. Aggression was measured with the Revised Swedish Version of Aggression questionnaire (AQ-RSV). Traumatic events and PTSD-related symptoms were measured by the Harvard Trauma Questionnaire (HTQ), and depression with HSCL-25. At the additional follow-up after one and a half years, the same measures were used, as well as clinical diagnostic interviews with the SCID. Verbal aggression correlated positively with age and educational level. No gender differences were found. The trauma level was high – the mean experienced number of the 16 trauma events derived from the HTQ was 9.65 (SD 3.55) – and significant correl-

ations were found between trauma and aggression at the first follow-up after three months – torture, for instance, correlated with total aggression scores ($p < 0.003$) – but not in later follow-ups. Aggression increased over time and was linked with both mean scores of PTSD and depressive symptoms, as well as with the diagnoses PTSD ($p < 0.0001$) and depression ($p < 0.0001$), especially if both diagnoses were present. Implications are discussed.

Keywords: aggression, PTSD, depression, trauma, Kosovars

Introduction

Trauma in refugee populations and its relation to both PTSD and depression has been the subject of many studies during the past decade.^{1,2}

Aggression and its correlation to PTSD together with the social consequences of trauma related aggression have also been investigated in many studies, mainly among Vietnam veterans.³ In this population, for instance, increased interpersonal violence has been connected with both the diagnosis and severity of PTSD.⁴ Dangerous weapon use⁵ and attitudes towards violence have also been found to be related to PTSD among Vietnam veterans.⁶ In one study the PTSD diagnosis, and not combat exposure itself, was found to be correlated with increased aggression among veterans.⁷ In another

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study of veterans with PTSD it was found that impulsive reactions were more frequently directed toward unknown persons whereas verbal aggression was more often aimed at people known to the veteran. It was also found that educational level and socioeconomic status played an important role in the occurrence of violence in this group.⁸ Lastly, comorbid alcohol addiction has been found to increase aggression levels among Vietnam veterans with PTSD.⁹ Despite these findings, very little is known about aggression among traumatized refugee populations with PTSD. In two cross-sectional studies among Kosovo Albanians conducted in Kosovo just after, and one year after, the end of the war it was found that PTSD symptoms increased at the same time as feelings of hatred towards the Serbs decreased.¹⁰ It would be of even greater importance to study aggression and its correlation to trauma, PTSD and depression in vulnerable populations such as mass-evacuees who are living under post-migration stressors and have less social support, so that the consequences of aggression are supposedly more severe both on an inter-individual and a societal level.

In this study, which is a part of a larger project¹¹ in which both PTSD,¹² depression and coping strategies were studied,¹³ we focused on aggression and its correlations to these diagnoses. The population and the context are described elsewhere.¹¹

The aim of this study was to investigate aggression and its connections with PTSD and depression. The study was conducted by questionnaires and clinical diagnostics in a sample of mass-evacuated and traumatized adults from Kosovo, using a prospective design with several follow-ups.

Materials and methods

Design and the study population

In the original design we intended to study

the mass-evacuated persons granted permission by the Swedish government to stay 11 months in Sweden at baseline and two follow-ups (after three and six months), with questionnaires. Later, due to new Swedish political decisions, their stay in Sweden was prolonged. A new opportunity then arose to perform an additional long-term follow-up of the studied sample after one and a half years. This had not been planned in the original design. However, after one and a half years, many in the original study population had voluntarily repatriated to Kosovo and this follow-up was therefore conducted both in Sweden and Kosovo (i.e. at baseline, and at follow-up at three and six months). We also decided to include clinical diagnostics in this follow-up. This means that at baseline and at the three month, six month and one and a half year follow-ups the self-reporting instrument, the Harvard Trauma Questionnaire (HTQ) was used. At the three month, six month and one and a half year follow-up the self-reporting instruments Hopkins Symptom Checklist (HSCL-25) and the Swedish version of AQ, AQ-RSV (Aggression Questionnaire, Revised Swedish Version) were used. Finally, at the one and a half year follow-up the self-reporting instruments were used together with clinical interviews.

A sample of 402 of the 2,930 Kosovars (about one in five) that in June 1999 had participated in a mass-evacuation to Sweden and were between 18 and 65 years old was randomly selected from airline passenger lists. They were supposed to stay at four of the five centres (Northern, Western, Central, and South regions) of the Swedish Migration Board. Participation in the study was voluntary and informed consent was obtained before participation. The baseline study began in August 1999, after the Swedish Migration Board assistants and interpret-

ers who were to interview participants at the centres had undergone a one-day training programme conducted by the second author (SE) and her research group. The inclusion period was August to September 1999. Communication between the project group and the field was maintained by a contact person from each of the four regions who was responsible for contacting the assistants during the study.

Informed consent procedures and the study design were approved by the Regional Ethics Committee at the Karolinska Institutet (KI Dnr. 99-245 and 00-444).

Assessment tools

The information and questions in the self-reporting instruments were translated and back-translated according to the standards of cross-cultural research.¹⁴ The instruments, back translated into Albanian and used in this study, were designed as a self-report questionnaire. However, in the few cases where the participants were more or less illiterate, the questions were read aloud by assistants (in Swedish) of the Swedish Migration Board and an authorized interpreter (in Albanian). We were aware that this affected the standardisation of the instruments; to avoid this problem, the assistants had training and regular supervision. Part 1 of the HTQ, that measures trauma experiences, was used only at the baseline measurement.

The essential problem in measuring human aggression with self-reporting instruments is to distinguish traits from states of aggression, i.e. baseline level versus episodic aggression. Therefore one must be aware that different forms of aggression-rating instruments measure different aspects of the aggressive process, and that the various aggression components of different instruments can only be compared on the most general level.¹⁵

On the other hand, self-report scales or questionnaires have the advantage that their uncomplicated administration and objective comparability render them valuable research instruments. Careful selection of items can enable the self-report technique to allow for a balanced representation of spectacular and subtle aggressive behaviours; still, the subjectivity and social desirability bias inherent in the method are obvious drawbacks.¹⁶

Diagnostic interviews, using the SCID instrument,¹⁷ at the one and a half year follow-up were conducted by the first author (GR), a psychiatrist. The interviews were conducted at the selected four of five Centres of the Migration Board in Sweden, and in Kosovo either in the participant's home or in a special interview room set up in a hotel in Pristina. Prior to the interviews, each respondent was to read an information letter (in Albanian) of informed consent that indicated the voluntary nature of participation and guaranteed strict confidentiality.

Harvard Trauma Questionnaire

The Harvard Trauma Questionnaire (HTQ) was used to assess for trauma history and PTSD symptom criteria. The instrument has been widely translated and used in a number of studies among diverse cultural groups and validated against clinical diagnoses.^{18,19} The reliability and validity of the PTSD-HTQ symptoms have been found to be high. Cronbach alpha, a reliability analysis measure of internal consistency based on the average inter-item correlation, has been estimated at 0.89.²⁰ For the PTSD-HTQ symptoms, a validation study conducted among 91 Southeast Asian refugee outpatients at the Indochinese Psychiatry Clinic in Boston reported a sensitivity of 78% and a specificity of 65%. In terms of reliability, one-week

test-retest reliability has been reported as 0.92 and interrater reliability among Bosnian refugees living in Croatia was estimated as 0.98.²⁰

The second author (SE) was granted permission to use the HTQ. The latter is a structured interview in which each participant responds to questions under four headings: traumatic events (Part One), personal description (Part Two), injury to head (Part Three), and trauma symptoms (Part Four). Parts two and three have been published¹¹ elsewhere. Part four, trauma symptoms, consisted of 30 symptoms and each participant was asked to report the extent to which each symptom had bothered him/her within the past week with reference to a four-point scale (1-4), ranging from “not at all”, “a little”, “quite a bit”, to “extremely”. The first 16 of the 30 symptoms reflect DSM-IV criteria for PTSD. We defined the occurrence of PTSD according to a scoring algorithm proposed by the Harvard Refugee Trauma Group.²⁰

The Hopkins Symptom Checklist

The Hopkins Symptom Checklist (HSCL-25) includes a 15-item depression sub-scale and a 10 item sub-scale of anxiety symptoms and in this study for practical reasons we used the depression sub-scale. This instrument has been widely translated and used in a number of studies among diverse cultural groups. It has proved to be internally consistent and valid for measuring depression and anxiety, for instance among Southeast Asian refugees and Bosnian refugees living in Croatia.²⁰ In another study with the same population¹³ the authors found that the best sensitivity and specificity for having a clinically diagnosed depression was with a cut-off point of 3.3 on the HSCL-25 depression sub-scale.

Aggression Questionnaire – revised Swedish Version (AQ-RSV)

The Swedish version of the Aggression Questionnaire, standardized on a normal Swedish population, was used.²¹ The 29 item questionnaire has four sub-scales measuring hostility (eight items), anger (seven items), verbal aggression (five items) and physical aggression (nine items). For the purposes of neutral answers avoidance, the items are arranged in a randomized order in four scale steps (from 1 = “least characteristic” to 4 = “most characteristic”). Among the main advantages of AQ-RSV is the possibility to assess gender and age specific aggression, which is widely used in other studies.^{22, 23}

SCID interview

The participants were interviewed by the first author (GR), at the one and a half year follow-up both in Sweden and Kosovo, using the clinical version of the Structured Clinical Interview for DSM-IV – Axis I disorders.¹⁷ Several studies have demonstrated the superior validity of the SCID over standard clinical interviews.²⁴⁻²⁶ The reliability of the SCID in diagnosing PTSD has been assessed at 0.8-1.0 in earlier studies.^{27, 28}

Statistical analyses

The Statistical Package for the Social Sciences (SPSS) 10.0 for Windows was used. A variety of statistical tests were used in the analysis of the data. The quantitative items are described by means \pm standard deviation. The differences between means were tested with the non-parametric Mann-Whitney test. The correlations between variables were tested with the non-parametric Spearman correlation coefficient. Chi-square tests were used concerning observed differences of proportions. The changes of mean scores over time were measured with the non-parametric Friedman test. A probability level of

0.05 was adopted a priori as the minimum level to be considered statistically significant for differences among groups. Internal consistency was estimated with Cronbach's alpha.

Results

Participants

Prior to the baseline study, 59 of the 402 possible participants had left Sweden. Of the remaining 343 persons, 218 participated at baseline (64% response rate). Women numbered 122 (56%) and men 96 (44%). No background data were available via the passenger lists due to logistic limitations and a chaotic situation at the time of departure and arrival in Sweden. For this reason it was not possible to carry out a drop-out analysis at baseline.

Between the baseline and the three month follow-up, 38 participants (17%) had repatriated out of the 218 participating at baseline. Of the remaining 180 persons, 131 (70 women and 61 men) participated in the first follow-up, three months after the baseline, giving a response rate of 73% (i.e. percentage of participants out of available subjects in the follow-up study).

At the six month follow-up, 91 participated (44 women and 47 men), that is 65% of those who participated at the three month follow-up. At that point of time we were unable to estimate how many had repatriated between the three and six month follow-ups.

At the additional follow-up, after one and a half years, of both those that had remained in Sweden and applied for asylum and those having repatriated to Kosovo, a total of 56 participated, i.e. 62% of those who had participated at the six month follow-up. Thirty-five of them (18 women and 17 men) were applying for asylum in Sweden and 21 (11 women and 10 men) had voluntarily returned to Kosovo.

Drop-out analysis

The drop-out rates were 87/218 between baseline and the three month follow-up, 40/131 between the three month and the six month follow-ups and 35/91 between the six month follow-up and the additional one and a half year follow-up. This means that the overall attrition rate was 162/218.

In an analysis of the drop-outs between the four investigations (baseline, three month, six month, and one and a half year follow-ups), there were no significant differences between participants and drop-outs regarding gender, age and educational level. The only socio-demographic difference was that participants at the three month follow-up were significantly more often married or cohabiting compared to the drop-outs. Regarding experience of torture, we found no differences between the drop-outs and participants. The drop-outs at the three month follow-up had significantly more PTSD-related symptoms scored with the HTQ than the participants. At the other follow-ups, the drop-outs did not differ from the participants with regard to HTQ scores. The drop-outs did not differ significantly from the participants at any of the follow-ups regarding HSCL-25 and AQ-RSV.

Trauma exposure

The mean experienced number of the 16 trauma events derived from the HTQ was 9.65 (SD 3.55). The rate for all individually experienced traumas, with the exception of the two items "rape or sexual abuse" and "imprisonment", ranged from 20% for "serious injury" to 91% for combat situation. Torture had been experienced by 53%. Women showed a significantly higher frequency of having experienced ill health without access to medical care ($p < 0.002$) and combat situations ($p < 0.013$).

Age, gender, educational level and aggression measured with AQ-RSV

A significant positive correlation was found between age and verbal aggression at the one and a half year follow-up ($r = 0.332$, $p < 0.016$) but not between age and any of the other sub-scales measuring aggression. We could not find any significant gender differences regarding aggression on any occasion, either total aggression scores or sub-scale scores. A significant positive correlation was seen between educational level (years at school) and verbal aggression ($r = 0.280$, $p < 0.014$) at the 6-month follow-up but not for the other expressions of aggression. In order to measure the trends of aggression levels over time the Friedman test was used. In Table 1 it is shown that total aggression scores, anger scores, hostility scores, verbal aggression scores and physical aggression scores increased significantly over time, especially between the six month and one and a half year follow-up. However verbal aggression scores did not increase significantly over time.

Trauma and aggression measured with AQ-RSV

At the first follow-up after three months, but not at the later follow-ups, we found that those having experienced the following five

traumas scored significantly higher on all the AQ-RSV scales or some of them:

1. Torture: total aggression scores ($p < 0.003$), hostility scores ($p < 0.001$), anger scores ($p < 0.014$), verbal aggression scores ($p < 0.013$) and physical aggression scores ($p < 0.012$).
2. Serious injury: total aggression scores ($p < 0.016$), hostility scores ($p < 0.006$), anger scores ($p < 0.036$) and physical aggression scores ($p < 0.013$).
3. Murder of stranger or strangers: verbal aggression ($p < 0.014$) and physical aggression ($p < 0.019$).
4. Forced isolation from family: total aggression scores ($p < 0.044$) and hostility scores ($p < 0.028$).
5. Lost or kidnapped: hostility scores ($p < 0.040$).

Aggression among those who repatriated or remained in Sweden

At the final follow-up after one and a half years, those who remained in Sweden scored significantly higher regarding aggression ($p < 0.017$); they also scored significant higher on hostility ($p < 0.010$) and physical aggression ($p < 0.002$). We investigated whether the difference in levels of AQ-RSV between those who had voluntarily remained in Sweden and those who had voluntarily re-

Table 1. Self-rated measures of aggression. Mean scores and significant changes over time measured with Friedman's test.

	AQ-RSV-scores mean values (SD)					Friedman's test, significant changes over time, p-values and mean ranked AQ-RSV-scores				
	total	hostility	anger	verbal	physical	0.0001 total	0.0001 hostility	0.003 anger	0.060 verbal	0.0001 physical
3-month follow-up	56.5 (18.3)	16.9 (5.3)	15.2 (4.2)	10.9 (3.6)	16.7 (5.8)	1.79	1.73	1.95	2.05	1.51
6-month follow-up	57.4 (17.5)	17.6 (5.6)	15.2 (4.5)	10.4 (3.5)	16.6 (5.4)	1.74	1.77	1.66	1.74	1.89
1.5 year follow-up	71.3 (17.4)	20.9 (5.8)	17.7 (4.2)	12.0 (3.5)	20.8 (6.3)	2.47	2.50	2.38	2.22	2.60

Table 2. Differences in Aggression scores measured with AQ-RSV between those diagnosed, clinically and by questionnaires, with or without PTSD and Depression.

<i>Clinically diagnosed PTSD</i>			
	PTSD	No PTSD	p-value
3-month follow-up, AQ-RSV mean scores (SD)			
6-month follow-up, AQ-RSV mean scores (SD)			
1.5 year follow-up, AQ-RSV mean scores (SD)	77.1 (15.1)	56.9 (14.1)	<0.0001
<i>Clinically diagnosed depression</i>			
	Depression	No Depression	p-value
3-month follow-up, AQ-RSV mean scores (SD)			
6-month follow-up, AQ-RSV mean scores (SD)			
1.5 year follow-up, AQ-RSV mean scores (SD)	82.3 (13.9)	65.0 (16.1)	<0.0001
<i>PTSD diagnosed with HTQ</i>			
	PTSD	No PTSD	p-value
3-month follow-up, AQ-RSV mean scores (SD)	62.7 (18.3)	52.5 (13.4)	<0.009
6-month follow-up, AQ-RSV mean scores (SD)	65.6 (19.2)	52.3 (13.8)	<0.002
1.5 year follow-up, AQ-RSV mean scores (SD)	74.8 (15.8)	55.3 (15.1)	<0.003
<i>Depression diagnosed with HSCL-depression sub-scale</i>			
	Depression	No Depression	p-value
3-month follow-up, AQ-RSV mean scores (SD)	82.8 (13.5)	55.2 (17.5)	<0.003
6-month follow-up, AQ-RSV mean scores (SD)	74.3 (18.4)	56.6 (16.1)	<0.006
1.5 year follow-up, AQ-RSV mean scores (SD)	85.3 (16.3)	66.2 (14.8)	<0.0001

patriated at the final follow-up could be explained by the fact that those who were less traumatized or had lower aggression scores returned to their home country more readily. However, we could not see any significant differences regarding trauma levels or aggression at baseline or earlier follow-ups between those who later decided to repatriate or not.

PTSD, depression and aggression

Those diagnosed with PTSD at the one and a half year follow-up scored significantly higher on AQ-RSV regarding total aggression scores ($p < 0.0001$) and all four sub-scales: hostility scores ($p < 0.0001$), anger scores ($p < 0.002$), verbal aggression scores ($p < 0.0019$) and physical aggression scores ($p < 0.003$). The participants diagnosed with depression at the one and a half year follow-up scored also to a significant

degree higher on AQ-RSV regarding total aggression scores ($p < 0.0001$) and the four sub-scales: hostility scores ($p < 0.001$), anger scores ($p < 0.004$), verbal aggression scores ($p < 0.008$) and physical aggression scores ($p < 0.001$).

We found also that those diagnosed with both PTSD and depression, compared with those diagnosed with only PTSD, scored significantly higher on AQ-RSV regarding total aggression scores ($p < 0.031$), hostility scores ($p < 0.046$) and physical aggression scores ($p < 0.034$). See also Table 2.

Among those judged to have PTSD-diagnoses according to HTQ, and those assessed as having a depression diagnosis according to HSCL-25 depression sub-scale (scored above 3.3), significantly higher scores of aggression were observed at the different follow-ups, as seen in Table 2.

A significant positive correlation was

found at all three follow-ups between mean scores of HTQ and AQ-RSV scores as follows: At the three month follow-up: total aggression scores and HTQ scores ($r = 0.483, p < 0.0001$), hostility scores and HTQ scores ($r = 0.464, p < 0.0001$), anger scores and HTQ scores ($r = 0.394, p < 0.0001$), verbal aggression scores and HTQ scores ($r = 0.277, p < 0.015$), physical aggression scores and HTQ scores ($r = 0.390, p < 0.001$).

At the six month follow-up: total aggression scores and HTQ scores ($r = 0.450, p < 0.0001$), hostility scores and HTQ scores ($r = 0.581, p < 0.0001$), anger scores and HTQ scores ($r = 0.481, p < 0.0001$), verbal aggression scores and HTQ scores ($r = 0.499, p < 0.0001$), physical aggression scores and HTQ scores ($r = 0.438, p < 0.0001$). At the one and a half year follow-up: total aggression scores and HTQ scores ($r = 0.450, p < 0.0001$), hostility scores and HTQ scores ($r = 0.346, p < 0.010$).

A significant positive correlation was also explored at all three follow-ups between mean scores of HSCL-25 depression subscale and AQ-RSV scores as follows: At the three month follow-up: total aggression scores and depression scores ($r = 0.501, p < 0.0001$), hostility scores and depression scores ($r = 0.531, p < 0.0001$), anger scores and depression scores ($r = 0.461, p < 0.0001$), verbal aggression scores and depression scores ($r = 0.407, p < 0.0001$), physical aggression scores and depression scores ($r = 0.455, p < 0.0001$). At the six month follow-up: total aggression scores and depression scores ($r = 0.526, p < 0.0001$), hostility scores and depression scores ($r = 0.563, p < 0.0001$), anger scores and depression scores ($r = 0.477, p < 0.0001$), verbal aggression scores and depression scores ($r = 0.449, p < 0.0001$), physical aggression scores and depression scores ($r = 0.432, p < 0.0001$). At the one and a half year follow-up: total

aggression scores and depression scores ($r = 0.510, p < 0.0001$), hostility scores and depression scores ($r = 0.561, p < 0.0001$), anger scores and depression scores ($r = 0.474, p < 0.0001$), verbal aggression scores and depression scores ($r = 0.369, p < 0.007$), physical aggression scores and depression scores ($r = 0.393, p < 0.004$).

Reliability analysis

The internal consistency of the instruments was evaluated on all occasions by Cronbach's alpha: HTQ 0.90 (baseline), 0.92 (three month follow-up), 0.92 (six month follow-up), 0.93 (one and a half year follow-up). HSCL-25 0.94 (three month follow-up), 0.97 (six month follow-up), 0.96 (one and a half year follow-up). AQ-RSV 0.91 (three month follow-up), 0.92 (six month follow-up), 0.92 (one and a half year follow-up).

Discussion

Important findings

The trauma level in the population was high, especially the number of participants that had been exposed to torture (53%). This is in line with the result from another study of Kosovars where 49% had been exposed to abuse/torture,²⁹ although a broader definition of the latter was used than in our study. Age as well as educational level was connected with more verbal aggression. One interpretation of this is that increased age and educational level leads to a more mature form of aggression, verbal instead of for instance physical aggression. This is in line with the results from an earlier study among Vietnam veterans with PTSD⁸ in which educational level was of importance regarding expression of aggression. No significant gender differences were seen regarding aggression level on any of the occasions. This is remarkable as when the AQ-RSV was tested

on a Swedish general population men scored higher on total aggression and all subscales except the anger subscale.²¹ One explanation for this is that women had a greater degree of PTSD and were more traumatized in this material, which is shown in an earlier study by the authors.¹²

It was also found that aggression increases over time. However, we could see that up to the three month follow-up a significant correlation was seen between trauma, especially torture and aggression, but this was not observed at the later follow-ups (at six months and one and a half years). This might be explained by the fact that later on post migration stress factor played a more important role in the cause of aggressive feelings and also that basic trust among the participants was impaired during the waiting time. This might also explain the fact that those who decided to remain and apply for asylum in Sweden also expressed significantly more aggression. This is in line with the findings in the same sample that an increase in both PTSD and depression was accompanied by a decrease in Sense of Coherence (in terms of comprehensibility, manageability, and meaningfulness), which is assumed to be of importance for the ability to cope with post-migration stress factors in daily life and for prevention of ill health.^{12,13} A significant correlation between both the diagnosis PTSD and the severity of PTSD symptoms and aggression was observed, which is in line with findings from earlier studies among Vietnam veterans.⁴ In the present study we also found that depression, severity of depressive symptoms and PTSD with comorbid depression were correlated to high levels of aggression. This may seem remarkable because depressed people usually do not express or are unaware of their aggression. However, the role of aggression in depressive disorders has been understood in terms of inner-directed hostility

in a psychodynamic context. In a biological context, van Praag hypothesized that there is a subtype of depression, “anxiety/aggression-driven depression”, with anxiety and aggression as primary symptoms and mood lowering as a secondary symptom.³⁰

Limitations and strengths

One limitation of this study is the relatively small sample and the drop-out rate (39% at three month follow-up, 30% at the six month follow-up, and 38% at the one and a half year follow-up). However, we did not find significant differences between the participants and the drop-outs regarding socio-demographic factors or exposure to torture. The finding in the drop-out analysis that the participants at the three month follow-up were more often married or cohabiting than the drop-outs hardly affects the conclusions of our results. The assumption is that single women and men may have returned to their social network in Kosovo. The conclusions are also not affected by the result that the drop-outs and not the participants scored higher on the HTQ at the three month follow-up. Another limitation is the fact that clinical diagnoses and saliva cortisol levels were only registered at the final follow-up after one and a half years.

Finally, it is important to point out that the measures have not yet been validated for Kosovars as an ethnic group. Due to practical and time limitations it was impossible to perform a pilot study with the aim of validating the measures for the Albanian mass evacuees at baseline. On the other hand, at the final follow-up the results from the HTQ and HSCL-25 could be verified by the clinical SCID-interviews. The strengths of the study are that we prospectively studied a sample of mass evacuees and measured morbidity not only with questionnaires but also with clinical diagnostics.

Conclusions

The study supports the clinical experience that anger and aggression may play an important role in problems associated with traumatized refugees. A clinical implication of the study is the need to be aware of, and to deal therapeutically with, outward expressions such as aggression in traumatized refugee populations with PTSD and depression. Research implications are to increase the knowledge of measuring aggressive feelings in traumatized populations and also to study the social and interpersonal consequences of aggression in these populations.

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Suicidal ideation, post-traumatic stress and suicide statistics in Kosovo

An analysis five years after the war. Suicidal ideation in Kosovo

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Abstract

The substantial impact of the war in Kosovo has been documented by earlier research performed shortly after the war, but only limited data on the long term mental health impact have been published so far, mostly limited to posttraumatic stress (PTSD). The present study is aimed at extending the focus to a major question so far neglected in most post-conflict zones, namely that of depression and suicidal ideation. **Methods:** The present study was based on a representative country-wide survey (n=1161), using subscales for suicidal behaviour in the General Health Questionnaire (GHQ), comparing results with the corresponding Hopkins Symptom Checklist (HSCL-25) items and the Harvard Trauma Questionnaire (HTQ) to assess war related experiences and PTSD symptomatology.

Irrespective of age, gender or education, subjects in rural areas had higher suicide ideation scores, 41.7% of respondents met criteria for moderate to severe depressive symptomatology,

41.6% for clinical anxiety. Unemployment (83.7%), and high PTSD scores were associated with suicidal ideation scores, the last contingent on depressive mood.

It is concluded, that suicidal ideation linked to both past stressful experience and present social stressors is a question to be considered in mental health care plans in post-conflict zones. Under-recognition could be expected to result in increasing suicidal behaviour. Ideation also indicates, especially in the context of high post-traumatic stress and depression rates, exhaustion and despair that need to be addressed by more general interventions than individual Psychotherapeutic treatment.

Keywords: suicide, depression, war, posttraumatic stress disorder

Introduction

Mental health and the war in Kosovo

The hostilities in Kosovo can be seen as a testing stone for the understanding of the long-term impact of complex economical and psychosocial stress on mental health in general and psychopathology in particular.

The period of the Milosevic regime had been characterized by severe violations of national and human rights, massive imprisonments, loss of work, closure of the University of Pristina, "apartheid" and discrimination in the public education system and separation of families due to emigration

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to western countries. All of these caused long term psychosocial stress for the large majority of the Albanian population in Kosovo. The health care system that had been gradually dismantled already, was further impaired through the impact of the war. The war ceased in June 1999 with the deployment of NATO forces (KFOR), measures in the framework of UN declaration 2144 and, later, the installation of the UN Interim Administration Mission in Kosovo (UNMIK). Following the peace agreement many Kosovar Albanians returned, facing extensive damage to their homes and property and missing family members, as well as having to cope with traumatic experiences of the war, violence and persecution. Fearing retaliation from Kosovo Albanians, thousands of Kosovo Serbs fled Kosovo during the first year after the NATO bombing campaign. Hostilities have left a legacy of economic devastation and an unemployment rate of more than 70% in some regions.

Besides the economic impact, public health, and especially mental health, have been described as a major challenge during the war¹ and as a long-term challenge for the future.

Two population-based studies shortly after the war have demonstrated high rates of psychological sequels, especially of post-traumatic stress disorder (PTSD), indicating a rise between 17.1% in 1999 to 25% in 2000^{2,3} in a study by the Centers for Disease Control and Prevention (CDC), and several studies since then, have confirmed high rates of PTSD in more selected samples including both refugees and non-displaced population groups.⁴⁻⁸ Torture, including sexual torture, was a frequent event besides the death or injury of relatives and friends.^{2,3}

Most studies in post-war regions have been focusing on Posttraumatic stress disorder so far, but depression, hopelessness

and suicidal behaviour have been observed as also common and equally important issues in public health.⁹

General Mental health in Kosovo after the war
Few studies on general mental health, especially after 2005, have been published on Kosovo compared to the other former Yugoslavian republics.¹⁰⁻¹⁴

In the earlier study of the CDC in 1999, Lopez-Cardozo¹⁵ found, using a cross-sectional cluster-sample survey, a mean General Health Questionnaire (GHQ) score of 11.1, and a mean GHQ "severe depression" score of 0.9. This is despite the high prevalence of PTSD. Participants over 65 years of age, or those after internal displacement and chronic illnesses, were at general at higher risk for general Psychiatric morbidity as measured by the GHQ summary score. The authors did not specifically evaluate suicidal ideation subscales or items.

Refugees

Roth and Ekblad^{4,8,15} followed a group of Kosovar refugees in Sweden, and using the Hopkins Symptom Checklist (HSCL) found mean depression scores of 31.29 in men and 37.12 in women in a group that consisted of 48 male and 50 female refugees. It might be difficult, though, to compare refugees that suffer common additional stressors and loss of social networks with groups of war survivors who either have been and are still in their environment, or who consist of a heterogeneous displaced and non-displaced sub-groups, as is the case in present Kosovo and Bosnia-Herzegovina. Ferrada-Noli¹⁶ had observed high rates of suicidal behaviour including suicide ideas, plans, and attempts in a group of refugees in Sweden, that included refugees from the region but also other war-torn areas.

Suicide before the war

The striking differences in suicide rates between eastern European countries, ranging from 2.4/100.000 suicides per year in Albania to 47.3 /100.000 in Slovenia and 75.6 in Lithuania (2000),¹⁷ have been observed but not sufficiently explained. Albania, Greece and Kosovo, were on the extreme low end of statistical rates. Changes in statistical surveys, reporting methods and demographic respective country border changes require caution in the interpretation of data that merge data from the former Yugoslavia with those of present Serbia/Montenegro or the former part republics and Kosovo. Marusic in Croatia¹⁸ mentions possible underreporting of suicides in the region, based on similarities with the group of undetermined deaths in both seasonality and marital status. Still, this cannot sufficiently explain low suicide rates in Kosovo or Albania in the dimension observed. Authors such as Biro^{19,20} have underlined numerous methodological problems in pre-war data. Further, Kosovo must be seen as a country with a special and distinct history related to the war and its sequelae, that cannot be easily compared to the history of the other former part republics – Serbia, Montenegro, Croatia, Bosnia-Herzegovina and Slovenia.

Both media reports and the official statistics published after the war in Kosovo demonstrate a rising trend (Kosovo Department of Statistics²⁴ that was considered to be especially alarming as general resources were already strained and, probably as a result of earlier low rates, suicide prevention programs were at present rare or non-existing. The need for a better understanding and awareness is also stressed by the lack of data on research in Kosovo so far. Population data are not completely reliable and percentages are therefore difficult to give, though an estimate population size of 2.000.000 would

yield a rate of about 2,8 per 100.000 based on the above report.

Subjects and methods

In our present study, we therefore explored the so far neglected prevalence of suicidal ideation in the context of past and present stressors in a more general representative cross-sectional survey of the Kosovar population, following the design of the earlier CDC study. We further intended to evaluate the concordance/cross-validity of some of the two of the most common instruments used in epidemiological research in war areas, – the GHQ-28²² and the HSCL-25,^{23,24} in regard to extreme distress, hopelessness and suicidal ideation.

Results from stage two of the study, focusing on further questions such as level of functioning, and from a third, qualitative approach based study will be published separately.

An ethics review was offered through a working group of the Kosovo Rehabilitation Centre for Torture Survivors (KRCT) in collaboration with the relevant World Council for Psychotherapy Working Group. Informed consent was attained from all participants and information and contact data were given to all participants for contacts or referrals in case of treatment to be offered free of charge in the KRCT and satellite centres. All interviewers received training and supervision in stress and counter-transference management, had been evaluated to exclude substantial war trauma, and supervision was offered during the interviews by experienced clinicians. The study was conducted following the approach of participatory research and local ownership of data as recommended in recent publications regarding research ethics at all stages.

Sampling methodology

A methodology similar to the earlier CDC study by Cordozo¹⁵ was applied to permit replicability and generalizability. The population structure of each municipality is used based on the published estimate of the Organization for Security and Cooperation in Europe (OSCE). The cumulative population of 15 years and older and the sampling interval was determined based on this survey, as the demographic survey data of the earlier CDC study were not recent enough to reflect demographic changes since 1999.

For this study we used the random two-stage cluster sampling methodology already used in the earlier CDC study² to provide a representative sample reflecting also city/countryside and regional distributions. In order to achieve a 95% confidence interval a total of 30 clusters with at least 40 adults over 15 years in each cluster were required. There were two Serbian clusters selected. The cumulative population of 15 years and older was calculated and the sampling interval was determined. From this, the cluster allocation for each municipality was drawn. In total, six teams of five interviewers were used to collect the data.

Data analysis

Data processing and analysis was carried out using Microsoft Excel 2003 for data entry and the SPSS 15.1.1 statistical package to perform statistical analysis. A probability level of 0.05 was adopted a priori as the minimum level to be considered statistically significant for differences among groups. Associations between categorical variables were carried out using Chi-square (Fisher's exact). Measures of difference between variables were employed using Student's *t* test where assumptions of normal distribution were met, or its non-parametric alternatives (Mann-Whitney *U* test), and Spearman's

rho to test correlations between continuous variables. A linear regression model, including age, gender and psychopathology as covariables was finally employed to test the association between post-traumatic stress and suicidal ideation.

Instruments

For the present objective to evaluate hopelessness, suicidal ideation and depressed mood, two self-reporting questionnaires were included in the overall study package: the General Health Questionnaire 28 (GHQ-28)²² and the Hopkins Symptoms Checklist (HSCL-25).²³

The General Health Questionnaire 28, (GHQ-28) is one of the most stable and widely used versions of the GHQ, a self-rating questionnaire evaluating mental health in general and specific aspects in four subscales with a score range of each 0-7, for depression, social dysfunction, anxiety, and somatisation. Scores range from 0 to a maximum of 28, higher scores indicating a higher burden of psychiatric morbidity. In our sample the internal consistency for this questionnaire was excellent ($\alpha = 0.94$).

The Hopkins Symptoms Checklist (HSCL-25)²⁶ consists of a 15-item scale of depressive symptoms, and a 10-item scale of anxiety symptoms. Answers may be coded from "0 = not at all" to "4 = much more than usual". Totals may range from 0 to 60 on the depressive scale and 0 to 40 on the anxiety subscale, generating a maximum total score of 100. Higher scores in both instruments indicate higher distress or pathology. This instrument has been demonstrated to be internally consistent and valid for measuring depression and anxiety in different refugee groups and war survivors in more general populations.² For this sample, HSCL had robust properties, displaying excellent internal stability ($\alpha = 0.95$)

Events related to war and persecution and PTSD symptoms were recorded using the Harvard Trauma Questionnaire (HTQ)²⁵ module in the version developed for the war in Bosnia-Herzegovina as this was seen as closer to characteristic war and trauma experiences than the original version by Mollica that had been developed for South-East Asia. The internal consistency of this instrument was also very good to excellent ($\alpha = 0.94$).

Instruments were used in the CDC versions that had been validated either in the population or by translation-retranslation.² A special questionnaire developed for the study was added to collect data on demographic data, employment, and war related factors.

The use of the relevant items in the GHQ as a subscale to measure suicidal behaviour ideation also has been established in recent studies.²⁶ These GHQ 28 items included:

- D3 Felt that life isn't worth living?
- D4 Thought of the possibility that you might make away with yourself?
- D6 Found yourself wishing you were dead and away from it all?
- D7 Found that the idea of taking your own life kept coming in your mind?
- Item D2 "Felt that life is entirely hopeless?" was added as an indicator of hopelessness.

Items SD7 Feeling hopeless about the future and SD10 Thoughts of ending your life (suicidal ideation) were taken from the HSCL-25. Also, GHQ overall score and depression scores were calculated using the recommended standard matrix.²²

Results

Some considerations must precede further description and statistical analysis deriving from the particularities of Kosovo and its recent history. As already discussed, many inhabitants of this former province of Yugoslavia were forced to leave their household in face of war. In this cohort also, approximately 50% of respondents were former refugees. Also, interviews were taken at a distance from the time of war. Main socio-demographic characteristics of the sample are presented in Table 1 and are described in the following.

The majority of participants in our study were young, or very young. A lower age limit was, in accordance to published guidelines, at age 15. Roughly half of the sample were under 35 ($n = 569$) and almost 80% were under age 55 ($n = 913$). Most ($n = 972$, 83.7%) were unemployed at the time data for this study was generated, their overall state of health visibly affected by their group history. Yet, surprisingly, less than 10% ($n = 92$, 7.9%) had received any help since peace had been reinstated for dealing with their psychological distress following the war. Half of the sample had been in combat situations ($n = 524$, 45.1%), more than one tenth having had sustained serious injuries as a result ($n = 142$, 12.2%). A significant proportion, moreover, had been tortured ($n = 206$, 17.7%), the term defined here as as "deliberate and systematic infliction of physical or mental suffering".

When a standard cut off (median-split) was used on the HSCL (Hopkins Symptoms Checklist), 41.7% of respondents met criteria for moderate to severe depressive symptomatology ($n = 484$), 41.6% had anxiety on a clinically severe level ($n = 483$) and $n = 500$ (43.1%) said they were under serious emotional distress.

A suicidal ideation index (SII) was cre-

Table 1. Sociodemographic characteristics and scores on the standard instruments of overall sample, $n = 1.161$. Results are expressed in frequency table and means (standard deviation); GHQ = General Health Questionnaire – generally used as a measure of well-being and quality of life, lower scores equate lower health. In this population the 25th percentile was at GHQ = 6; HSCL = Hopkins Symptoms Checklist; in various analyses a cut-off was used using median-split; PTSD = post-traumatic stress disorder – data expressed in frequencies using the CDC classification criteria on the HTQ (Harvard Trauma Questionnaire). High rates of clinical symptoms can be observed in spite of the time that has passed since the war.

Variable		Men	Women	Total
		n (%) mean (SD)	n (%) mean (SD)	n (%) mean (SD)
Age	15-34	218 (38.3)	351 (61.7)	569 (49)
	35-54	130 (37.8)	214 (62.2)	344 (29.6)
	55-64	49 (47.6)	54 (52.4)	103 (8.9)
	> 64	59 (40.7)	86 (59.3)	145 (12.5)
Area	Urban	251 (40.5)	369 (59.5)	620 (53.4)
	Rural	205 (37.9)	336 (62.1)	541 (46.6)
Region	Ferizaj	34 (43.6)	44 (56.4)	78 (6.7)
	Gjakova	15 (38.5)	24 (61.5)	39 (3.4)
	Gjilan	48 (41.4)	68 (58.6)	116 (10)
	Mitrovica	61 (38.4)	98 (61.6)	159 (13.7)
	Peja	35 (38)	57 (62)	92 (7.9)
	Prishtina	157 (38)	256 (62)	413 (35.6)
	Prizren	106 (40.2)	158 (59.8)	264 (22.7)
PTSD		96 (21.1)	160 (22.7)	256 (22)
GHQ score		7.8 (7.06)	7.97 (6.84)	7.55 (6.83)
HSCL anxiety		7.74 (7.3)	7.69 (6.7)	7.7 (6.9)
HSCL depression		11.3 (9.4)	11.7 (9.5)	11.54 (9.42)

ated using items from the GHQ and the HCSL. The corresponding seven items (D2, D3, D4, D6, D7, SD7, SD10) were re-coded in a Likert-type manner (0 = not at all to 3 = very frequently). Scores ranged from 0 to 21, with a mean = 3.13 (SD = 3.77) and relatively heterogeneous distribution (Skewness = 1.73, SES = 0.07) for which reason subsequent univariate analyses were limited to non-parametric. Although not originally designed to establish suicidality, the SII showed excellent internal consistency ($\alpha = 0.8$) and cross-validated very well both with GHQ total score ($r = 0.42$, $p < 0.000$), HSCL scores for anxiety ($r = 0.6$, $p < 0.000$) as well as depression ($r = 0.7$, $p < 0.000$).

No socio-demographic variables discriminated suicide ideation levels, except geographical area. Irrespective of age, gender or

education, subjects in rural areas had higher suicide ideation scores (Mann-Whitney U rank: 614.7 vs. 542.4, $z = -3.73$, $p = 0.000$). This was robust also in analyses looking only at high-risk individuals (with scores above the 75th percentile) alone (Mann-Whitney U: 199.7 vs. 167.92, $z = -2.84$, $p = 0.004$)

When looking at geographical regions in particular, subjects in Mitrovica had the lowest SI levels (see Figure 1), whereas those in Gjakova, a region with high exposure to war, scored highest. In terms of psychopathology, higher suicide ideation scores were associated with worse post-traumatic stress symptomatology as measured by the HTQ ($r = 0.58$, $p < 0.000$) and overall lower functioning score on the HTQ ($r = 0.58$, $p < 0.000$), independent of geographical area (see Figure 1). PTSD symptoms severity predicted suicide ideation in this population ($\beta = 3.53$,

Table 2. Suicide ideation score ranks in subjects with PTSD, compared to those without PTSD, in all regions of Kosovo included in the study design. Differences are expressed in log-rank differences using Mann-Whitney U tests.

Region	PTSD caseness (CDC definition)	n	Mean rank	Sum of ranks	Mann-Whitney U
Ferizaj	Suicide ideation score	absent	63	33.70	z = -4.798 p = 0.000
		present	15	63.87	
		Total	78	958.00	
Gjakova	Suicide ideation score	absent	24	15.81	z = -2.91 p = 0.004
		present	15	26.70	
		Total	39	400.50	
Gjilan	Suicide ideation score	absent	83	46.55	z = -6.15 p = 0.000
		present	33	88.56	
		Total	116	2922.50	
Mitrovica	Suicide ideation score	absent	133	71.36	z = -5.51 p = 0.000
		present	26	124.21	
		Total	159	9490.50	
Peja	Suicide ideation score	absent	66	40.01	z = -3.76 p = 0.000
		present	26	62.98	
		Total	92	1637.50	
Prishtina	Suicide ideation score	absent	334	183.13	z = -8.54 p = 0.000
		present	79	307.94	
		Total	413	61164.00	
Prizren	Suicide ideation score	absent	202	115.22	z = -6.77 p = 0.000
		present	62	188.81	
		Total	264	11706.00	

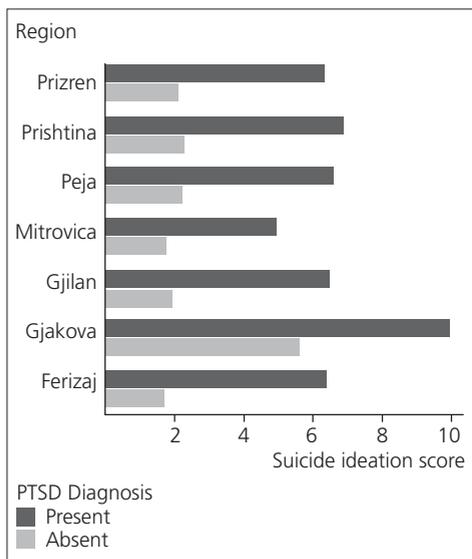


Figure 1. Suicide ideation index scores in subjects with post-traumatic stress disorder compared to non-PTSD across regions included in the study; irrespective of area included in this research, SI levels are much higher in subjects with PTSD.

CI95%: 3.27-3.78, $p < 0.000$, Adjusted $R^2 = 0.39$) independent of age and gender, although somewhat contingent on depressive symptomatology (in depressed people $\beta = 3.67$, CI95%: 3.04-4.3, Adjusted $R^2 = 0.2$).

Discussion

Our study results must be seen in the context of some methodological limitations. First, the overrepresentation of women in our sample, due probably to the absence of males during day time, might increase indicators sensitive to gender, though a similar bias can be observed in other studies similar to our own (see for example Lopez-Cardozo).² Further, no detailed history of earlier suicide attempts or family history of suicide were taken as part of the interviews. This was due to the fact that the still low incidence of suicide in the population as compared to countries known for their high suicide rates such as Hungary lead to a primary focus on present suicidal ideation, hopelessness and depression in the original design of our study.

The interpretation of possible aetiological factors indicated a key role of post-traumatic stress, but in heterogeneous larger populations that have suffered from a multiple "cluster" of adversities, including economic deprivation, unemployment, displacement, exposure to multiple war related and other traumas, an identification of contributing factors for distress might have to be based on an understanding of each individual person and his history. Still, certain geographical regions appear to reflect a higher rate of suicidal ideation. These areas might be targeted by special efforts in the new mental health care plan.

The use of the relevant items in the GHQ also has been well established in similar studies with clinical populations, as noted before, and confirms the proposed applica-

tion of what is already seen as a subscale to measure suicidal ideation,²⁷ though further cross-validation with more specific instruments such as the suicidal intent scale²⁸ should be performed in future studies as soon as they are available in the Kosovar language. It can be used as a good screening instrument in similar situations, through several recent studies have underlined that the field of actual prediction of suicide through suicidal ideation might be a complex challenge that cannot be reduced to individual scales in clinical cases, especially as culture dependent underreporting of suicidal ideation in the GHQ has been reported in a recent study.²⁹ The good statistical cross-validity between the four items in the well-validated GHQ 28 identified as subscale denoting suicidal ideation and hopelessness and the corresponding HSCL 25 item indicated that the Hopkins Symptom Checklist, containing only one item each, might also serve as a general screening indicator for hopelessness and suicidal ideation if a fast evaluation of both anxiety and depression are required in larger population samples (see for example Joseph).³⁰

Conclusions

The high post-war rates of hopelessness and suicidal plans or ideation in combination with the still low, but rising, rates in the general statistics in Kosovo indicate that extreme hardships might neutralise protective factors earlier responsible for the above mentioned low rates.

Possible intervention strategies

The present study has demonstrated a high rate of serious suicidal ideation in a representative sample of the Kosovar population (see Table 1), possibly linked to the still high rate of PTSD. Concrete suicide plans, especially those in the context of clinical level

depression, could be seen as warning signs indicating potentially higher suicide risk. It at least shows the need for urgent treatment and support, especially in regions identified in the present study.

Specialised telephone help lines^{19,31} are still being developed in Kosovo, and might be a further cost efficient and user friendly strategy to reach out in a country that is small but still has limited public transportation and financial restrictions to travelling, especially in distant areas. The present stress on an integration of community oriented family medicine centres to replace the lack of medical specialists and general practitioners and extend services of the limited number of hospitals makes sense also in regard to early intervention. However, special training programmes by Kosovar specialists should be installed in these institutions to promote research and knowledge of identification and support of individuals at risk. The general risk groups identified in our present study might not necessarily be the same as those at risk for actual suicide, as some factors must have been so far active to prevent the step from suicidal ideation and depression to actual suicide explaining lower rates by international comparison.

An important issue for future planning would also be the situation of family members or friends, affected indirectly by suicide. These people are frequently termed "suicide survivors"¹⁹ and they suffer and have been exposed to a frequently unexpected and violent form of bereavement.

Resources to support such efforts from the European Community countries and the UN might be relatively low-cost with high cost-to-benefit ratio. Policy packages that have been proven to be efficient such as media guidelines³² could be added. Also, more general intervention projects for war areas, such as the STOP,¹⁴ could well benefit from

the integration of a focus on interventions in this field.

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An explorative outcome study of CBT-based multidisciplinary treatment in a diverse group of refugees from a Danish treatment centre for rehabilitation of traumatized refugees

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Abstract

A group of highly traumatized refugees ($n = 26$) with diverse cultural backgrounds in a Danish Clinic for Traumatized Refugees (CTR) was assessed for symptoms of post-traumatic stress disorder and other aspects of general functioning. Patients were assessed at intake, after the end of treatment and six months later. The results point to very high symptom levels and a large need for treatment in this population. Psychiatric symptoms and their correlates were assessed with the Harvard Trauma Questionnaire (HTQ), the Trauma Symptom Checklist-23 (TSC-23), the Global Assessment of Function (GAF), and the Crisis Support Scale (CSS). The Trail Making Test A & B (TMT) was used as a screening instrument for acquired brain damage, with promising results. Indications of effectiveness from 16-18 weeks of multidisciplinary treatment (physiotherapy, pharmacotherapy, psychotherapy, and social counseling) were supported with small to medium effect sizes on most outcome measures. The results are discussed in terms of clinical implications and future treatment, assessment, and research needs.

Introduction

According to the UN, refugees are defined as individuals forced to flee their countries

because of fears of persecution on grounds of belonging to certain racial, religious, national, social or political groups. They are unable to seek protection from persecution in countries of their own citizenship and are thus seeking refugee status in other countries. The number of refugees under UNHCR's protection has rounded 11.4 million during the year 2007. Europe is housing about 14% of the world's refugees.^{1,2} The large numbers of people seeking refuge and help call for the development of knowledge that will enable appropriate health care and treatment in receiving countries.

A high percentage of refugees have experienced physical and mental hardships in the form of forced migration, starvation, near-death experiences, torture, disease, injury and loss or killing of family and close friends. Because of the physical and mental strain of refugee life, this population is known to have an increased risk of physical and mental health problems.³ In a review of quantitative research on refugees' mental health Keyes⁴ identifies posttraumatic stress disorder (PTSD), depression, anxiety, dissociation, and psychosis as the most frequently found negative mental health states in refugees. According to ICD-10⁵ trauma is defined as a situation of exceptionally threatening or catastrophic nature, which is likely

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to cause pervasive stress to almost anyone. By this definition, refugees are likely to have experienced a number of traumas before arrival to the host countries, which puts them at risk of developing PTSD. PTSD is characterised by core symptoms of 1) re-experiencing of traumatic events in memory through intrusive thoughts and dreams, 2) avoidance of trauma-reminding stimuli and 3) physiological hyperarousal or alertness. Because refugees often experience multiple trauma of long duration, PTSD may manifest itself differently in this population than in clinical PTSD populations who have been exposed to isolated traumatic events (natural disasters, man made accidents, assaults and the like).

While earlier research was focused on relating specific trauma types to psychopathological outcomes, recent studies are acknowledging the wealth of mediating factors between traumatizing experiences and mental health outcomes as well as the existence of a range of pathological and non-pathological reactions to trauma.⁵⁻⁸ A large population study found that physical and mental health problems are highly prevalent in refugees and asylum seekers in the Netherlands.⁹ Compared to refugees, asylum seekers who have uncertain refugee status had worse mental and physiological health outcomes. Studies also indicate that rates of PTSD and mood disorders are higher in resettled refugees than in their counterparts who did not migrate. This would imply, that the migration processes and post migration factors are adding to the severity of PTSD symptoms.⁶ Different stressful post-migration effects have been found to predict maintenance of PTSD. Unemployment, lack of social contacts, and lack of language proficiency are among the most often cited.^{7, 8, 10, 11}

This complex interplay of individual traumatic experiences and pre and post

migration factors in symptom development makes prevalence estimates of PTSD difficult to compare. Estimates of PTSD in tortured refugees vary from 14%-91%.¹⁰ They vary from 24%-71% in traumatized, non-tortured refugees surveyed by self report instruments and from 12%-26% in traumatized refugees surveyed by interview method.¹⁰ In a meta-analysis of prevalence of serious mental disorder in refugees resettled in western countries, 9% prevalence for PTSD, 4-6% prevalence for depression, and 3-6% prevalence for generalized anxiety disorder were found, with very high comorbidity between the states.¹² These estimates are much lower than others usually cited. Nevertheless, these relatively low estimates imply that at least several tens of thousands of refugees in western countries have PTSD.

Longitudinal studies indicate that PTSD symptoms, along with symptoms of anxiety and depression, for many refugees are persistent for decades.¹³⁻¹⁵ A series of studies documenting development of PTSD and depression in Khmer youths who suffered trauma as children show that 35% still met diagnostic criteria for PTSD after a follow-up period of 12 years. While depression rates tended to diminish over time, new/delayed occurrences of PTSD were seen even at the time of a 12 year follow-up.¹⁵ In a study of a clinical sample of tortured refugees surveyed for treatment but not treated in a Danish rehabilitation centre, a reduction in symptoms of PTSD, depression, and anxiety over a period of ten years was documented. Thirty percent of the study population were below the clinical cut off for PTSD at 10 year follow-up compared to 65% scoring above the HTQ cut-off (2.5) for PTSD at baseline. Mean scores on the Harvard Trauma Questionnaire (HTQ) decreased from 2.73 at baseline to 2.37 at follow-up.⁸ These studies point to the possibility that only about 15-

30% of not treated refugees with PTSD are symptom-free decades after traumatization. A percentage remains chronically ill despite the time lapse and intensive treatment.^{6,16-18}

Only a handful of studies have examined and documented the psychological state of traumatized refugees in Denmark. Among these were studies examining levels of traumatization in young Bosnian refugees,¹⁹ evaluations of psychoeducation programmes for refugee children from Kosovo,^{20,21} evaluation of mental status in rejected asylum seekers in Danish asylum centres,²² and a study of social problems in tortured refugees.²³ Three studies about long term mental health outcomes in tortured refugees have also been published recently.^{8, 11, 24} These studies were carried out at the RCT in Copenhagen and included tortured refugees only (torture is understood in correspondence with the UN conventions. The same definition is used throughout the article). In this study, we set out to describe a comprehensive patient population in a smaller treatment centre.

Aims

Research indicates that a complex interplay of pre-migratory and post-migratory factors is of importance for the development and maintenance of PTSD, anxiety and depression symptoms as well as their chronicity and treatment-outcomes in refugee populations. The aims of this study were twofold: First, the study was explorative. We wanted to describe a specific, culturally diverse population of refugees admitted to the Treatment Centre for Rehabilitation of Traumatized Refugees (CTR) in Holstebro, Denmark, in terms of traumatization and symptom levels as well as global functioning and social support. Systematic descriptions of refugee treatment populations in Denmark are needed because of socio-political

circumstances specific to this country, where no orchestrated national system for treatment of traumatized refugees existed before 2005.

There are 12 specialized centres for treatment of traumatized and/or tortured refugees and a number of private and general mental health treatment options available for refugees in Denmark today. A recent Danish Health Technology Assessment report³ concluded that the efforts of these governmental agencies are not well orchestrated; treatment capacity is insufficient and treatment effectiveness is as yet not established. There is therefore a need to describe the symptom levels of the treatment populations in a systematic way to assess the treatment needs.

Secondly, we wanted to assess the effectiveness of the multidisciplinary treatment offered at the CTR. Besides validated measures of PTSD symptomatology, and because of the exploratory nature of the study, we also included a measure of cognitive functioning. As a result of undernourishment or thirst for prolonged periods or/and different forms of torture e.g. suffocation and beating to the head, torture survivors and refugees may acquire brain damage. Acquired brain damage (ABD) due to traumatic brain injury (TBI) is often diffuse, the most common symptoms being memory and attention deficits, apathy, labile affect, impaired social judgment, distractibility, and impulsivity.²⁵ Traumatic brain injury can consequently easily be confounded with PTSD. Mollica, Henderson & Tor²⁶ have reported a considerable amount of traumatic brain injury events in a civilian Cambodian sample. Uncovering ABD in refugees in western countries has important implications for social adaptation and psychosocial treatment in the host country.

Table 1. Sex and country of origin in the sample.

	Iraq	Iran	Kuwait	Sri Lanka	Ivory Coast	Bosnia and Herzegovina	Chechnya	Lebanon	Serbia
Male	14	3	1	1	0	1	4	1	2
Female	12	2	0	0	1	0	4	0	4
Total	26	5	1	1	1	1	8	1	6

Method

Participants

The inclusion criteria for the study comprised all the patients admitted for treatment at the CTR in Holstebro from August 2007 to September 2008. Forty-one patients meeting the centre's admission criteria (ICD-10²⁷ diagnosis *F43.1 PTSD* or *F43.2 adjustment disorders, F62.0 enduring personality change after catastrophic experience*) completed a visitation process. Nine patients were not offered treatment due to the presence of other mental health problems that demanded primary attention (e.g. organic brain damage, schizophrenia, and personality disorder). The final study sample consisted of the remaining 32 patients who were offered treatment at the centre. Three of the participants terminated the treatment untimely, while one of the psychologists forgot to assess three other participants at the end of the treatment. Unfortunately, the data on the three participants without a complete dataset, and the three participants that dropped out of treatment went missing in the RCT archives.

The study presents results on the final $n = 26$ treated participants with complete data sets for all three assessment times. This sample consisted of 54% male and 46% female patients, aged between 19 and 65, with a mean age of 39 years ($SD\ 9.9$). Reflecting the diversity of the patients' cultural backgrounds at the CTR, the participants in the study were from nine different countries with Bosnian, Lebanese, and Iraqi patients being the

three largest groups, representing 30%, 23%, and 19% of the sample, respectively. A complete overview of the participants' cultural backgrounds is presented in Table 1. The mean time since resettlement in Denmark was 11.9 years ($SD = 5.7$) ranging from 1-24 years. 73% of the participants were married, the rest were widowed or divorced.

Procedure

The participants received 16-18 weeks of multidisciplinary treatment, consisting of once weekly individual psychotherapy session and once weekly physiotherapy session. Patients were treated by two psychologists and two physiotherapists. The levels of psychiatric symptoms and social support were assessed by the two psychologists at three different assessment points: before treatment, after the end of treatment, and at the six month follow-up. All self-report measures were translated into participants' native languages by a process of back translation. The assessment procedure was carried out by the psychologist that had been treating the patient, except at follow-up, where only one of the psychologists was carrying out the assessments. The assessments were conducted at the CTR before the psychotherapy sessions.

Treatment

The psychological treatment was predominantly cognitive behavioural therapy (CBT) with focus on exposure. Three patients received CBT with elements of eye movement

desensitisation and reprocessing therapy (EMDR). The specific CBT methods resembled treatment for panic attacks with psychoeducative elements, use of trauma hierarchies, in vitro exposure where the patient relives the trauma through remembering, breathing exercises, and training in coping with the anxiety and fear. Trauma treatment at the CTR is also structured after principles of 1) stabilization, 2) coming to terms with the trauma, and 3) integration of traumatic memories and grieving following Judith Herman's model.²⁸

The physiotherapy consisted of Body Awareness Therapy, and education on body awareness in coping with pain and stress. The psychotherapeutic and physiotherapeutic treatments were delivered during the same interval of 16 weeks. They were otherwise independent of each other.

All the participants were in pharmacotherapy during the study, mostly with antidepressants (SSRI). A couple of patients received high dosages of antipsychotic medication (Risperidon or Seroquell). The medications were prescribed by the general practitioner, but it was not possible to determine whether the patients have been taking the medication, or whether they were following the prescriptions when taking the medication. The effects of the pharmacotherapy are hence undocumented.

The overarching principle at the treatment centre is the one of shared care, with involvement from patients' general practitioner and social workers from the municipality. The GP is responsible for the pharmacotherapy, the social work is done primarily independently of the psycho and physiotherapeutic efforts. The RCT has a coordinating responsibility, which is established through at least three obligatory network meetings between the different actors during the 16-week treatment period.

Outcome measures

Demographic information about participant's age, sex, country of origin, clinically determined diagnosis by Schedules for Clinical Assessment in Neuropsychiatry (SCAN)²⁹ (according to ICD-10), and scores on The Global Assessment of Functioning (GAF)⁶ were obtained from the CTR patient register. SCAN is a computerized semi-structured clinical interview. GAF is the fifth axis in the DSM system and was applied as a measure of global mental health.

The remaining data which were used to assess treatment outcomes came from self-report measures. Magnitude of experienced trauma was assessed on the Harvard Trauma Questionnaire part I, which was originally developed for the Indo-Chinese populations.^{31, 32} The version used here was slightly revised for the patient population at the CTR. Items pertaining to "brainwash" and "lack of housing" were excluded, while additional items found descriptive of this population (forced labor, psychological violence and lost home), were included. Participants were asked to state whether they were directly or indirectly (by witnessing) exposed to the events. All the items from the questionnaire are shown in Table 2.

PTSD symptomatology was assessed by the Harvard Trauma Questionnaire (HTQ) part IV 31 comprising 16 items, covering PTSD symptoms of re-experiencing, avoidance/numbing and physiological arousal as described in DSM-IV, along with an additional 14 trauma related symptoms known to be descriptive of refugees' traumatic experiences. The scale was scored on a Likert type scale from 1 "not at all" to 4 "almost always". In the Indo-Chinese version of the HTQ a cut-off score of < 2.5 was estimated to differentiate between clinical and non-clinical presence of PTSD³¹. The need to establish appropriate cut-offs for

Table 2. Overview of experienced and witnessed types of trauma with percent wise changes in reporting (irrespective of direction). Percentages in parentheses.

Type of trauma	Number of participants who have experienced the trauma	Reporting difference: baseline versus the end of treatment (self-experienced)	Number of participants who have witnessed the trauma	Reporting difference: baseline versus the end of treatment (witnessed)
1 Life-threatening experience	24 (92)	+2 (8.3)	25 (96)	-1 (4)
2 Physical violence (being hit or kicked)	24 (92)	0 (0)	25 (96)	-2 (8)
3 Psychological violence (harassment, humiliation)*	25 (96)	+1 (4)	26 (100)	-1 (3.8)
4 Rape	6 (23)	+2 (66.6)	16 (62)	+6 (37.5)
5 Other forms of sexual assault	7 (27)	+5 (71.4)	14 (54)	+5 (35.7)
6 Imprisonment	18 (69)	+6-1 (38.8)	20 (77)	+5-1 (30)
7 Loss of close relatives or family members	26 (100)	-1 (3.8)	26 (100)	-2 (7.7)
8 Loss of friends	26 (100)	-1 (3.8)	26 (100)	-2 (7.7)
9 Loss of home*	24 (92)	+2 (8.3)	25 (96)	+1 -2 (12)
10 Loss of possessions	24 (92)	+1 (4.1)	25 (96)	+1-2 (12)
11 Ruined home	24 (92)	+2-5 (29.1)	24 (92)	+1-5 (25)
12 Being shot at	24 (92)	+2 (8.3)	24 (92)	+1-1 (8.3)
13 Thinking that you are going to die	25 (96)	+1 (4)	23 (88)	+2-1 (9.4)
14 Long-lasting hunger/thirst	20 (77)	+3-1 (20)	20 (77)	+3-2 (25)
15 Observed killing	15 (58)	+7-1 (53.3)	20 (77)	+4-3 (35)
16 Having seen dead or hurt people	22 (85)	+3-1 (18.2)	21(81)	+3-1 (19)
17 Having been injured	16 (62)	+5-1 (37.5)	19 (73)	+3-2 (26.3)
18 Torture	10 (38)	+4-2 (60)	14 (54)	+3 (21.4)
19 Forced labour*	9(35)	+3-2 (55.6)	12(46)	+3-3 (50)
20 Being ill without possibility of getting medical treatment	18 (69)	+2-4 (33.3)	19 (73)	+3-5 (42)
21 Not knowing if family or friends are alive	21(81)	+4-1 (23.8)	21 (81)	+5-2 (33)
22 Feeling helpless	22 (85)	+3 (13.6)	20 (77)	+5-1 (30)
23 Other	2 (8)	0 (0)	2 (8)	0 (0)
Total	432	81 (18.7)	467	94 (20.1)
Mean (SD)	16.62 (3.77)	3.5	17.96 (3.65)	4.1

*) Items added by the authors to the original HTQ-part I.

the instrument in different research settings and populations has been pointed out.^{31,33} Others, in the meantime, have replicated the discriminant property of the cut-off of < 2.5 in other populations.³⁴ The cut-off of < 2.5 was therefore also used here, as it has been widely used in similar research. For assessing the presence of PTSD by the HTQ, an algorithm according to DSM-IV criteria for diagnosis of PTSD was also applied. According to the algorithm, presence of at least one re-experiencing symptom, at least three avoidance/numbing symptoms and at least two symptoms of physiological alertness, with a score of three or four, are indicative of PTSD.

Assessment of general symptoms of psychological distress was carried out through the Trauma Symptom Checklist (TSC-33), an instrument originally designed for assessing the impact of child sexual abuse on later functioning.³⁵ The TSC-33 is a measure with documented applicability to other traumatized populations,^{35,36} especially when keeping in mind its considerable overlap with other general measures of psychological distress (e.g. Derogatis' SCL-90³⁷ and HSCL-25³²). The revised version, TSC-23,³⁸ which is also used here has been abbreviated for better construct validity. It contains two subscales: negative affectivity and somatization. The scales among themselves comprise a number of symptoms of depression, anxiety and dissociation, as well as somatic complaints such as headache, digestion and respiration problems. The scale is scored on a Likert type of scale from 1 "never" to 4 "very often". The items are summed up to give the total score.

For assessing levels of social support suspected to have a mediating effect on development of post-traumatic symptoms,^{39,40} the Crisis Support Scale (CSS)⁴¹ was used. The scale consists of seven items measuring

different aspects of social support rated on a 7 point Likert scale with higher scores indicating more support. Participants are asked to rate levels of social support twice. First, pertaining to perceived support at the time of experienced traumatization and secondly pertaining to levels of present social support.

The Trail Making Test (TMT),⁴²⁻⁴⁵ measures the capacity to change cognitive track from one task to another. It was used to assess potential presence of acquired brain damage due to traumatic brain injury. Consisting of part A, 25 numerated circles, and part B, 13 numerated circles and 12 circles with letters A to L, part A requires connecting circles in numerical order while part B requires the participant to connect the circles with corresponding letters (e.g. 1A, 2B, and so on). The time to solve the two parts is measured and compared to standard scores. Letters were written in the native writing of the refugees. The TMT is used as a screening instrument for brain damage and is also easy to administer and score. Having refugees' diverse cultural backgrounds in mind and cultural specificity of most cognitive tests, the relatively simple and value free TMT was suspected to be an acceptable and probably a valuable contribution to the assessment of refugees' cognitive difficulties.

Statistical analyses

Most of the data turned out not to be normally distributed. Wilcoxon signed ranks tests were performed for assessment of differences in pre-treatment, post-treatment, and follow-up scores on those self report measures which yielded unusually distributed data. Because of the very small sample size, the significance level was kept at $p < 0.05$, despite the repeated measures design. Differences in scores between normally distributed data were evaluated with one-way repeated measures ANOVA. Associations between different

measures of mental health were explored using the Chi-square statistic. Effect size for the Wilcoxon signed rank tests was calculated as $r = Z / \sqrt{n}$, where n is the number of observations over the two assessment points. Cases were excluded pair wise in case of missing values. All the analyses were performed using the SPSS 17.0 programme.

Limitations

In interpreting the results it is important to keep in mind that the data set was incomplete due to the six missing assessments. Standard procedures for evaluating the impact of missing data and differences between the treated sample and the drop-outs could not be performed. The lack of randomization and control group is also limiting the representativity of this small sample. In addition, a number of the applied scales proved to have insufficient reliability scores.

Results

Changes in diagnostic status

At the beginning of the study, all the patients were diagnosed with (ICD-10) F43.1 Post-traumatic Stress Disorder, four had an additional diagnosis of Y07.3 *maltreatment by official authorities*. At the end of treatment, two of the patients were no longer diagnosed with F43.1, PTSD but with F62.0 – *enduring personality change after catastrophic experience*. Diagnostic status remained the same for the rest of the patients as it was at the end of treatment.

Exposure to traumatic events

The participants experienced a mean of 16.6 (SD= 3.8) trauma types and witnessed a mean of 18 (SD = 3.65) trauma types out of 23 possibilities. All have experienced loss of close relatives or family members, 92% have felt that their life was endangered, 92% have experienced physical

violence, 69% have been imprisoned and 38% tortured. An overview of experienced and witnessed trauma types is presented in Table 2. The numbers are approximations of trauma reporting at baseline. A certain amount of change in the reporting of traumas was observed between the assessment at baseline, the end of treatment, and follow-up, amounting to approximately 20%. As a whole, there was a trend of reporting on more traumas with time. Alterations in trauma reporting among refugee populations are a known and researched phenomenon.^{46,47} Also, cognitive malfunction, confusion, and alterations in recall and declarative memory seem to accompany prolonged and chronic PTSD.^{7, 48, 49}

PTSD symptoms as assessed by the HTQ

Scale reliability: Although the HTQ is widely used in cross-cultural research³¹⁻³⁴ and is known to have good internal consistency, the Cronbach alpha coefficient in the current study was very low. Several items had to be excluded from the analyses of scale reliability because there was not any variance in respondents' scores. A closer inspection of the scores revealed unusual distributions because all subjects were scoring maximum on many items. The necessary exclusion of items due to lack of variance in scores could explain the low alpha values, since they are sensitive to the number of items in the scale.

Symptoms of PTSD as measured by the HTQ were generally high in the population. Mean score for the total scale was 3.7 (SD =) and 3.9 (SD =) for the 16 PTSD items at baseline. All the participants were above the cut-off score of > 2.5 at all three assessment times. According to the DSM-IV algorithm, all the participants (100%) had PTSD at baseline, 88.5% at the end of the treatment, and 96.2% at follow-up.

Treatment effectiveness as assessed by the HTQ

Overall treatment seemed to have had an effect on the PTSD symptoms. Variation in the magnitude of effectiveness was observed with different types of PTSD symptoms. Wilcoxon signed rank test revealed statistically significant reduction in HTQ total scores between baseline and the end of treatment ($z = -4.1$, $p < 0.0005$) with a large effect size ($r = 0.57$). The median score decreased from pre-treatment (Md = 105.5) to post-treatment (Md = 99). The presumed treatment effect was maintained at the six month follow-up ($z = -3.7$, $p < 0.0005$, $r = 0.51$, Md pre-treatment = 105.5, Md follow-up = 96.5).

A significant decrease in symptom scores on the HTQ re-experiencing scale were not observed between baseline and the end of treatment, but were evident at follow-up ($z = -2.9$, $p < 0.005$) with a small effect size ($r = 0.24$). Median at pre-treatment was 16, and at follow-up it was 16.

Significant decrease in scores on the avoidance/numbing scale was found between baseline and the end of treatment ($z = -4.4$, $p < 0.005$) with a large effect size ($r = 0.61$), pre-treatment Md = 28, post-treatment Md = 22.5, and also a maintenance of symptom reduction at follow-up ($z = -3.9$, $p < 0.000$, $r = 0.54$) and a Md = 23 at follow-up. Finally, Wilcoxon signed rank test did not reveal any significant changes in symptoms on the HTQ arousal scale at any point of assessment.

These results imply that multidisciplinary treatment at CTR probably played a role in reducing specific PTSD symptoms as defined by the diagnostic criteria in DSM-IV, which are entailed in the HTQ. The largest effect sizes were found for core symptoms of avoidance-numbing and smaller, but still significant reductions in symptoms of re-experiencing/intrusion. Effectiveness

in reducing symptoms of hypervigilance was not observed. The means and standard deviations of the HTQ scores are to be found in Table 4.

The Global Assessment of Functioning

The global mental health as measured by the GAF was generally low. The mean scores at baseline were ranging from 36: *major impairment in several areas of function; school/work, family relations, judgment, thinking or mood, to 45: serious impairment in social occupational or school functioning*, with a mean of 40.4, (SD = 2.95). One-way repeated measures ANOVA revealed a significant improvement in GAF scores between the three assessment times (Wilk's Lambda = 0.37, $F(2,23) = 19.24$, $p < 0.0005$, multivariate partial eta squared = 0.63). Post hoc analyses showed a significant effect between baseline and the end of treatment, and maintenance of effect at the six month follow-up. Although improvement was observed, global mental health remained poor as indicated by low mean scores on the GAF = 48.5 (SD = 7.60) at follow-up. Table 3 summarizes means and standard deviations on all the mental health outcome measures.

Symptoms of psychological distress as assessed by the TSC

As observed with the HTQ, a great deal of respondents was scoring very high on the TSC. The lack of variation made it hard to obtain reasonable Cronbach's alpha values. The scale is otherwise known to have good internal consistency. Briere & Runtz³⁵ reported internal consistency of a $\alpha = 0.89$ for the TSC-33, while Krog & Duel³⁸ reported internal consistency of $\alpha = 0.92$, for the total scale TSC-23 and $\alpha = 0.82$ and $\alpha = 0.81$ for the subscales negative affectivity and somatization, respectively.

The TSC-33 and TSC-23 indicated that levels of psychological distress were gener-

Table 3. Descriptive statistics for the scales. *n* = 26.

	Mean baseline	Mean after the end of treatment	Mean at follow-up
HTQ-total (SD)	105.96 (7.88)	98.56(9.22)*	98.12(7.67)**
HTQ-re-experiencing (SD)	16.00 (0)	15.23 (1.27)	14.73 (1.66) **
HTQ- avoidance and numbing (SD)	27.80 (0.80)	22.46 (2.64)*	23.46 (3.07)**
HTQ- alertness (SD)	20.00 (0.00)	19.38(1.09)	19.15 (1.38)
TSC-23 total (SD)	82.80 (11.46)	73.46 (7.78)*	74.65 (10.65)**
TSC-23 negative affectivity (SD)	47.16 (6.59)	42.38 (4.94)*	43.34 (8.25)**
TSC-23 somatisation (SD)	35.61 (9.21)	31.00 (3.63)*	31.57 (3.57)
CSS-now (SD)	17.16 (4.86)	37.81 (3.69)* (***)	35.72 (5.09)**
CSS-then (SD)	15.91 (3.84)	15.69 (4.73)	16.20 (4.33)
GAF (SD)	40.38 (2.95)	46.61 (6.64)*	48.48 (7.60)**
TMT-A (SD)	31.08 (10.08)	26.46 (7.71)	26.88 (7.48)
TMT-B (SD)	59.62 (21.84)	46.52 (16.31)	45.84 (16.24)

*) significant change between baseline and the end of treatment at $p < 0.025$.

**) significant change between baseline and follow-up at $p < 0.025$.

***) significant change between the end of treatment and follow-up $p < 0.025$.

HTQ = Harvard Trauma Questionnaire; TSC-23= Trauma Symptom Checklist-23; CSS = Crisis Support Scale; GAF = Global Assessment of Functioning; TMT = Trail Making Test part A & B.

Table 4. Mean scores on the Harvard Trauma Questionnaire (HTQ). *n* = 26.

	Baseline (SD)	Range baseline	End of treatment (SD)	Range at end of treatment	Follow-up (SD)	Range at follow-up
HTQ total	3.5 (0.26)	2.8-3.9	3.3 (0.31)	2.7-3.9	3.3 (0.26)	2.7-3.8
HTQ re-experiencing	4.0 (0)	4.0-4.0	3.9 (0.27)	3.3-4	3.8 (0.34)	3-4
HTQ avoidance	3.9 (0.11)	3.4-4.0	3.21 (0.38)	2.6-4	3.4 (0.44)	2.6-4.0
HTQ hypervigilance	4.0 (0)	4.0-4.0	3.9 (0.22)	3.2-4.0	3.8 (0.28)	3.0-4.0

Table 5. Means on the TSC-33 and the TSC-23. *n* = 26.

	TSC-33	TSC-23
Baseline (SD)	115.26 (11.92)	82.80 (11.46)
End of treatment (SD)	104.44 (9.82)	73.46 (7.78)
Follow-up (SD)	103.63 (10.22)	74.65 (10.56)

ally high in the present research population. A comparison of scores on the TSC-33 and TSC-23 is to be found in Table 5. The means of 82.8 out of 92 possible on the total TSC-23 scale show that participants are scoring between 3 and 4 on most items indicating that symptoms are present “often” or “very often”. This is also true for the two TSC-23 subscales.

Treatment effectiveness as assessed by the TSC-23

Decreases in psychological distress levels on the TSC-23 were observed following treatment as indicated by the Wilcoxon signed ranks test ($z = -3.7$, $p < 0.000$), with a large effect size ($r = 0.52$), pre-treatment $Md = 82$, post-treatment $Md = 74.5$. The effect was also observable at follow-up ($z = -2.8$,

$p < 0.006$, $r = 0.38$) and a $Md = 72$ at follow-up.

Amelioration of symptoms of depression and anxiety indicated by the negative-affectivity scale was evident between baseline and the end of treatment ($z = -3.4$, $p < 0.001$), with a medium effect size ($r = 0.47$), pre-treatment $Md = 47$, post-treatment $Md = 42$ as well as at follow-up ($z = -2.7$, $p < 0.008$, $r = 0.37$), and a $Md = 41$ at follow-up. This was also true for the somatisation-scale ($z = -2.9$, $p < 0.004$), with a medium effect size ($r = 0.40$), pre-treatment $Md = 34$, post-treatment $Md = 30.5$ and ($z = -2.2$, $p < 0.03$, $r = 0.30$, $Md = 32$) at follow-up. Thus, treatment seemed to ameliorate levels of overall psychological distress, including symptoms of anxiety, depression and somatic compliant. This presumed effect is somewhat smaller but still present at follow-up.

Levels of social support

as measured by the CSS-present and CSS-past
Cronbach's alpha values in the present study were also low for the CSS. Again, we suspect that this was due to the lack of variance in scores in the present sample. In a larger sample of 4,213 subjects Cronbach's alpha values for the entire CSS scale $\alpha = 0.82$, with $\alpha = 0.75$ for T1, and $\alpha = 0.67$ for T2, have been reported.⁵⁰ In the current study mean inter-item correlations for present CSS was 0.15, with values ranging from -0.34 to 0.55. For the past CSS scale mean inter-item correlation were 0.16, values ranging from -0.19 to 0.63.

At baseline, the perceived levels of present support were generally low, with 89% of the participants reporting total scores under 28, indicating that they "almost never" had anyone to talk to about their problems, "no one showing sympathy and support" or "helping with practical things". At the end of treatment and follow-up 100%

had scores above 28, indicating at least moderate levels of perceived present social support. Scores on retrospective perceived levels of social support were low at baseline (100% having scores under 28) and remained approximately at the same level at the end of treatment as well as at follow-up assessments.

Treatment effectiveness

as assessed by the CSS-present and CSS-past
Statistically significant increases occurred in participants' self-rated levels of present social support between the three assessment times ($z = -4.3$, $p < 0.000$), with a large effect size ($r = 0.62$), pre-treatment $Md = 17$, post-treatment $Md = 39.5$. Maintenance of effect was observed at follow-up ($z = -4.1$, $p < 0.000$, $r = 0.59$, $Md = 38$ at follow-up). There was a statistically significant decrease in scores on perceived social support between the end of treatment and follow-up ($z = -2.3$, $p < 0.02$, $r = 0.33$). No changes were found in participants' retrospective perceived levels of social support.

Screening for acquired brain damage

As already mentioned, five participants were excluded from the study, because their scores on the TMT and careful clinical interviews indicated the presence of brain damage. Of the participants included in the study three more (11.5%) had scores on the TMT A & B in the 10th percentile for their age groups at baseline. This cut-off is usually considered as indicative of brain injury.⁴²⁻⁴⁵ At the time of second assessment and follow-up however, two of the participants had remarkably better scores, now in the normal range. Thus, only one participant's scores remained inside the critical cut-off of the 10th percentile, in spite of the effect of rehearsal on the test scores. In fact, for this person, the scores remained

exactly the same at all three assessment points, which might indicate presence of brain damage.

In the intake procedure, the TMT had successfully spotted a number of persons in need of further neuropsychological assessment, which is exactly what a screening measure should do. One person was possibly overlooked. As far as the two participants who managed to perform better on the test are concerned, their ability to learn and thus to do remarkably better at second and third assessment would imply absence of brain damage. Instead, it might be speculated that the prolonged task solution period at baseline might have been a result of misunderstanding of task instructions or some other aspect of the test situation itself.

Associations between scores on mental health measures

We suspected that participants who resettled in Denmark decades ago and were still symptomatic had very chronic PTSD and maybe also higher symptom levels than participants who have resettled more recently. Associations between years since the arrival in Denmark and total scores on the HTQ and TSC-23 were examined using the Chi-square statistic. Also associations between the levels of social support and the total scores on the HTQ and TSC-23 were examined to test a possible influence of social support on symptom levels. None of the associations gave significant results, possibly due to the small sample size and the general lack of variance in scores (scores were grouped at the high end of the assessment scales).

Discussion

Characteristics of the treatment population at the CTR

The main finding in this study is the very high levels of reported PTSD symptoms and general psychological distress in the patients at CTR in Holstebro. Means of 3.5 on the HTQ total score and 3.9 on the HTQ PTSD items found in this population are seemingly the highest scores reported in the research literature on refugees. Other reports on the HTQ PTSD items in refugee populations in treatment range from 2.42 to 2.95.^{7,11,24,51-53} Kivling-Bodén & Sundbom⁷ have reported a total score of 2.4 on the HTQ in a clinical population from the former Yugoslavia that was resettled in Sweden. The higher symptom level in the present population can be understood in terms of symptom chronicity, which is associated with symptom severity in untreated cases. If the number of years since resettlement are taken as an indication of years since traumatisation, and therefore an approximation of initial appearance of symptoms, the symptoms in the present population are much more chronic (mean-time since resettlement 11.9 years (SD = 5.7)). The average number of years since resettlement in the Swedish population was 5.5 years at last follow-up. Keller et al⁵¹ reported a mean of 2.42 on the 16 PTSD items on the HTQ in a culturally diverse clinical population treated in the USA. This is in comparison to a score of 3.9 in our population. Again, the levels of chronicity are not directly comparable to those in this population, since the American sample seems to consist of recently arrived refugees. All three samples seem to have experienced high levels of trauma exposure, but they are not directly comparable, because the sample in the Kivling-Bodén study was assessed by a version of HTQ with only 17 events, while

a 23-item version was used in the other two studies. A questionnaire with more options could probably serve as a help in prompting memory, and therefore result in reporting of more events. Carlsson et al²⁴ have also reported means of 2.7 for HTQ total and 2.93 for HTQ PTSD in a clinical population of refugees in multidisciplinary treatment in Denmark, very similar to the present. Common residence in Denmark means that both samples probably are exposed to some of the same post-migratory factors on the macro level (refugee legislation, asylum procedures, public opinions about refugees etc.). The samples are also comprised of individuals of approximately same age and composition of ethnic origin. It was not possible to compare the actual levels of trauma exposure in the samples because they were assessed and reported differently. Reports of higher symptom levels would be expected in the Carlsson et al.²⁴ sample because it is mainly comprised of tortured refugees.

The contra-intuitive presence of higher symptom levels in the present study population can be explained in two ways. First, our population was approximately half male half female, whereas the Carlsson et al²⁴ population was predominantly male. Women seem to be more likely to develop PTSD than men. Also, feelings of helplessness and emotional distress are more consonant with women's gender roles than men's.⁵⁴ This could suggest that women could be prone to report more symptoms of psychological distress than men. Secondly, the majority of the Carlsson et al.²⁴ sample has been resettled in Denmark for less than five years. Our sample has been resettled for about twice as long. This can have an effect on the perceived levels of social support and maintenance of positive attitudes toward one's own life situation. As long as the resettlement is a relatively new experience, hope for a better

life and a better future in the new country can be maintained. But when the years in the new country have passed without much change in the life situation and psychiatric symptoms and other hardships of refugee life are still present, this hopeful attitude can be hard to hold on to. Also, the fact that the refugees in the present study are settled in small Danish provinces where there are not many fellow refugees can limit their access to important sources of social support.²³ This does not apply in the same sense to the tortured refugee sample from the RCT in Copenhagen. Social support probably has implications for the PTSD levels as will be discussed further on.

Assessment of global mental health through GAF showed low levels of global functioning which was in agreement with the very high symptom levels on the HTQ. Means of 57.3 and 59.1 have been reported in other clinical refugee populations.^{55, 56} Wenzel et al.⁵⁶ reported a range in GAF scores between 45-80 (mean 59.1, SD 7.6) in a culturally diverse population of refugees in Austria. Lavik et al.⁵⁵ have reported a mean score on the GAF of 57.3 in a very large multicultural sample of refugees living in Norway. In comparison, the GAF scores in this present sample seem very low (range 36-59, mean at baseline 40.3), especially since the Austrian sample consisted exclusively of tortured refugees and a very large percentage of the Norwegian sample has been tortured too. What is not clear in the meantime is the level of chronicity of PTSD symptoms in the two comparison groups. The Austrian group seems to have arrived in Austria relatively recently, since many of the refugees are reported to have uncertain political status. Boehnlein et al¹⁷ reported a range in scores on the GAF from 45-85 in their treatment population of highly chronic PTSD patients from South-East Asia. Fur-

thermore, they report that the group with the poorest treatment outcome after more than 10 years of continuous treatment had GAF scores between 45-60, a level of impairment which is very similar to the one of the present population, scoring between 36-59 at last follow-up.

Scores on the TSC-23 are also high in the present population. In severely traumatized populations like women who have been victims of incest since a young age with abuse going on for many years, mean scores of 76.7 are reported 57 compared to 82.8 in the present research population. The high levels of PTSD symptomatology on the HTQ, the high levels of anxiety, depression, and somatisation symptoms on the TSC-23, along with low levels of global functioning, paint a comprehensive picture of a highly symptomatic research population. Also, in comparison to similar populations in terms of multicultural sample composition and approximated traumatisations levels the symptom levels are very high in the present population. It is therefore worth considering if some bias inherent in the research design could unnaturally be elevating the levels of symptoms.

Reporting of symptoms through self-report measures is known to result in higher prevalence than found by clinical interviews.¹⁰ The present research population was also assessed by SCAN diagnostic interviews at all three assessment times. HTQ algorithm method and SCAN interviews showed reasonably similar PTSD prevalence. 85% of the patients (by algorithm method) and 92% of the patients (by SCAN) were assessed to have PTSD at the end of treatment (all the patients had PTSD at intake since this is the criterion for being admitted to treatment). The small difference in diagnostic status between the two methods may also be caused by different diagnostic categories existing in

DSM-IV,³⁰ on which the HTQ algorithm method is based, and SCAN using ICD-10²⁷ classification. ICD-10 contains the category F62.0, which is a diagnostic category describing permanent personality change as a consequence of extreme traumatization. The DSM-IV³⁰ does not have an equivalent diagnostic category. The two patients (8%) recognised as having personality change with SCAN could be recognised as “ordinary” PTSD in the DSM-IV algorithm. The F62.0 (ICD-10)²⁷ and 309.81 Posttraumatic Stress Disorder (DSM-IV)³⁰ are different diagnostic categories but have an overlap in that they are both diagnosed following traumatic events (criterion A in both diagnostic categories). They also have an overlap in terms of their description of avoidance/numbing symptoms (criterion C in 309.81 and criterion B in F62.0) and symptoms of increased arousal (Criterion D in 309.81 and criterion B in F62.0). Also, F62.0 is often preceded by Posttraumatic Stress Disorder F.43.1 (ICD-10). Cut-off scores on the HTQ might have shown a slight overestimate because the prevalence of PTSD was estimated to be 100% at all times. Still, comparison of the checklist and clinical assessment methods implies that the high prevalence of PTSD in the present study population does not seem to be overestimated because of the use of self-report measures. See Table 6 for an overview of PTSD prevalence in the present population assessed by different methods.

Table 6. Comparison of PTSD prevalence with different assessment methods. *n* = 26.

	Baseline	End of treatment	Follow-up
SCAN-interview:			
– PTSD	100%	92%	92%
– F62.0		8%	8%
HTQ algorithm	100%	88.5%	96.2%
HTQ cut-off (>2.5)	100%	100%	100%

Asylum seeking patients are also suspected to exaggerate their symptom levels because high amounts of psychological distress due to persecution might ensure them asylum in the host countries. This is probably not the case in the present population since rehabilitation centres only treat refugees who have been granted asylum and most of our participants have been settled down in Denmark for decades. One possible reason for false inflation of symptoms could have been the fact that very few are offered treatment at the specialized rehabilitation centres. The participants could have felt that they had better chances of getting treated if they exaggerated their symptoms at intake. Furthermore, because of the shared care principles at the RCT the participants might have exaggerated their symptoms because this could lead to beneficial evaluations by the social workers, who were responsible for evaluation of their capacity to work.

Contrary to this, believable reasons for the very high levels of psychological distress observed in the present sample are the high levels of trauma exposure (see Table 2) and the duration of symptoms themselves. Because most of the participants have settled down in Denmark more than a decade ago, it can be suspected that at least an equal length of time has passed since the traumatizing events occurred. Also, in comparison to similar populations, the present seems to be one of the most chronic.

General tendencies in the Danish psychiatric system, such as reductions in the capacity to house hospitalised psychiatric patients, have meant that only the worst afflicted patients are represented in the hospitals' statistics. This effect might also be showing for the refugee PTSD patients. It is thus not unlikely that the treatment population at the Holstebro CTR is highly symptomatic of PTSD and other PTSD related symptoms (anxiety,

depression, and somatization), although the morbidity levels might be somewhat inflated.

Recent research into the role of symptoms of emotional numbing in PTSD suggests that emotional numbing often understood as loss of interest in activities, detachment from others and restricted range of affect might be seen as an individual factor in PTSD (as parallel in importance to re-experiencing, avoidance and arousal symptoms when it comes to describing PTSD).⁵⁸ Preliminary results indicate that presence of emotional numbing seems to characterise the most severe cases of prolonged PTSD with high trauma exposure.^{58, 59} In these terms, the population at CTR may be indicative of emotional numbing. This population scoring almost maximum on many symptom scales may reflect this restriction in affect range. They could be unable to differentiate between the emotional states because they are so distressed that "everything may feel as distressing as everything else", explaining the lack of variance in scores. Further studies within this highly traumatized population are needed to specifically address the levels of emotional numbing and the role it might play in treatment outcomes.

Observations of treatment effectiveness

The other important finding of this study was that the multidisciplinary treatment offered at the CTR seems to show some effectiveness in ameliorating symptoms of PTSD in spite of the very high and presumably chronic morbidity levels. A medium effect ($r = 0.43$) was observed for the 16 HTQ PTSD symptoms. Large effect size ($r = 0.61$) was found for avoidance numbing symptoms, and a small effect size ($r = 0.24$) for re-experiencing symptoms. In a similarly chronic population of treatment resistant Vietnamese refugees, treated with culturally sensitive CBT, Hinton, Pham, Tran,

Otto, Safren, & Pollack⁶⁰ reported symptom reduction on the HTQ of a large effect size (Cohen's $d = 2.5$). Treatment studies in general have shown effect for both culturally sensitive and standard CBT.⁶⁰⁻⁶⁶ A series of studies of narrative exposure therapy (NET), a combination of narrative and cognitive-exposure techniques, demonstrates that it elevates symptoms of PTSD, anxiety and depression in both clinical and community based settings with trained lay-counsellors from refugee camps acting as therapists to their co-refugees.^{65, 66} Effectiveness of short term psychodynamic therapy (Cohen's $d = 3$) and testimony therapy has also been suggested through studies by Holmquist, Andersen, Anjum, & Alinder⁶⁷ and Weine, Kulenovic, Pavkovic, & Gibbons.⁶⁸ Although many different regimens show some effectiveness and statistically significant symptom reduction, a considerable number of patients do not reach the subclinical thresholds.^{7, 24} The few available treatment outcome studies with an explicit focus on the long-term duration of treatment effects in refugees with PTSD, also point to the possibility that the treatment effects can be rather short term.^{17, 69}

The effect sizes observed in this study are relatively small compared to the very large effect sizes found in some of the more methodologically rigorous trials of CBT.^{60, 63-66} While multidisciplinary treatment, adhering to pain management and combining physiotherapeutic and social interventions with more traditional psychiatric methods of psychotherapy and medication intuitively seems appropriate for multi-traumatized refugees, better descriptions and more rigorous studies of effective elements of multidisciplinary treatment are needed to determine its applicability and relative cost effectiveness in treatment of refugees with PTSD. There were considerable shortcomings in the control of the treatment factors

in this study. The psychotherapeutic treatment was not manualized. This means that the use of specific techniques was mostly left to the individual therapist's personal preferences. As a result, three arbitrary participants received psychotherapy with elements of EMDR. It was in the mean time not possible to identify the specific cases in the data material. The possible influence of the EMDR on the treatment outcomes is therefore not controlled for. It follows, that the observed treatment effects can, because of the lack of control of therapeutic factors, equally well be attributed to the therapist's person as to the treatment in question. Also, no attempts to document and evaluate the specific effects of the other components in the multidisciplinary treatment (pharmacotherapy, physiotherapy, and social work efforts) were made. It has been argued that complex therapies, consisting of more effective factors, may require longer treatment periods for their many elements to come to their right.⁷⁰ This might very well be the case with multidisciplinary treatment. The all important question to be answered is, if these more complex and maybe longer, more expensive treatments, have longer and/or other, more generalized benefits than the standard cognitive behavioural therapies, which do show very large effect sizes in refugee populations as well.

Finally, less specific measures of PTSD symptomatology covering states often occurring with PTSD were also included in the study. Here, medium effect sizes were observed for the TSC-23 scale, covering symptoms of depression, anxiety, and somatization, and a large effect size for improvement on the GAF. Thus it seems that the multidisciplinary treatment at CTR in Holstebro demonstrated differing sizes of effectiveness but overall signs of effectiveness on a number of different measures in spite

of the small sample size ($n = 26$). This is encouraging taking into consideration the state of the patients. Furthermore the effect generally seemed to be lasting at the six month follow-up, although it was somewhat smaller than at the end of treatment.

The clinical significance of the observed outcomes

While the statistically significant results are interesting, the clinical implications of the treatment effectiveness are less encouraging. Results of the SCAN-interviews, where 92% of the patients were diagnosed with PTSD at follow-up, and 8% had received a diagnosis of chronic personality change after a course of PTSD (F62.0) are showing no clinically significant improvement. DSM-IV algorithm showed 96% PTSD prevalence at follow-up (see table 5 for details). Thus, according to our most optimistic estimate only 3-4% of the patients (corresponding approximately to one patient) had moved below the clinical threshold for PTSD. This means that the level of symptoms remained high in the population in spite of the statistically significant results showing symptom improvement.

Finally, the clinical implications of the statistical treatment effects are not sufficiently explored in this study because a broad measure assessing the impact of the treatment on the patients every day function was not included. A measure of global mental health, which assesses some aspects of every day functioning, was included. What seems to be missing is the subjective evaluation of the level of impairment from the sufferer's perspective. Furthermore, it is also important to recognise that in populations with different ethnic backgrounds, culture probably plays a role in modulating the personal perceptions of disability according to the salience of specific social roles in the culture in question. Sack et al,¹⁵ referring to the before mentioned series of longitudinal

studies on traumatized Cambodian youth, conclude that high levels of PTSD symptoms do not necessarily mean high levels of disability since many of the young Cambodians managed to get collage degrees, had well paid jobs and functioned in family entities in spite of their symptoms. Also, since chronic PTSD seems to be periodic and long lasting for a fraction of highly symptomatic patients^{6, 13-16} such as ours, it cannot be hoped that they ever will be entirely asymptomatic. More subjective measures of well-being could therefore be valuable in detecting the smaller changes in patients as they learn to live with their symptoms. Further studies of patient populations in rehabilitation centres are needed to establish levels of functional and subjectively perceived disability co-occurring with high and chronic PTSD symptom levels.

A measure included in this study, which may be indicative of the treatment's effect on broader life domains, and therefore may be linked to the clinical significance of the outcomes, was the Crisis Support Scale. The results indicate that the treatment condition might have had some effect on increasing levels of present social support. Since the effect seems to be lasting even after the end of treatment, this might indicate that the increases in participant's perceived social support are not only due to time spent with the treatment personnel at the CTR which might be an important source of social contact for patients with severe PTSD who easily become socially isolated. We speculate that the slight decrease in social support scores between the end of treatment and follow-up was due to precisely this reason – the patients losing the supportive contact to the professionals after the end of treatment. The lack of change in past social support following treatment may be explained if past social support was not discussed in treatment

and the focus was on discussion and reappraisal of sources of present social support. Furthermore, no significant correlation was found between CSS-present and CSS-past scales at any point of assessment.

The mechanism behind this co-occurrence of improved levels of present social support following treatment is not fully illuminated in the study. Thus, we do not know precisely what might have caused the elevation of levels of perceived social support and even less about how this effect may have been mediated. Associations between perceived social support and levels of PTSD symptomatology have traditionally been conceptualised as the former having a buffering effect on the latter so that more social support at the time of crisis results in less PTSD. This conceptualisation is supported by the research literature,^{39-41, 50} but was not observed in this research population.

Kaniasty & Norris³⁹ have recently suggested that different mechanisms of social support are linked to different phases of PTSD. The social causation mechanism (more social support leading to less PTSD) turned out to be most salient in the initial phases of PTSD (6-12 months after the occurrence of the disaster); in the period from 12-18 months after the disaster a mechanism of social selection (more PTSD leading to less social support) was salient along with the social causation mechanism, while social selection alone occurred after 18-24 months following the disaster. Even though the research population in the cited study consists of Mexican survivors of a natural disaster, common social mechanisms such as social selection can be assumed to operate when normal/adaptive reactions to traumatization turn into more chronic forms of the same, thus becoming psychopathological. This could explain the lack of association between social support and PTSD symptoms in the

present, highly chronic population, where mechanisms of social selection presumably are the most salient. Rehabilitation efforts concentrating on counteracting processes of social selection and supporting processes of social support are recommended. In relation to this, Schweizer et al⁴⁰ have found that perceived social support from the refugees' own community predicts the symptoms of PTSD while perceived social support from society as a whole does not play as important a role in the prediction of PTSD symptomatology. This observation is of importance for the present study population, which is settled in provincial areas where there are not many fellow refugees. Danish governmental settlement policies are aimed at dispersion of refugees throughout the country, which is meant to be beneficial for integration.

The utility of the TMT A & B in refugee populations

The use of cognitive tests which are specific for the Western part of the world are generally not advised in other cultures without verification of their applicability. Maj et al⁷¹ have demonstrated that TMT A is virtually culturally universal, while the TMT B which relies on the use of the Latin alphabet can be assumed to have limited application with individuals who are dyslexic, illiterate, or poorly educated, and are not native users of the written Latin alphabet. Although the TMT B was translated to the native languages of the study participants, several of the other characteristics could easily apply to the present study population. It is therefore remarkable that the majority completed both parts of the test within the standard western norms. Generalizations on the TMT's value as a screening instrument for acquired brain damage in refugee populations are premature on grounds of this small study. Five

possible study participants were referred to other types of treatment because of suspicion of acquired brain damage (ABD). The suspicion was confirmed by further assessment. This might indicate that the TMT A & B has some value in detecting possible cases of acquired brain damage at an early stage in the assessment of refugee patients' mental health. It is not possible to say anything conclusive about presence or absence of ABD in the one patient detected through subsequent analyses, because no other data that could illuminate this question were available. Only two participants seem to have had some trouble in understanding the test requirements, which does not seem as high a percentage considering the sample's diversified cultural background, and the before mentioned limitations in use with non-western populations.

Finally, it is important to recognise that the use of TMT A & B with refugees suffering from chronic PTSD creates many uncertainties about the interpretation of the results. Most importantly, the test itself is not specific. Its sensitivity to conditions of general cognitive dysfunction means that it can be tapping into cognitive impairments, which are suspected to accompany chronic PTSD^{48, 49} and are by definition not cases of TBI. Therefore, the underlying cause of the cognitive impairment remains unknown, as well as the possibility that the observed cognitive dysfunction can be reversed by elevation of PTSD symptoms. The value of the application of the TMT in such populations therefore rests on its ability to bring to attention TBI as a possible factor in the explanation of the patient's difficulties. The possibility of TBI in refugee PTSD patients is often overlooked, and can easily be masked by language and cultural differences which are creating a barrier between the professionals and the patients. Maj et

al⁷¹ have also reported results on a variant of the TMT developed for cross-cultural use, where utilization is not dependant on the knowledge of the Latin language standards. Further analyses of the TMT's applicability in refugee populations are recommended.

Limitations

The study population was small and not randomized. It is thus not representative of the refugee PTSD populations in general. Also, the baseline data on three participants without complete data set and three participants that dropped out of treatment (19% of the research population) went missing in the CTR archives. Analyses of possible differences in baseline scores between this part of the research population and the part that was included in the final statistical analyses could therefore not be performed.

Because of the possibility of specific socio-political circumstances in the referral system in this part of the country as well as professional traditions operating at the CTR, the specific treatment circumstances and procedures could have played a role in the final results. The statistical make up of the data unfortunately did not permit more rigorous statistical analyses and exploring of associations between the different measures of mental health. The low Cronbach's alphas might have been due to insufficient translations of the instruments, such that the same items could have had slightly different meanings in different languages.

Finally, a control group was not included in the study design, but the fact that the patient's PTSD symptoms have been persistent for decades makes it unlikely that the treatment effects found are merely due to natural remission. It is also not possible to disentangle treatment effects due to different treatment components, such as psychotherapy, physiotherapy or medical therapy.

Similarly, it is also likely that patients from different cultures could have responded differently to the treatment due to cultural and language differences (e.g. differing access to education, and culturally specific ideas about appropriate treatment for mental illness), but this effect could not be explored because of the very small sample size. An explorative study design that was as close as possible to the natural practices at the CTR was strived for, making the study itself less adherent to more rigorous research recommendations.

Conclusions

The study confirmed the clinical observations of very high levels of psychological distress in the patient population at the CTR in Holstebro. Statistically significant improvement was observed on most symptom measures following treatment. Clinical implications of these statistically inferred improvements seemed much smaller and less clear. Measures of improvement in subjective well-being are recommended in such highly chronic patients with little hope of full symptom recovery. The evaluation of the relative effectiveness of multidisciplinary treatment compared to other treatments for refugees with PTSD calls for further exploration of specific effective factors in multidisciplinary treatment as well as composition and duration of such complex treatment efforts.

Finally, high levels of symptoms of PTSD, depression and anxiety were persistent in patients up to 24 years after resettlement in Denmark. This makes it necessary to point out that receiving countries are obliged by UN treaties to rehabilitate victims of torture and mass violence. Numerous studies show that it is not enough to provide traumatized refugees with safe surroundings and the assurance of basic needs. Refugees are met with challenges of acculturation and

various sources of post-migration stressors upon their arrival in host countries. Disability caused by severe trauma does not go away with time; furthermore it hinders successful social adaptation and integration into the new society. Effective national treatment systems for traumatized refugees are therefore a good investment for the future. In taking care of mental health and social problems before they get out of control and more costly on the national level, the programmes, more importantly, are also a resource for reducing human suffering.

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