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**Torture; mental sequelae and treatment approaches – are
these applicable in low-income countries?**



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1 ABSTRACT

1.1 Background:

According to recent statistics torture is still practiced in many countries and is most prevalent in low- and middle income countries. In these countries, the availability of and funding for psychiatric health aid is scarce and the living conditions are usually unstable and insecure. This literary review investigate what mental sequelae result from torture, which therapeutic opportunities are available to address them and which of these are applicable in low- and middle-income countries.

1.2 Method:

Several databases were searched for articles concerning torture trauma, its mental sequelae and treatment approaches producing 30 articles on the psychiatric and psychological sequelae of torture trauma and its treatment approaches, which were reviewed.

1.3 Results:

The literary review showed that the most common mental sequelae of torture are PTSD, depression and anxiety as well as other symptoms that are not covered by these specific diagnoses. Limited research on treatment approaches show that narrative exposure therapy, cognitive behavioural therapy and interpersonal therapy have the most effect on reducing torture trauma symptoms.

1.4 Conclusion:

Torture does lead to psychiatric and psychological sequelae. Several treatment approaches are recommended, but none are specifically designed to address torture trauma. Although some show promising effect, it is questionable how applicable these approaches are considering the cultural, linguistic, religious and financial barriers that have to be overcome in unstable situations in low- and middle-income countries in order to implement them. None are at this time ideal. There is suggestion of producing a model where the treatment encompasses all aspects of torture trauma, including both those on the individual as well as the community as a whole, but further research is needed.

2 INTRODUCTION

This thesis is a literary study of issues relating to torture, where I concentrate on the following questions:

What are the psychiatric and psychological sequelae of torture trauma?

What are the therapeutic opportunities to address these sequelae?

And which of these opportunities are applicable in low-income countries where most torture survivors reside?

2.1.1 Why torture?

Torture is inhuman, gruesome and undeniably wrong. It is often thought of as a medieval act, as something that was only performed under periods like the medieval inquisition, as something ancient that no longer exists in our modern world. However, according to the Amnesty International Report¹ from 2008, more than 81 countries had cases of torture and ill-treatment by security forces, police and other state authorities in 2007. According to Human Rights Watch research in 2004 and 2005² the following countries practiced torture: China, Egypt, Iran, Iraq, Indonesia, Israel, Malaysia, Morocco, Nepal, North Korea, Pakistan, Russia, Syria, Turkey, Uganda, Uzbekistan. Two conclusions can be drawn from this, torture still very much exists and it is also more common in low-income and middle-income countries. It is not something of old times, but an existing issue that needs to be dealt with.

Torture can be used for many purposes. However, it is first and foremost a gruesome act inflicted on a human being, by another human being. Its purpose may be everything from wishing to punish and/or destroy fellow human beings, to a method used as a government's security strategy – a machinery for suppressing dissent, to a method for gaining information, obtaining a confession, for intimidating and terrorising³. However used it will always degrade its victims and dehumanize the torturer.

Genefke and Vesti portray it well when they state that *“The ultimate aim of torture is not to obtain information but to break a person's personality, his or her identity. Toward this goal, torturers destroy their victims' ability to cope with life situations in a normal way. Torture victims have learned their role by heart.”*⁴.

Torture is possibly the worst violation of human rights that exists. Still it is an issue not spoken openly of, an issue around which there is a lot of secrecy. In accordance with this many survivors of torture do not speak of torture either. They emerge from this horrible experience feeling humiliated, degraded, mistrusting and guilty – because they have survived, because of what their families have been through, because they have escaped while others are left behind to be tortured.

Due to the reasons mentioned, it is important to highlight the existence of torture as well as the awful sequelae it gives in an exposed individual. It is not an issue that should remain hidden. It is especially important for medical staff to be aware of its existence and its sequelae. Both so that they can recognise symptoms of torture when presented to them and offer treatment, as well as to be sure to never perform or participate in torture themselves. Medical staff has the unique opportunity of being people who can help the individuals, exposed to this horrible human rights violation, reconstruct and reconceive a worthy, healthy life. When looking at it this way one could say it is an ethical obligation to be aware of the issue of torture and to know how to deal with patients that have been exposed to torture.

In this thesis I have decided to investigate three issues:

1. What are the psychological and psychiatric sequelae of torture trauma?
2. What are the therapeutic opportunities to address these sequelae?
3. Which of these therapeutic opportunities are relevant in low- and middle-income countries where most torture survivors reside?

I find it important to be aware of what the mental sequelae, both psychological and psychiatric, are after being exposed to torture trauma. This is important both because it is necessary knowledge to be able to supply the appropriate treatment, as well as to highlight the immense impact torture has on its victim.

Further, torture is executed mainly in low- and middle-income countries resulting in a high population of torture survivors living here. There are several problems that lead to a limitation in delivery of mental health services in low and middle-income countries. First of all there is a lack of professional mental health workers (such as psychiatrists, psychologists etc) to supply mental help. This is exemplified by statistics showing that low-income countries have a median of 0.05 psychiatrists and 0.16 psychiatric nurses per 100 000 population. An example is Liberia with a population of 3, 5 million with one psychiatrist in the country; another is Afghanistan with a population of 25 million with just two psychiatrists in the country. High-

income countries have a ratio of psychiatric health-workers to population which is about 200 times higher⁵. Also many of the few professional mental health workers educated in low- and middle-income countries leave their country for other high-income countries with better salaries and opportunities⁵. This shortage further results in an impossibility of implementing many of the evidence-based treatment interventions used in high-income countries. All in all this contributes to the inequity of the distribution of mental health workers and services, enhancing the shortage in low- and middle-income countries.

Another issue is the financial one. Many of the low and middle-income countries with a designated mental health budget spend less than 1% of their total health budget on mental health⁵, whereas high income countries spend 6.88% of their total health budget on mental health⁵. Here it is also important to remember that the health budget of high-income countries is several times more than that of low- and middle-income countries. Moreover, more than 1/3 of low-income countries rely on out-of-pocket payments as a primary source of finance for mental health care, compared to only 3% of high-income countries who finance mental health care mainly by taxation or social insurance⁵.

An issue extremely relevant to this topic is that 85% of the world's 6 billion people live in the 153 countries classified as low- and middle-income countries⁶⁵, and only 6% of the mental health research⁶⁶ conducted in the world takes place in these countries. This is interesting as many of the torture survivors one wishes to treat live in these countries, but the limitation in research leads to a lack of knowledge both on what disorders they suffer from as well as what treatment might be the most effective.

All of these issues lead to a limitation in available treatment opportunities. Due to these aspects it is interesting to look at the difference in treatment opportunities for torture survivors in low- and middle-income countries compared to the general treatment opportunities developed worldwide.

I will not be looking closely at the somatic or physical sequelae of torture in this literary review. However, it should be said that these are as important as the mental sequelae, as both the physical and mental sequelae influence each other and create a complicated disease-complex where distinguishing physical from mental symptoms can be very difficult or impossible. An example of this is sexual torture which may leave both physical and psychological scars⁶. Other examples of physical problems are gynaecological problems, urinary dysfunction, stomach-ache, headache, low back pain, pelvic pain, pain in extremities,

chest pain and sensory disturbances⁷. Although these are physical complaints they might as well be somatic manifestations of mental sequelae.

According to Amris⁸ persistent pain related to the musculo-skeletal system is the most frequent physical complaint in torture survivors. She reviews the discussion on whether this pain should be assessed as being solely physical or solely psychological, or as a result of a set of bio-physiological, psychosocial and behavioural factors.

This is an example as to how it might be impossible to distinguish between physical and psychological sequelae, but also how tightly interwoven they are with each other.

2.1.2 Definition

Torture is defined in many ways, but all contain more or less the same idea of what it consists off.

Torture is defined by The World Medical Association in the Declaration of Tokyo “*as the deliberate, systematic or wanton infliction of physical or mental suffering by one or more persons acting alone or on the orders of any authority, to force another person to yield information, to make a confession, or for any other reason.*”⁹

Amnesty international has adopted the following definition of torture:

“*Torture is the systematic and deliberate infliction of acute pain by one person on another, or on a third person, in order to accomplish the purpose of the former against the will of the latter*”¹⁰

The United Nations in their “Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment” defines torture as:

“*..any act by which severe pain or suffering, whether physical or mental, is intentionally inflicted on a person for such purposes as obtaining from him or a third person information or a confession punishing him for an act he or a third person has committed or is suspected of having committed, or intimidating or coercing him or a third person, or for any reason based on discrimination of any kind, when such pain or suffering is inflicted by or at the instigation of or with the consent or acquiescence of a public official or other person acting in an official capacity. It does not include pain or suffering arising only from, inherent in or incidental to lawful sanctions.*”¹¹

The United Nation definition is definitely the most widely used definition and we will therefore concentrate on torture defined this way.

2.1.3 Methods of torture

There are several methods used to torture an individual. Most commonly these methods are classified into physical or psychological methods. However, the physical methods usually do not only cause physical sequelae, but also psychological ones due to the fashion in which they are executed and the extent of the trauma inflicted on the tortured.

Examples of physical torture methods¹² are:

- Electrical torture
- Falanga (beating of the soles of the feet causing excruciating pain and damages that may last for a lifetime.)
- Sexual torture
- Suspension
- Stretching
- Submersion
- Beating
- Nail torture, burning with cigarettes
- Mutilation
- Restriction of access to food and water
- Exposure to inhumane conditions

Examples of psychological torture methods¹² include:

- Threats, sexual harassment
- Exhaustion and debility through food, water and sleep deprivation
- Witness of torture or of sexual assaults
- Forced blind obedience
- Restricted communication with outside world or of visits from the outside.
- Threats of being killed or infliction of serious injury
- Threats of separation from, torture of or killing of family members.
- Witness of atrocities
- Forced to become a traitor.

2.1.4 Psychiatric sequelae

Torture is suggested to have long-term psychological and psychiatric effects that persist throughout the lifespan.

Several mental disorders are suggested to occur in torture survivors. Among these are PTSD, depression and other affective disorders, anxiety, dissociative disorders, psychosis and personality change^{13,14}. However, there has been discussion as to whether these diagnoses cover the many symptoms seen in torture survivors, as their spectrum of symptoms do not all seem to be covered by one diagnosis alone. Such symptoms can include guilt, fear, insomnia, nightmares, depression, withdrawal, irritability, loss of concentration, sexual dysfunction, memory disturbance, no belief in the future, low self-esteem, psychosomatic disorders, intolerance towards others, speaking disturbances and hallucinations^{13,14}.

Not all symptoms and disorders can of course be seen at once in one patient, but a selected complex of these may be present leading to a magnitude of symptoms to cure.

It is also important to remember that torture survivors most often also suffer from physical sequelae after torture, and these might worsen the psychological symptoms. The physical scars and marks may disappear over time with adequate medical treatment, but it is important to remember that the mental sequelae, although not visible to the same extent, are still present after the physical healing, and need medical attention as well.

2.1.5 Post-traumatic Stress Disorder

PTSD is a relatively young diagnosis. It was first recognised as a diagnosable psychiatric disorder in the third edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-III)¹⁵ and ICD-10(International Classification of Diseases, 10th edition)¹⁶ in 1980. Its characteristics differ somewhat between the DSM-IV (the newest edition of DSM) (*annex 1*) and ICD-10 definitions (*annex 2*).

In both definitions PTSD is regarded as *a response to a stressful/traumatic event or situation (of either brief or long duration) of an exceptionally threatening or catastrophic nature, which is likely to cause pervasive distress in almost everyone*¹⁶.

The definitions further require symptoms of re-experiencing the trauma by recurrent and intrusive recollections of the event (flash-backs, images, dreams, nightmares, thoughts, perceptions); symptoms of numbness and emotional blunting; avoidance of activities and

situations reminiscent of the trauma; and autonomic hyperarousal with hyper-vigilance, an enhanced startle reaction and insomnia^{15, 16}.

However, the DSM-IV definition has some criteria that are not present in the ICD-10 classification. First of all DSM-IV criteria for the traumatic event include that a person can have experienced, witnessed or been confronted with the event, and that the response has to involve intense fear, helplessness and horror¹⁵ (not included in the ICD-10 classification). Furthermore in DSM-IV, the symptoms must have been present for at least one month¹⁵ (not included in the ICD-10 classification). In addition DSM-IV has classified the PTSD diagnosis into different stadiums by time-limitations of the presenting symptoms: acute PTSD defined as lasting less than three months, chronic PTSD after three months, with or without delay onset: Onset of symptoms at least six months after the stressor¹⁵. None of these time-related classifications occur in ICD-10. They recognise that PTSD can become chronic, but state that this may occur over several years with an eventual transition to an enduring personality change¹⁶.

Although there is discussion as to whether PTSD is a relevant diagnosis to use when describing the symptoms seen in torture survivors, it is often diagnosed and is commonly used as a collective measure of the symptoms it represents as a diagnosis. It is therefore used in several studies, as it comprises several of the symptoms described as independent symptoms above.

2.1.6 Treatment methods

The most frequently used treatment opportunities and which also are the most acknowledged will be described in the following section. Whatever treatment opportunity is used, it is important that the therapist creates an alliance of trust with the survivor¹⁷. The survivor has to be certain that he/she has a trusting relationship with the therapist in order to be able to recount the traumatic events they have survived as well as to receive proper treatment.

Cognitive behavioural therapy:

This form of therapy builds on two theories: Cognitive theory where one assumes that emotions and manners are controlled by the thoughts around a situation, and in behavioural therapy the learning theory¹⁸. This theory looks at psychiatric disorders as wrongly learned behaviour or thinking. A set of behaviour or emotions are implemented due to the positive or negative consequences of a thought or action. The more positive the consequence/result, the more one will use that action/thought/emotion to obtain it and vice versa.

Cognitive behavioural therapy has proven effect for the treatment of PTSD, depression and anxiety disorders. The essence of the treatment approach towards torture survivors is summarised in the following principles: a treatment focus on the “here and now”; the use of explicit, agreed and defined treatment strategies; the specification of treatment goals, negotiated and agreed with the patient to bring about the desired changes in their life (these goals should be realistic, measurable and achievable) and finally the use of collaborative therapeutic strategies between the patient and therapist.¹⁹ The interventions include encouraging the survivor to think his behaviour under torture was a normal human response, helping them to establish new values and assumptions about themselves, others and the world that enable the development of trust, meaning and more functional behaviours, integrating the client into the community through development of social networks and psychosocial activities

Narrative exposure therapy:

In this model witnesses or victims of severe human rights violations are invited to testify their traumatic experience allowing both treatment and a record of the trauma to be made. The central tenet is the retelling of the trauma story, but through the process of tape recording, writing and editing the client is left with a permanent record or testimony that can be used for personal purposes or for prosecution of human rights violations. The survivor becomes an active participant, the therapist’s role being one of clarification, encouragement and acting as a witness. This practice enables the processing of painful emotions and the construction of clear contingencies of dangerous and safe conditions, generally leading to significant emotional recovery.²⁰

Exposure therapy: includes EMDR, in vivo exposure and imaginary exposure.

is a cognitive behavioural therapy technique for reducing fear and anxiety responses, based on the principles of habituation and cognitive dissonance²¹. In this model one uses exposure to elements reminding the patient of the traumatic event, either as in vivo exposure(physical stimuli), imaginary exposure(thinking back to the trauma) or by Eye Movement Desensitization and Reprocessing (EMDR), to recall and learn to handle the emotions, traumatic memories and images setoff by the traumatic event.

Psychoeducation:

The idea here is to give relief to the patient by explaining the nature of symptoms caused by traumatic experiences and by demonstrating that the response is normal. The theory is, the better knowledge the patient has of their illness, the better the patient can live with their condition. However this is not a treatment, but is meant to be part of an overall treatment plan²².

Interpersonal therapy:

This is a short-term supportive psychotherapy that focuses on the connection between interactions between people and the development of a person's psychiatric symptoms.

IPT emphasizes the ways in which a person's current relationships and social context cause or maintain symptoms rather than exploring the deep-seated sources of the symptoms. Its goals are rapid symptom reduction and improved social adjustment²³.

Psychodynamic psychotherapy:

In psychodynamic psychotherapy, whatever psychodynamic formulation is used in explaining trauma-induced symptoms, the primary goal of treatment is integration of the traumatic experience by means of therapeutic reliving of the trauma²⁴.

Pharmacotherapy:

There is increasing evidence that severe trauma can produce long lasting neurobiological changes affecting catecholamine and serotonergic functioning, neuroendocrine systems, sleep patterns, and endogenous opiates²⁵. Pharmacotherapy has shown effect in the treatment of many psychiatric diseases, and is usually combined with other treatment forms.

Family, group and other therapies:

Family therapy may be useful, but may be difficult with refugee survivors as their family may not be with them in their country of exile²⁵.

Group therapy is not widely used and its benefits are not evaluated. Groups may lack cohesiveness, being made up of people from differing political, ethnic and linguistic backgrounds. Talking in a group setting may be looked upon as not culturally or politically acceptable²⁵.

3 METHOD

Different literary databases were searched for articles related to torture, its psychological and psychiatric sequelae as well as for treatment methods. The databases used were Medline through Ovid and Pubmed, Psychinfo and Cochrane library. Search words used for finding articles related to the psychological and psychiatric sequelae of torture were: mental health, psychiatry, torture, sequelae, mental disorders. I searched the databases using different combinations of these words.

Likewise these databases were searched for articles on treatment of torture survivors. Search words used for this were: mental health, torture, psychotherapy, cognitive therapy/ or behaviour therapy/ or psychoanalytic therapy/ or drug therapy/, refugees/ or torture/.

The time frame for relevant articles was limited to 1990 – august 2008. Moreover, I only selected articles that directly studied the torture trauma independently either by comparison of refugee groups where one group had been tortured and the other not, or by study of groups of tortured non-refugees and refugees. This resulted in 17 articles from 1990 – 2008 concerning the psychological or psychiatric sequelae of torture. Likewise for treatment methods of torture survivors, I narrowed it to the articles including the treatment of the psychological or psychiatric sequelae of torture trauma. Moreover, I decided to mainly include articles that looked at the efficacy of different treatment methods for torture survivors. This resulted in 13 articles concerning the treatment of the mental disorders torture survivors suffer from.

Further, the library at the Norwegian centre for violence and traumatic stress (Norsk kunnskapscenter om vold og traumatisk stress) was searched for books concerning the mental disorders of torture survivors as well as their treatment, 3 books were found.

I further searched the bibliographies of articles found above for other similar and relevant articles.

I also consulted researchers who have been working in this field for a long time and was recommended literature.

Seeing that I was not able to find any articles on what are the best pharmacological treatment options for torture survivors, I chose to include one article and one book-chapter concerning the pharmacological treatment of PTSD which might be relevant in torture survivors.

4 RESULTS

4.1 Literary review of the psychiatric and psychological sequelae of torture

There are several studies exploring which psychiatric sequelae result from torture.

Laurence²⁶ wrote, in 1992, a review of the literature on the mental effects of torture up to that point in time. Several of the studies reviewed here conclude that torture survivors have several mental symptoms (excluding the physical sequelae) in common including: anxiety, insomnia, nightmares, panic, depression, emotional lability, flashbacks, memory disturbances, and suicidal ideation, impaired memory and concentration, behavioural and personality changes. Studies show that torture survivors suffer from multiple (from 45-90% of the torture survivors

had at least one symptom) and more intense symptoms than the control groups that were not tortured.

Laurence also considers the fact that one has not been able to give the constellation of symptoms identified as sequelae of torture a name. Rasmussen and Lunde (1980) identified a symptom complex corresponding to “post-traumatic cerebral syndrome”. Petersen et al (1985) determined their patients to suffer from a “chronic organic psychosyndrom”. Allodi and Cowgill (1982) named the collective residual symptoms found in the individuals they studied to constitute “the torture syndrome”. Others (Goldfeld et al, 1998; Jadresic, 1990) argue that the PTSD diagnosis does not cover all the symptoms seen in torture survivors and that it is not an appropriate term, which should rather be called a “continuing traumatic stress disorder”. In other words up till this point in time there was no consensus on what to call the complex of sequelae that torture survivors suffer from.

Ramsay et al ²⁷, in 1993, studied the psychiatric morbidity in survivors of organised violence including torture. They found that out of 100 patients 42 subjects met the DSM-III-R criteria for major depressive disorder, 55 had received a clinical diagnosis of depression. 31 subjects met the DSM-III-R criteria for PTSD while 54 had received a clinical diagnosis of PTSD. 20 subjects met DSM-III-R criteria for both depression and PTSD, showing the large comorbidity between these diagnoses.

Basoglu et al ²⁸ in 1994 compared 55 tortured with 55 closely matched non-tortured political activists in Turkey to study the psychological effects of torture. Compared to many other studies they found a low prevalence of PTSD and depression. PTSD had been present in 33% of the survivors and 11% of the comparison subjects. Currently, 18% of the survivors (that is only 10 persons) compared to 4% of the comparison subjects had PTSD. Only 4% of torture survivors had a major depression diagnosis. Alcohol and substance abuse was almost non-existent in either group. The survivors had higher scores, than the comparison subjects, on most measures of anxiety and depression, although both groups had values within normal.

In a study by Van Velsen ²⁹ in 1996 he found that of sixty patients with a past history of torture or other repressive state violence, 31(52%) met the diagnostic criteria for (PTSD) and 21(35%) met the criteria for major depressive disorder (MDD) using the DSM-III-R criteria. His patients were referrals to a London-based independent charity. However, these diagnoses did not occur alone in torture victims and comorbidity was found in many of the patients.

There was a diagnosis of PTSD and MDD alone in 22 cases (37%) and comorbidity was seen in 25%. In other words 15 of the 21 patients with MDD also had PTSD. Other clinical diagnoses found were GAD (generalized anxiety disorder) in 10%, schizophrenia in 3%, adjustment disorder with anxious mood in 3%, depressed mood in 2%, dysthymia in 2% and depressive disorder not otherwise specified in 2%.

In 1998 Nirakar et al³⁰ studied the impact of torture on refugees displaced within the developing world. They looked at two groups of Bhutanese refugees in Nepal, one consisting of 526 tortured refugees, the other a control group of 526 non-tortured refugees matched for age and sex. They found the tortured refugees to have both higher levels of PTSD symptoms (14% versus 3% in the non-tortured group) as well as anxiety (43% versus 34%) and depression scores (25% versus 14%), compared to the non-tortured group. They performed a logistic regression analysis which showed that history of torture predicted PTSD symptoms (odds ratio, 4.6: confidence interval 2.7 -8), depression symptoms (OR 1.9; 95% C.I, 1.4-2.6) and anxiety symptoms (OR, 1.5; 95%CI, 1.1-1.9).

Holtz et al³¹, in 1998, studied refugee trauma versus torture trauma in Tibetan refugees through a retrospective controlled cohort study. In this study 2 groups each consisting of 35 Tibetan refugees, one group having been tortured the other not, were matched in most other areas such as age, gender, social status, occupation. There was a discrepancy in the two groups' level of political activity as well as education in form of literacy. The authors did not investigate the prevalence of PTSD due to cultural difficulties with translating the diagnostic criteria into a format which the Tibetans would understand. The prevalence of symptom score in a clinical range for both cohorts was 41, 4% for anxiety symptoms and 14, 3% for depressive symptoms. The torture survivors had a statistically higher proportion of elevated anxiety scores than the non-tortured cohort (54, 3% versus 28, 5%). This was not true for the depression scores, only 1/7 had elevated depressive scores (14, 3% in both cohorts), meaning that 86% of the participants as a whole did not have elevated depressive symptoms. The reason for the low depression scores may be that the refugees were all supplied with social support at arrival in India, which is proven to alleviate symptoms of PTSD and depression (Smith 1986). The conclusion being that one of the long-term effects of torture is elevated anxiety symptoms, independent of secondary stressors inherent in living in and fleeing from a socially, culturally, economically and religiously repressive environment.

Wenzel et al³² in 2000 looked at the psychological disorders in a group of 44 exiled survivors of torture. The most frequent diagnosis found was PTSD, but criteria for a present diagnosis of other disorders were fulfilled in 34 patients, mainly major depression or dysthymia. 4 patients fulfilled the criteria for functional psychosis. A diagnosis of present PTSD was found in 90.9% (40 patients), only PTSD was found in 22.7% (10 patients), present diagnosis of major depression and dysthymia in 59.1%, anxiety disorders in 20.4%. Of the 40 patients with PTSD, 30 of them fulfilled criteria for at least one more present diagnosis, the most frequent being major depression.

In addition many patients reported to suffer from symptoms that are not included in the narrow PTSD diagnostic criteria, such as feelings of shame, distrust in others and guilt

In a study by Van Ommeren et al³³ from 2001, psychiatric disorders among tortured Bhutanese refugees living in Nepal were studied. Their study comprised 418 tortured and 392 non-tortured refugees. They found that tortured, compared to non-tortured refugees, were more likely to report 12-month ICD-10 posttraumatic stress disorder, persistent somatoform pain disorder and dissociative disorders. Of tortured refugees 73, 7% and 43, 3% reported lifetime and current PTSD respectively. The tortured refugees were also more likely to report lifetime PTSD, persistent somatoform pain disorder, affective disorder, generalised anxiety disorder and dissociative disorders. Lifetime dissociative disorder was seen in 19, 4% of the tortured refugees compared to only in 4, 6% of the non-tortured refugees. Likewise the lifetime prevalence of affective disorder (including severe depressive episode) and GAD were higher among the tortured refugees (35, 6% and 20, 6% respectively) than among non-tortured (15, 6% and 12, 5%), but 12-month rates were much lower for both groups indicating remission.

They also found that approximately 5 of 6 tortured refugees had at least 1 lifetime disorder and 3 of 4 at least one 12-month disorder. In contrast, more than half of non-tortured refugees had a lifetime disorder within their life, and almost half had a 12-month disorder.

As for comorbidity they found that $\frac{3}{4}$ of the tortured and non-tortured refugees with lifetime PTSD reported a comorbid disorder. The tortured refugees with lifetime PTSD were more likely to report each of the assessed disorders including affective disorders (42, 8%), GAD (24%), specific phobia (27, 9%), dissociative disorder (23, 1%).

Their risk ratios showed that each of the assessed disorders occurred more likely in the lifetime of a tortured refugee than in the lifetime of a non-tortured refugee. Affective disorders and GAD were common lifetime disorders, but their much lower 12-month

prevalence rates indicate that these remitted over time. As for 12-month disorders, tortured refugees were more likely to report PTSD (43% versus 4%) and dissociative disorders (18% versus 3%).

Hermansson et al³⁴ studied, in 2003, the long-term impact of torture on mental health in group of war-wounded refugees. They compared two groups, each consisting of 22 members, one in which all had been tortured, and the other of non-tortured refugees. They found the prevalence of psychiatric symptoms to be high in both groups, but there were no significant differences in mental health between tortured and non-tortured. 50% of the tortured group and 59% of the non-tortured group were diagnosed with PTSD. Between 41% and 45% of both groups had clinical scores indicating a clinical diagnosis of depression or anxiety. They also found that if an individual met the criteria for PTSD, it was likely he also met the criteria for anxiety and depression.

Thapa et al⁶⁴ studied the psychiatric disability among tortured Bhutanese refugees in Nepal in 2003. They performed a cross-sectional survey among 418 tortured and 392 nontortured Bhutanese refugees matched for age and gender, and looked at four different domains of disability; personal care, family, household and social activities. In an earlier study (Van Ommeren et al³³) they found more psychiatric morbidity in the tortured group than in the nontortured group. In this study they found no difference in disability between the groups, one in five tortured and nontortured were disabled. In the tortured refugees factors associated with disability were PTSD, specific phobia and present physical disease. In the nontortured factors associated were present physical disease, greater age and generalized anxiety disorder.

Zungu-Dirwayi et al³⁵ studied a sample of 134 survivors of gross human rights violations in primary care, and found that 72% of the participants had a current psychiatric diagnosis. The most frequent diagnosis was depression (55%), followed by PTSD (42%), whereas 27% of the sample had an anxiety disorder other than PTSD. With regard to comorbidity, 54% of the sample had more than one diagnosis. The common comorbid diagnoses were depression with PTSD, or depression with PTSD and another anxiety disorder.

Bichescu et al³⁶ looked at the long-term consequences of traumatic experiences in 2005. They compared 59 former political detainees exposed to torture from Romania with a control group of 39 individuals matched on age and gender, social status, educational level and others.

Lifetime prevalence of PTSD in survivors was found to be 54%, and a current diagnosis of PTSD to be 30.5%. Former political detainees had significantly higher scores than control subjects on state anxiety. As for comorbidity they found the PTSD score to correlate positively with anxiety and depression (27%) and dissociative disorders (34%). Also depression score was positively correlated with anxiety. Other comorbid diagnoses included substance abuse (37% had this).

Alexander et al³⁷ compared torture survivors (17 in each group) from Bosnia and Colombia and their rates of anxiety, depression and PTSD, in 2007. Their results showed that 100% of Bosnians were symptomatic for depression, and over half had symptoms of PTSD compared to 35% of Colombians for depression and 18% for PTSD. The Bosnians showed a considerably higher level of anxiety symptoms, HSCL- 25 score of 2, 66, compared to Colombians with a HSCL-25 score of 1, 83.

In 2007 Wietse et al³⁸ studied the disability associated with psychiatric symptoms among tortured non-refugee survivors in rural Nepal. Of the 201 participants they found 59, 7% to have PTSD and most also had anxiety and depression (85, 6% and 81, 1% respectively). There was seen comorbidity both between PTSD and anxiety as well as between PTSD and depression.

In a review article by Thomas A Campbell³⁹ in 2007 he finds the three most common psychological disorders found in torture victims to be PTSD, depression and anxiety. The prevalence of one or more of these range from 85% to 15% of victims. He also sums up that there are several other symptoms reported which do not fit any diagnostic criteria such as trauma congruent hallucinations, depression, confusion, disorientation, impaired memory and personality change, identity disorders, suicidal ideation, conduct or substance abuse problems, physical impairments, disturbances in the value-processing system and intensification of pre-trauma disorders or conditions.

Thomas Wenzel⁴⁰ wrote a review on torture in 2007. He emphasizes that the sequelae of torture include PTSD, chronic pain, depressive disorders, and reactive symptoms. He found prevalence-rates of PTSD varying from 30 to over 90%. Major depression or depressive disorder to be nearly as common or in some studies more frequent than PTSD. (Keller et al)

81.1% were found to have anxiety disorders, 84, 5% had depressive symptoms and 45, 7% had PTSD. Dissociation is also observed frequently.

Mills et al⁴¹ wrote a systemic review of mental disorders and torture in Bhutanese refugees in Nepal in 2008. They aimed to summarize the impact of the long-term displacement on refugee mental illness using systematic review techniques. They found six studies that met their inclusion criteria. All conducted amongst Bhutanese populations residing in Nepalese refugee camps, and a sub-sample of 2331 torture survivors residing in the camps, identified in 1995. All the studies report a dramatically high incidence of mental illness including depression, anxiety and post-traumatic stress disorder. Both tortured and non-tortured participants reported elevated rates of mental disorder.

4.2 Literary review on the research on treatment of torture survivors

Several researchers have explored which treatment approach may be the best in torture survivors.

Campbell³⁹ in his review on torture from 2007 points out that the treatment of torture survivors is difficult, and that after the emergence of PTSD in DSM-III the study of torture survivors has mainly focused around this one disorder. Further on he emphasizes that even though PTSD does occur in torture survivors, this is not the only disorder to occur (as we have also seen in the above literary review.). Depression, anxiety, psychosomatic symptoms and personality disorders are widely reported³⁹. Therefore treatment of torture survivors can not simply focus on one disorder, nor can previously established treatments of certain disorders necessarily be applied to torture survivors fitting diagnostic criteria for those disorders³⁹.

According to Campbell³⁹ the most efficient treatment for the psychological sequelae of torture is cognitive- behavioural approaches. He also reviews psychodynamic and community-based approaches to treatment. In his review he concludes that the few well-controlled studies which have been conducted are either inconclusive or have serious methodological issues. The research he pulls out includes³⁹:

- *Paunovic and Ost (2001)*⁴² who found that CBT was as effective as exposure treatment in treating PTSD in refugees, in a study that included six torture survivors in addition to ten non-tortured refugees with symptom reduction found to be 50%. Paunovic additionally found the same for generalized anxiety and depression, where symptom reduction was found to be 50% and 57% respectively.
- A review by *Foa(2000)* which found that CBT for PTSD is more effective than other treatment techniques, with exposure therapy receiving the most empirical support due to its effectiveness. The effectiveness of these treatments in torture survivors, however, remains to be properly investigated.
- In another case study, *Basoglu, Ekblad, Baarnheilm and Livanou (2004)*⁴³ showed success in treating a Kurdish torture survivor living in Switzerland. This treatment made use of standard cognitive-behavioural techniques for the treatment of PTSD, including exposure techniques. The therapy achieved significant success in reducing symptoms of PTSD and depression, which had continued to reduce at a six-month follow-up.

Another common approach Campbell mentions is that it was, in the past, common to use some form of psychodynamic therapy. Much of the literature comes from the Rehabilitation and Research centre for Torture Victims in Copenhagen and focuses on insight therapy. There is little empirical evidence to support this method in treating the symptoms of PTSD.

He also emphasizes that research has shown that the amount of social support after being tortured was related to depression (*Mollica et al, 1998*³⁹).

Another form of treatment is cognitive processing therapy. Campbell writes that there are no studies done on this form of therapy on torture survivors, but the work that has been done in sexual abuse victims suggests that it may have enormous promise. CPT is based on information processing theory, and posits that information about the trauma consisting of stimuli, responses, and meanings of the stimulus and response elements is stored in fear networks. The therapy consists of psychoeducation, writing an account of the trauma full of emotional detail, and encouraging clients to experience their emotions while writing the account. CPT seems to be successful at treating both PTSD and depressive symptoms that result from sexual experience, which could make it extremely worthwhile as a treatment for torture survivors. Several studies has shown its effect(*Nishith, Resick&Griffin, 2002; Resick, Nishith, Weaver, Astin & Feuer, 2002*³⁹) and it is shown to be superior to prolonged exposure in reducing feeling of guilt among sexual assault survivors (*Resck et al, 2002*³⁹). Overall, it is necessary to examine the efficacy of this method among torture survivors.

Campbell further comments that there have been very few treatment models specifically designed for treating the psychological sequelae of torture. Narrative exposure therapy (NET; *Shcauer, Neuner & Elbert, 2005*³⁹) is one form of treatment that has been specifically developed to treat the psychological sequelae of war, torture and organized violence. This form of therapy shows promise although short and moreover both being treating and documenting torture and human rights abuses. One study using NET in a Ugandan refugee camp showed that it is highly effective compared to supportive counseling and psychoeducation, with only 29% of survivors who received NET still meeting criteria for PTSD a year after treatment, as opposed to 79% of those who received supportive counseling and 80% of those who received psychoeducation (*Neuner, Shauer, Klaschi, Karunakara & Elbert, 2004*⁴⁴). However, this sample contained both tortured and non-tortured refugees.

Another treatment that has been developed is the HEARTS model (Hanscom, 2001⁴⁵). This model aims to teach the community leaders how to help traumatized members of the community by focusing on six treatment steps. These steps are not designed to be sequential, but rather are designed to be flexible in the order in which they are used. The steps include listening to the story of the victim, focusing on emotions and actions, asking about symptoms, explaining the reason for symptoms, teaching relaxation and coping skills, and helping with self-change. There has been no collected data of this models effect as of yet, but it is an important contribution to the research of torture, being a model specifically designed to treat the psychological sequelae of torture.

McIvor and Turner²⁵, in their study from 1995, considered the assessment and treatment approaches for survivors of torture. They evaluated different treatment approaches including The testimony method, psychodynamic psychotherapy, “insight therapy”, cognitive/behavioural approaches, family, group and other therapies and pharmacotherapy. On the aspect of pharmacotherapy they have several reflections. Pr 1995 there were no controlled trials examining the efficacy of medication in the treatment of torture survivors. They review two studies lasting 18 weeks, one comparing phenelzine with imipramine, the other amitriptyline with placebo. For phenelzine a clinical meaningful effect was found for PTSD symptoms and it was found to be more beneficial than imipramine although it had more contraindications. Amitriptyline was found to be more effective than placebo in reducing PTSD symptoms. Other medications of which they review uncontrolled case reports and which have shown effect on PTSD symptoms are carbamazepine, propranolol and clonidine. (Davidsons 1992).

Their overall conclusion is that there is no adequate controlled research on the assessment, treatment and clinical outcome of torture survivors. They emphasize the importance of considering significant social and political sequelae affecting survivors, families and whole communities when drawing up a treatment formulation. They quote Basoglu & Marks (1988) who found that since no mode of therapy yet has been demonstrated to be better than another there is no ethical dilemma in withholding one component. By defining the elements in therapy that are truly therapeutic, it will be possible to provide more effective treatment programs. A flexible, staged, client-centred approach utilising several techniques is likely to achieve best results²⁵.

They state that present evidence from controlled studies show that behavioural techniques are most effective in relation to PTSD following simple trauma. However, these should always be combined with more cognitive and complex methodologies for the more complicated traumas of systematic persecution and torture.

Carlsson et al⁴⁶ performed a follow-up study of mental health and health-related quality of life in tortured refugees in multidisciplinary treatment (Multidisciplinary = psychotherapy, physiotherapy, social counselling and medical help), in 2005. The aim of their study was to examine changes in symptoms of PTSD, depression and anxiety, and in health-related quality of life during treatment in traumatized refugees⁴⁶. The study comprised 55 persons admitted to the Rehabilitation and Research Centre for Torture Victims in 2001 and 2002. Data on background, trauma, present social situation, mental symptoms (using Hopkins symptom checklist-25, Hamilton depression Scale, Harvard trauma questionnaire) and health-related quality of life (WHO quality of life-bref) were collected before treatment and after 9 months. No significant change in mental symptoms or health-related quality of life was observed.

Falk et al⁴⁷ performed a study where they introduced a psychosocial program for Liberian and Sierra Leonean survivors of torture living in Guinea. The program was used between 1999 - 2003 and had 3 main goals: a) to provide mental health care, b) to train local refugee counsellors, and c) to raise community awareness about war trauma and mental health. The treatment blended elements of western and indigenous healing, the core component consisting of relationship-based supportive group counseling. 4000 clients were provided with counseling and an additional 15000 were provided with other supportive services. Supportive group psychotherapy (including elements of psychodynamic, relational/interpersonal, cognitive-behavioural, narrative and expressive/humanistic psychotherapies) was the primary

approach, other clinical services were family counseling, social activities amongst others. Results from follow-up assessments (at intake and at 1, 3, 6 and 12 months) indicated statistically significant reductions in trauma symptoms and increase in measures of daily functioning and social support during and after participation in groups.

Mollica et al⁴⁸ assessed symptom change in Southeast Asian Refugee survivors of mass violence and torture in 1990. They evaluated changes in symptoms and levels of perceived distress of 21 Cambodians, 13 Hmong/Laotian and 18 Vietnamese patients before and after a 6-month treatment period. The treatment consists of counseling and social service support specifically designed to address the psychiatric disorders and the unique cultural and social and family dimensions of the Indochinese patients. They found that all had a reduction in psychiatric symptoms (depression, anxiety, PTSD and individual symptoms), Cambodians the greatest and Hmong/Laotians the least reductions in depressive symptoms. Although psychological symptoms improved many somatic symptoms worsened. All in all the authors conclude that refugee survivors of multiple traumata and torture can be aided by psychiatric care.

Biscescu et al⁴⁹ evaluated the outcome of narrative exposure therapy (NET) to that of psychoeducation (PED) only in victims of political detention and torture in Romania. The 18 participants with an established diagnosis of PTSD, were randomly assigned to either one session of PED (n=9) or five sessions of NET (n=9). Symptoms of PTSD and depression were assessed prior to treatment and after a 6-month follow-up. NET, but not PED produced a significant reduction in post-traumatic symptoms and depression scores. Four out of 9 of those who completed NET compared to 8/9 of those within the PED group, still had PTSD 6 months after the treatment had ended. These results indicate that NET may lead to the alleviation of post-traumatic and depression symptoms even when the conditions persist for excessive time periods.

Bolton et al⁵⁰ performed a randomised controlled trial group of interpersonal psychotherapy (IPT) for depression in rural Uganda in 2003. They compared the effect of IPT in 107 individuals compared to a control group matched in age, gender, and degree of depression of 117 individuals. At follow-up they found a mean reduction in depression severity of 17.47 points in the intervention group compared to 3.55 points in the control group. After

intervention 6.5% of the intervention group and 54.7% of the controls met the criteria for major depression, compared to 86% and 94% respectively, prior to intervention.

In 2006 Bolton et al⁵¹ published a follow-up study where they looked at the 6-month outcomes of IPT in the same group studied in 2003. 103(96%) out of 107 participants in the intervention group and 113(97%) out of the 117 controls were reassessed six months after the post-intervention assessment. They found that the participants following the IPT-group had mean depression symptom and functional impairment scores respectively 14.0 points and 5.0 points lower than the control group. The rate of major depression had declined from baseline to 6-month follow-up in both groups, most significantly in the IPT-group where prevalence had sunk from 86% at baseline to 12% at 6-months follow-up, compared to respectively 94% and 55% in the control group.

Bisson⁵² reviewed the evidence for a pharmacological approach to the management of PTSD in 2007. By reviewing the few randomised controlled studies (RCT) completed on the pharmacological treatment of PTSD he found data on selective serotonin reuptake inhibitors (SSRI), tricyclic and monoaminoxidase inhibitors as well as for four other drugs. The efficacy of the drugs is described in terms of reduction in clinical-assessed severity of PTSD symptoms using the results of the Nice Meta-analysis in this area. The drugs that show statistically significant positive effect over placebo are Paroxetine (an SSRI.), Sertraline, Amitryptiline, Phenelzine, Mirtazapine. Although these showed positive effect there are cautions to be taken due to their adverse effects. Also some of the RCT's conducted were of very small size and some with very large confidential intervals meaning that their effect, although proven to be positive, is unknown to be large or small. Some benzodiazepines, including clonazepam, alprazolam, carbamazepine, clonidine and prazosin, have been reported as efficacious in open-label trials, case reports or case series. Studies including Fluoxetine showed less convincing results, but may be due to few participants. Further he found no statistically proven effect for Imipramine (tricyclic), Venlafaxine, Olanzapine and Risperidone.

Smith et al⁵³ reviewed the literature available in 1998, regarding the psychopharmacological interventions used in treatment of trauma survivors. For the different groups of medications they find the following:

- Antidepressants

- Tricyclic antidepressants: are found to show modest improvement in several open-label studies. Clomipramine shows particular effect for intrusive recollections. Several placebo-control design studies show effect for Amitriptyline, Imipramine, but no statistical effect for desipramine.
- Monoamine oxidase inhibitors: results of uncontrolled studies show beneficial effects of MAOIs on PTSD symptomatology. There are mixed results of the effect of phenelzine, one study showing no difference from placebo, the other showing superiority to imipramine and placebo therapy.
- Selective serotonin reuptake inhibitors: only a few small case reports were available at this point in time, but in these fluoxetine showed effect and was well tolerated
- Anticonvulsants:
 - Carbamazepine: several case studies show effect of carbamazepine on the improvement of intrusive symptomatology, hostility and impulsivity.
 - Valproate: only one study had been conducted and this showed significant improvement in hyperarousal and hyperactivity, as well as in avoidance and withdrawal symptoms.
- Lithium carbonate: two open-label studies show effect of lithium (in 8/14 patients) on flashbacks, startle response, anger and psychological stress.
- Benzodiazepines: Clonazepam was shown to have effect in an open-label study. Alprazolam showed effects on anxiety symptomatology, but not on symptoms specific for PTSD. Moreover, they enhance the dangers of dependence with long-term treatment with benzodiazepines.
- Buspirone: two clinical studies have shown clinical improvement in PTSD symptoms.
- Clonidine and Propranolol: case-studies have shown effect of both on improving PTSD-symptomatology. One study also showed that the combination of imipramine and clonidine provided a larger symptom relief (in 63% of 68 patients) than either of the two medications alone (27% imipramine, 10% with clonidine).

5 DISCUSSION

5.1 *Considering research on mental sequelae*

When reviewing the studies concerning the psychological and psychiatric sequelae of torture the predominant disorders seem to be PTSD, depression and anxiety. The prevalence in the studies considered here varies a lot. For PTSD the prevalence varies between 14% and 90.9%, for anxiety disorders between 10% and 85, 6% and for depression between 4% and 100%.

It could seem as if anxiety and depression disorders are the disorders seen immediately after the trauma, while PTSD seems to have a larger impact somewhat later in time. Van Ommeren et al³³ found a lower 12-month rate of general anxiety disorder(6.2%) and affective disorders(including major depressive episode)(7.6%) compared to the lifetime prevalence(which were 20.6% and 35.6% accordingly) indicating remission for these disorders over time, while PTSD did not seem to remit as rapidly.

However, in some of the studies there is also shown a reduction in PTSD-symptoms over time with the lifetime prevalence varying between 33²⁸-71.4³³% and current PTSD between 18²⁸-43, 3%³³. The reduction here though does not seem to be as significant as for affective and anxiety disorders. As a result it could seem as if PTSD does not remit at the same extent and therefore might be a more important subject for treatment in order for it to remit/heal more rapidly and not become a long-lasting chronic disability.

Comorbidity between PTSD, depression and anxiety disorders are commonly seen^{27, 29, 32, 33, 35, 36, 38}, as well as in combination with other alone-standing symptoms such as guilt, fear, shame, humiliation, confusion, disorientation and others³⁹.

Other disorders seen, but not as commonly studied as PTSD, anxiety and affective disorders, are dissociative disorders, adjustment disorders, psychosis and persistent pain disorder^{33, 29}.

There is especially one issue that is problematic when reviewing the studies done on the psychological/psychiatric sequelae of torture, which is that in most of the studies the torture survivors examined are additionally refugees. This is important as torture in itself is a huge traumatic experience, but being a refugee may add-on further trauma that can lead to a worsening of psychological symptoms. This may lead to that the symptomatology seen in the

survivors studied may be larger than it would have been without the additional trauma of being a refugee.

Such additional trauma may include:

- uprooting from their home country,
- loss of family members or the entire family,
- confrontation with government officials in their asylum country (this may be a problem due to the fact that torture often has been inflicted on them by government officials in their home country, resulting in mistrust and the like towards government officials in the country of asylum),
- having to report what they have experienced as a stage in the process of receiving asylum. This may be difficult as many already suffer from mental symptoms which will make it very difficult to retell this experience due to the flooding of emotions that may occur as well as backflashes to the trauma, the re-experience of it, etc.
- loss of their own culture and language, leading to the trauma of not being able to express oneself, communicate, understand the society one is living in, which again may lead to isolation and worsening of symptoms.

There is additionally a difference between the study of tortured refugees living in the west and tortured refugees living in a non-western country close to the one they have fled from. In addition to the traumas listed above, which apply to both groups, the tortured refugees living in non-western countries usually live in a more challenged situation and may therefore have higher symptom load due to their continuing traumatisation. By challenged situation I mean that most are living in refugee camps where there is limited access to food, water, clothing and housing meaning that the basic aspects of life are threatened. Further there may be an ongoing war, lack of order, the threat of further pursuit and prosecution. In these situations the most pressing issue may not be to get professional help for mental symptoms, nor are they likely to be available. Moreover, the health service that exists in Western countries and which is often offered to western refugees, does not exist to the same degree in non-western countries in which torture survivors may reside. They, therefore, do not get the same offer of psychological/psychiatric help as those in Western communities, since availability is lacking, and may as a result experience a worsening of mental symptoms. This in turn may lead to the fact that the mental symptoms obtained in a study of such a population, may actually be higher/worse than in a population group “only” exposed to torture.

Of the studies reviewed here only 4 studies looked exclusively at non-refugee tortured survivors. These four comprise Basoglu et al²⁸, Zungu-Dirway et al³⁵, Bischescu et al³⁶ and Wietse et al³⁸. Their results are very similar to those found in studies which look at refugee torture survivors.

However, Basoglu et al²⁸ found a somewhat lower rate of PTSD than in other studies (currently only 18% in the tortured versus 4% in the non-tortured) and a remarkably lower depression rate (only 4% of the tortured). Moreover they did not find comorbidity between anxiety and depressive disorders in the torture survivors as they do in most other studies. This may be due to the fact that the victims studied are not refugees, or that they are a group of “strong people”(seeing as they were political activists and maybe more prepared for detention and torture if it were to come) that “tolerate” torture in a better way.

There are further several studies which compares torture trauma to refugee trauma by looking at refugee groups in developing countries where the groups are matched on many aspects(age, gender, nationality), except for that concerning torture. In these studies (Van Ommeren et al³³, Nirakar et al³⁰, Holtz et al³¹, Thapa et al⁶⁴) one generally found high PTSD levels as well as relatively high levels of depression and anxiety in the tortured refugees. The exception here is Holtz³¹ were they did not research PTSD levels due to difficulties with translation, but they also found low depression scores. The researchers themselves think it may be due to the social support the refugees where given on arrival, which is proven to alleviate depression symptoms.

Another interesting issue is that Thapa et al found no difference in psychiatric disability between tortured and nontortured refugees, although they have different predictors for disability. They argue that reasons for the lack in difference may be that the groups have different risk factors for disability. Seeing as the torture survivors have better access to medical services their disability due to physical disease may be less seeing as they get better and faster treatment. Moreover, this may compensate for the disability associated with their greater mental disease, and therefore lead to overall less disability.

In a majority of these studies the groups compared have been matched on at least age, gender and nationality, and some also on some of the following aspects of their lives; social status, educational level, religious beliefs, political involvement, trauma exposure, psychiatric morbidity, living conditions. There is, however, a relatively large variation in the prevalence of disorders found. This may be due to that not all of the studies matched their groups on all

of these aspects, but only a selection of them. This again may result to some aspects being left out, some of which may influence the psychiatric morbidity found. Therefore the variation in prevalence seen between the studies may be due to differences in for example educational level, religious beliefs, social activities that may result in different coping skills and therefore different levels of psychiatric sequelae after torture. Alexander et al's³⁷ study is an example that illustrates how different ethnic groups tolerate the torture trauma they have been exposed to, seeing the extreme difference in prevalence of psychiatric disorders (PTSD, Depression and anxiety) they found between Colombians and Bosnians.

Another reason for the difference in prevalence may be that the refugees studied in High-income countries may have been exposed to a higher degree of traumatisation over a longer period of time both preflight, during flight and after arrival in their country of asylum.

Additionally the period of time that may have elapsed between initial traumatisation and treatment may be prolonged resulting in more mental symptoms having developed and therefore the recording of a higher degree of psychiatric morbidity in the studies.

However, the PTSD, anxiety and depression prevalence in tortured refugees are in all of the studies significantly higher than in the non-tortured refugees. This indicates that PTSD, anxiety and depression disorders are some of the sequelae of torture trauma.

5.2 Considering the research on treatment:

From the few studies conducted on the effect of torture treatment resumed above, it seems that narrative exposure therapy is the treatment which is most effective amongst survivors of torture, especially those living in developing countries and unstable environments.

Both Bischescu et al⁴⁹ and Neuner et al⁴⁴ who compared NET to Psychoeducation, Neuner et al also to supportive counseling, found that NET was more efficient in decreasing PTSD-symptoms after finished treatment.

In Neuner et al's study there is several issues that need to be discussed. First of all, their study population consisted of both tortured and non-tortured refugees, where only 7% were tortured, leading to the question of whether this is a representative group for treatment of torture trauma. Secondly, this population lived in an unstable situation and suffered from poor nutrition and poverty as well as continuing traumatisation by repeated attacks on the refugee camp by Sudanese and Ugandan rebel armies. This portrays a group that in many ways may be representative as to under what conditions treatment may have to be given in low-income countries and areas of conflict where many torture survivors reside.

Thirdly, considering the effect of the treatment, many of those who received NET left the settlement (62%⁴⁴) during the year between treatment was given and follow-up was conducted. Due to this, this group was not exposed to the same amount of traumatic events (they reported less than the other groups⁴⁴) during this year as were the other groups who remained in the camp. Therefore one can wonder whether the decrease of PTSD-symptoms seen at the 1-year follow-up in the NET-group was real, or whether it was influenced by the significantly less traumatisation that occurred in this group compared to the others. Although this is a relevant issue, it is clear from the migration seen in the NET-group that NET has positive influence at least on how these individuals decided to take charge of their future and move to safer living conditions, if not also on their mental sequelae.

The treatment model in Falk et al's study also included narrative exposure therapy amongst other therapies and they also showed a reduction in trauma symptoms as well as an increase in level of daily functioning.

Several studies referred to here (In Campbells³⁹ review: Paunovic et al⁴², Foa, Basoglu et al⁴³. Elsewhere: McIvor and Turner²⁵, Falk et al⁴⁷) indicate that cognitive behavioural therapy has shown effect in reducing PTSD symptoms, both when used as treatment in western countries as in non-western countries⁴⁷. In Paunovic et al's study, referred to in Campbell's review, it was shown to reduce symptoms with as much as 50%. A problem with Paunovic et al's study are his inclusion criteria which state that in order to be included patients had to have a lasting Swedish residence permit and speak Swedish without needing an interpreter. One can therefore assume that the patients included in this study have had the psychological strength needed to create a new life in Sweden by themselves before receiving this treatment. One can therefore wonder to what extent these individuals are a representative group for torture survivors in general, seeing as it seems they in some way have been able to overcome their disability (in form of mental sequelae influencing their lives) and start a new life.

Cognitive processing therapy, which Campbell further discusses in his review, has been shown to have great effect on PTSD in sexual assault victims, but there is no research on this technique with torture survivors.

As for treatment of depression Bolton et al^{50, 51} has found in their studies in Uganda that interpersonal therapy significantly reduces depression symptoms in victims of war and organized violence, including torture. This effect was proven both directly after completed treatment and at 6-month follow-up. However, this is one study comprising only a total of ca

250 individuals, and although showing effect, when further studies have been completed may show different results.

In Mollica et al's study³⁹ (referred to in Campbell's review) one seemed to show that social support given to refugees on arrival to their host country reduces the depression rate seen in these survivors. This is also shown in Holtz et al's³¹ study of torture trauma versus refugee trauma in Tibetan refugees, where they also found a significantly low rate of depression. One of the reasons was thought to be that the refugees received social support immediately on arrival in India. Although not studied specifically, this may prove to be of importance in the treatment of tortured refugees.

Compared to the above results it is interesting that Carlsson et al⁴⁶ did not find any significant improvement in their patients mental symptoms, treated with multidisciplinary treatment, from inclusion to the 9 months follow-up. Whether this is due to the level of trauma these patients have been exposed to (the patients were severely traumatised individuals), the time between trauma and treatment was offered, or that the treatment approach was significantly different is difficult to predict.

The pharmacological component of the treatment of torture survivors is not studied at all. There is overall remarkably little research done on which medication can be helpful in the treatment of PTSD in severely traumatized patients. Phenelzine, sertraline, amitryptiline, paroxetine and Mirtazapine have been shown in randomised controlled trials to have effect on reducing PTSD symptoms^{52, 53, 25}. However, some of these RCT's are small and although the effect is statistically significant, it is not known how small or large the effect is. For other medications studies completed are mostly case reports, case series or open-label trials. These kinds of studies have shown moderate effect in benzodiazepines such as clonazepam, alprazolam, carbamazepin, clonidine and prazosin, and also for propranolol, valproat and buspirone (Bisson, Smith et al, McIvor and Turner). The problem with these studies is that most of them are not controlled, so one does not know the accurate effect of the medications. Furthermore they are not blinded, meaning that both the patient and doctor knows what is given, and in such a way might influence the effect unknowingly, and therefore lead to more positive results of the study.

Further there is no proven effect of imipramine, venlafaxine, olanzapine and risperidone. As for fluoxetine, a SSRI, there have been done very few trials with few people. These have shown less convincing results, but this may be due to the insufficient numbers in the study.

Although the effect is proven for other trauma groups, one does not know whether they will have the same effect in torture survivors, and more research is needed, before strong recommendations can be given. One aspect is especially important to consider and that is the difficulty in evaluating the effect of medications seeing as these are seldom given alone, but often together with another form of therapy.

The studies reviewed above do illustrate some guidance as to what treatment approaches may be the ones with greatest effect. It is clear that narrative exposure therapy and cognitive behavioural therapy show effect in treating PTSD in trauma survivors and also torture survivors. Although not many studies have been completed on the effect these methods have in treating torture survivors, the few that have been completed do show effect and in total also comprise a relatively large amount of participants, indicating that these results can be significant^{44, 47, 49}.

5.3 Are these treatment approaches applicable in low-income countries?

When looking at the applicability of the different treatment approaches I think it first is important to mention the discussion around the cultural validity of PTSD as a diagnosis. This is of importance as many of the treatment approaches considered and researched above are first and foremost evaluated on their effect in reducing PTSD-symptomatology. Therefore it is interesting to briefly introduce this discussion, seeing as PTSD as a diagnosis seems to be a fundament for how treatment is “designed” and a pin-pointer for which treatment is to be given.

PTSD was originally constructed by western psychiatrists and Vietnam-war veterans as a new approach to the psychological consequences of exposure to warfare and trauma⁵⁴.

Due to this there has been discussion around whether PTSD is applicable to a population consisting of mostly non-western individuals. More specifically it is argued that the western world has replaced traditional beliefs and religion with medicine and psychology as explanations for life's atrocities⁵⁵. Therefore in our society it is natural that a trauma is a trauma, that it leads to certain mental symptoms, such as PTSD, and that these are explained with our medical understanding so that these symptoms therefore can be healed by professionals in this science. In a non-western society this may not be the logical view-point.

Mental symptoms arising after trauma may here have a completely different explanation, religious, indigenous or other. Therefore a diagnosis such as PTSD, or the entire concept surrounding it and trauma, may not be understandable in this population because they have different meaning systems and also different coping strategies. Summerfield explains it well when saying: *“What constitutes psychological knowledge is the product of a particular culture at a particular point in time and there is more than one true description of the world. All cultural traditions have their own systems of psychological thought and practice. Many ethnomedical systems have taxonomies which range across the physical, supernatural and moral realms, and do not conceive of illness as situated in body or mind alone. The body is seen to be susceptible to the actions and wishes of ancestors and to spirits. Distress is commonly understood and expressed in terms of disruptions to the social and moral order and internal emotional factors are not seen as able to cause illness. Western trauma theory, which likens the brain to a machine and sees PTSD as the result of incomplete emotional and cognitive processing within that machine, cannot make sense in such settings.”*⁵⁵

Due to the above one has had problems translating what the PTSD diagnosis comprises into other languages as well as cultural settings, so that the population one studies will be able to understand it. An example of this is from Holtz et al's³¹ study from 1998 where they were not able to translate the concept of PTSD as a diagnostic category due to the differences between Buddhism and the Western ontological system

Summerfield argues in his article that the western community is imposing their beliefs, in format of medical science and psychology, onto communities which may explain the emotions they experience after torture or war otherwise or consider them normal reactions. He, as well as others (Rosen et al⁵⁶, McHugh⁵⁴) has criticised the PTSD diagnosis of being imposed on people with reactions which may be normal to have after the traumas they have been exposed to. He worries that labelling trauma survivors with our premade diagnosis may shut out other important aetiological issues for the symptoms these survivors portray, and in doing so also not treating or confronting other problematic issues.

Although this is a very important issue to consider, many do argue today that PTSD is an applicable diagnosis. A study of the validity of the construct of post-traumatic stress disorder in India, where in-depth interviews of 55 women were performed, showed that these women subjectively reported typical PTSD symptomatology like re-experiencing, avoidance and hyper-arousal, and also their experience of it reflecting trauma⁵⁷

It is further argued that PTSD is applicable, but that it does not comprise the entire symptom range seen in torture survivors. One agrees that PTSD is a symptom complex one frequently sees in torture survivors, but that torture survivors also suffer from several other mental symptoms and disorders not included in the PTSD diagnosis^{58, 59}.

It is therefore important for health personnel working with victims of torture to use assessment models which enhance all the other symptoms torture survivors may demonstrate such as those of depression disorder, anxiety disorder, but also individual symptoms not included in these preset diagnoses and in such a way be able to apply a correct treatment approach.

With this in mind I will now consider the applicability of the different treatment approaches in low-income countries. Although guidance can be drawn from the research above as to what treatment approaches are the most effective, there are some issues that need consideration. Firstly, most of the research used as the basis for what constitutes the best treatment for disorders such as PTSD, depression and anxiety, is research done in the Western world both on western clients, but also on severely traumatized tortured refugees living in the west. Seeing as neither the western clients nor the severely traumatized tortured refugees are representative groups for the population needing treatment in the developing world the treatment approach as it is may not be applicable for torture survivors living in developing countries. In other words there seems to be a lack of research limited to studying individuals where their only trauma is torture, and its specific treatment. Therefore the treatment approaches the studies conclude are the best may not fit the group they are aiming to treat, as the study group and the group one wishes to treat do not represent the same population.

Secondly, there might not be an opportunity to get treatment in the developing world and this problem affects all of the approaches proven to be effective above. This because of the lack of health personnel capable of delivering it, but also due to the situation these survivors might be in. If they are still in danger of being pursued and prosecuted, the main priority may not be to obtain mental health services.

As discussed earlier in the introduction the lack of health personnel is a major problem. In developing countries there will both be a lack of specialists able to deliver the form of treatment documented to be the correct one in the western world, as well as a lack of primary health personnel to discover that there is a problem in the first place. Leading to very few people getting the help they need because the resources to give it to them is lacking.

Moreover, there is also the financial issue of who is to pay for the health service that needs to be provided to this group. Somehow both education of health personnel, equipment, buildings and the like would have to be financed, and this could become an issue⁵.

Thirdly, there is a cultural and linguistic barrier in delivering treatment. A treatment method that works perfectly well with e.g. a European suffering from PTSD being treated at a European rehabilitation centre by a European psychiatrist, might not work so well when one places a refugee from e.g. Chile, or the western psychiatrist in a low-income country in the same situation. Both because therapist and client no longer have the same cultural basis (different meaning systems, religious beliefs, traditional coping strategies⁵⁵), but also because they do not talk the same language, and an interpreter will have to be used which in itself can lead to misunderstandings and problems relating to trust and alliance between therapist and patient important for treatment to be successful^{62, 63}.

With these aspects in mind, none of the treatment approaches studied above is ideal, at least not in the way they are now. Furthermore, all of them will in some way or another be affected by the many shortages mentioned above that exist in low-income countries.

Narrative exposure therapy has many positive sides that may make it applicable in low-income countries. Primarily it is especially designed to treat the psychological sequelae of war, torture and trauma. Additionally it is a method which can be used to document human rights violations and in such a way enlighten this issue and hopefully help with its elimination. It is also a form of therapy that fits the settings often found in developing countries by that it consists of few treatment sessions and therefore is easier to complete in unstable situations. From the few studies that have been completed it does show promising effect. However, NET is expensive and as the situation is today requires well-educated psychiatrists/psychologists to implement it.

As for interpersonal therapy and cognitive behavioural therapy, when applied in low-income countries the time-frame necessary for applying these treatment methods may be a problem as unstable living conditions may force patients/clients to move, and thereby not be able to complete treatment. Some of the research above has implicated that social support seems to reduce depression in torture victims when provided. This is easier to implement in health services in low-income countries as many people from different professions can be educated to deliver this service. However, further research is needed in this area.

The research on pharmacotherapy in torture survivors is non-existent. There are two aspects that need to be considered in the applicability of pharmacology. Firstly, the cultural aspect of psychopharmacology, will these individuals be willing to take pills for symptoms they might not understand why medication will help. Secondly, they might suffer from more than one condition and therefore medication might not have the same effect as when used for one specific condition. Pharmacotherapy may be a way in which torture survivors can get relief from symptoms even when mental health support of other sorts is lacking. However, seeing as the research is lacking there are no recommendations as to what one should prescribe. Moreover, financial issues may become very important when it comes to who is to pay for the medication used.

6 Conclusion

Considering what the mental sequelae after torture trauma are, there seems to be enough research to conclude that PTSD, depression and anxiety are predominant diagnoses seen in torture survivors, whether residing in their country of origin or living as refugees elsewhere. There are not done many follow-up studies of how these mental health sequelae evolve over a longer period of time, and this can be interesting both for showing the effect of treatment that may have been given, or to study the natural course in these victims. Most studies conducted so far have only looked at the effect of torture in the torture survivors themselves. It is, however, also important to remember that the torture the survivors experience not only affects them, but also their families, the community and even the person treating the survivor. Therefore, in the future it will be necessary to study the total impact of torture, at least in what way it will influence the treatment given to torture survivors as to treat not only the individual, but also his/her family and community. Moreover, further studies are necessary in the future, using a rehabilitation approach, to study the social functioning and disability aspects seen in torture survivors as a result of their traumatisation.

Although there is discussion around PTSD as a diagnosis as well as around its validity, this issue is being addressed. The criteria making up the PTSD diagnosis are under revision and are not definitely decided as of yet, and moreover its cultural validity is still to be decided by further research in the future.

In the research on treatment approaches for torture, it is a problem that one has not been able to conclude on one treatment approach being the best. This has resulted in the study of several different treatment models, and there has not yet been done enough research to be able to clearly identify which treatment approach has the best effect. In other words the research covers several treatment approaches and in each area the research is scarce.

In total one can conclude that more research is needed to figure out whether there are some treatment approaches that are better suited to use when treating survivors of torture. Seeing as there does not seem to be any proof that any of the approaches alone is capable of managing the complex symptomatology seen in torture survivors, there is also a need to investigate whether one treatment approach will suffice, or whether one will have to relocate pre-existing methods into a new treatment model integrating several approaches and forming a fitting model that will cover all aspects of the symptomatology seen in a torture survivor. Such a model will have to be constructed in such a way that it will be applicable to this population group in low-income countries as well as in high-income countries. Also in view of the problems presented above, this model will have to be applicable even in situations where there will be a lack of health personnel, lack of financial resources, lack of stability in the community and cultural problems. If one concludes that creating such a model is the best approach, there will undeniably be challenges to overcome in its production as well as in its applicability, and more research will be needed to solve these issues.

In regard to future treatment, several models for what could be the best treatment for torture survivors have been drawn up by different psychiatric professionals. An example is the HEARTS model by Karen Hanscom illustrated in Campbell's review article. In many of these one also includes the importance of not only treating the victim/survivor, but also involving family and the community in the "treatment". In other words community approaches become important, focusing on both the education of the community as well as reintegrating the survivor into both his/her family setting and into the community (in ways of language, education, work, social status etc)⁶⁰. Social support is emphasized to be a very important component in such an approach to treating torture survivors⁶¹. Moreover, one wishes to educate local health workers to a level with which they can deliver the mental health treatment themselves without needing the support from experts from high-income countries. The efficacy of any of these theories on treatment has not been tested yet, but can become important areas for further research on the treatment of torture survivors.

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Annex 1: PTSD in DSM-IV:

PTSD is in DSM-IV (the diagnostic group mostly used by American psychiatrists and most researchers) **defined through the following criteria:**

Diagnostic criteria for PTSD

include a history of exposure to a traumatic event meeting two criteria and symptoms from each of three symptom clusters: intrusive recollections, avoidant/numbing symptoms, and hyper-arousal symptoms. A fifth criterion concerns duration of symptoms and a sixth assesses functioning.

- Criterion A: stressor

The person has been exposed to a traumatic event in which both of the following have been present:

1. The person has experienced, witnessed, or been confronted with an event or events that involve actual or threatened death or serious injury, or a threat to the physical integrity of oneself or others.
2. The person's response involved intense fear, helplessness, or horror. Note: in children, it may be expressed instead by disorganized or agitated behaviour.

- Criterion B: intrusive recollection

The traumatic event is persistently re-experienced in at least one of the following ways:

1. Recurrent and intrusive distressing recollections of the event, including images, thoughts, or perceptions. Note: in young children, repetitive play may occur in which themes or aspects of the trauma are expressed.
2. Recurrent distressing dreams of the event. Note: in children, there may be frightening dreams without recognizable content
3. Acting or feeling as if the traumatic event were recurring (includes a sense of reliving the experience, illusions, hallucinations, and dissociative flashback episodes, including those that occur upon awakening or when intoxicated). Note: in children, trauma-specific reenactment may occur.
4. Intense psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event.
5. Physiologic reactivity upon exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event

- Criterion C: avoidant/numbing

Persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness (not present before the trauma), as indicated by at least three of the following:

1. Efforts to avoid thoughts, feelings, or conversations associated with the trauma
2. Efforts to avoid activities, places, or people that arouse recollections of the trauma
3. Inability to recall an important aspect of the trauma
4. Markedly diminished interest or participation in significant activities
5. Feeling of detachment or estrangement from others
6. Restricted range of affect (e.g., unable to have loving feelings)
7. Sense of foreshortened future (e.g., does not expect to have a career, marriage, children, or a normal life span)

- **Criterion D: hyper-arousal**

Persistent symptoms of increasing arousal (not present before the trauma), indicated by at least two of the following:

1. Difficulty falling or staying asleep
2. Irritability or outbursts of anger
3. Difficulty concentrating
4. Hyper-vigilance
5. Exaggerated startle response

- **Criterion E: duration**

Duration of the disturbance (symptoms in B, C, and D) is more than one month.

- **Criterion F: functional significance**

The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.

Specify if:

Acute: if duration of symptoms is less than three months

Chronic: if duration of symptoms is three months or more

Specify if:

With or without delay onset: Onset of symptoms at least six months after the stressor

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Annex 2: ICD-10 PTSD definition:

F43.1 Post-traumatic stress disorder Arises as a delayed or protracted response to a stressful event or situation (of either brief or long duration) of an exceptionally threatening or catastrophic nature, which is likely to cause pervasive distress in almost anyone. Predisposing factors, such as personality traits (e.g. compulsive, asthenic) or previous history of neurotic illness, may lower the threshold for the development of the syndrome or aggravate its course, but they are neither necessary nor sufficient to explain its occurrence. Typical features include episodes of repeated reliving of the trauma in intrusive memories ("flashbacks"), dreams or nightmares, occurring against the persisting background of a sense of "numbness" and emotional blunting, detachment from other people, unresponsiveness to surroundings, anhedonia, and avoidance of activities and situations reminiscent of the trauma. There is usually a state of autonomic hyperarousal with hypervigilance, an enhanced startle reaction, and insomnia. Anxiety and depression are commonly associated with the above symptoms and signs, and suicidal ideation is not infrequent. The onset follows the trauma with a latency period that may range from a few weeks to months. The course is fluctuating but recovery can be expected in the majority of cases. In a small proportion of cases the condition may follow a chronic course over many years, with eventual transition to an enduring personality change (F62.0). Traumatic neurosis

<http://www.who.int/classifications/apps/icd/icd10online/>