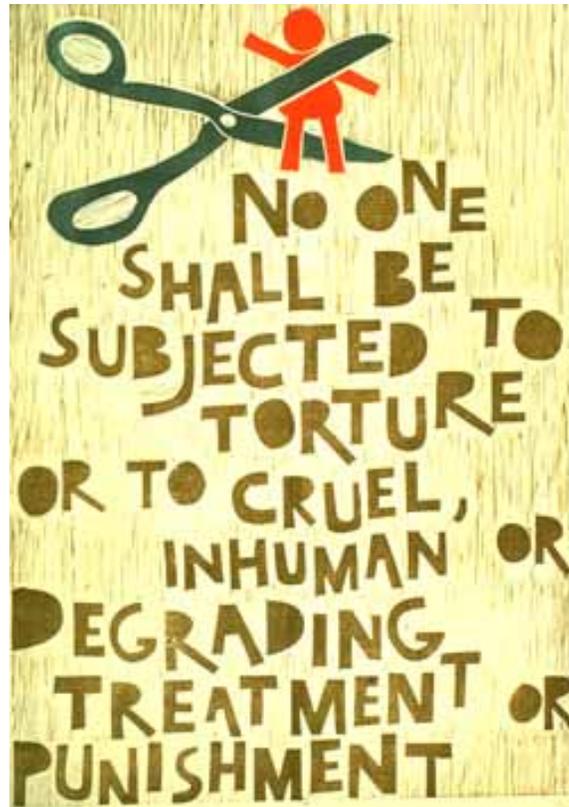


The Physical and Psychological Sequelae in Adult Refugees Or Asylum Seekers Who Have Survived Torture



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Submitted in partial completion of the Master of Clinical Health Services

August 8, 2013

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The Physical and Psychological Sequelae in Adult Refugees Or Asylum Seekers Who Have Survived Torture

Summary Statement

Every year the United States (US) plays host to refugees and asylum seekers who have been uprooted from their homelands. Many of these refugees have gone through unspeakable traumas and torture. Coming to a new country can be a terrifying experience and many do not know where to turn or how to express what they have been through. As refugees and asylum seekers are seen in clinics and emergency rooms across the country, there is an increased need for healthcare providers to understand the signs and symptoms of both the physical and psychological sequelae of torture.

Research Question

What are the physical and psychological sequelae in adult refugees or asylum seekers who have experienced torture?

Purpose of the Research

The purpose of this research study is to determine the physical and psychological sequelae that occur in adult refugee or asylum seeker populations who have survived torture.

Introduction

There are an estimated 15.4 million refugees and asylum seekers worldwide.¹ In 2012, the Office of Refugee Resettlement reported that 58,238 refugees arrived in the United States. Washington alone resettled 2,165 refugees last year.² Many of these refugees have come from countries fraught with war, political corruption, and human rights violations abounding. It is estimated that 5% to 35% of refugees around the globe have endured torture, be it physical or psychological in origin.³ A survey conducted by human rights group Amnesty International from 1997-2000 reported the use of torture in over 150 countries.⁴ As of 2007, Amnesty International also reported an estimated 53% countries worldwide habitually practice torture, up from 45% in 1973.³

The United Nations (UN) defines torture in Article I of the UN Convention Against Torture and other Cruel, Inhuman or Degrading Treatment or Punishment 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.”⁵

A more blanket definition drafted by the World Medical Association in its Declaration of Tokyo in 1975 describes torture as “the deliberate, systematic or wanton infliction of physical or mental suffering acting alone or on the orders of any authority, to force a person to yield information, to make a confession, or for any other reason.”⁶ Torture at its core is a process of dehumanization designed to completely break victims down into fragments of their former self. Torture does not

discriminate; men, women, and children alike may be victims.⁷ It is performed for various purposes including indoctrination of beliefs, isolation, to instill fear, to elicit information and to implicate individuals in certain circumstances.⁸ Though torture is often thought of in the physical, there are many forms of psychological torture as well, and the two are often intertwined.

Over the last several decades many countries have come together with the common goal of putting an end to torture. In 1948, after witnessing the horrors of Nazi treatment of Jews in World War II, the UN General Assembly adopted the Universal Declaration of Human Rights. This was the first step toward legislation against torture. The declaration stated that no one should have to go through torture or maltreatment, and that basic human rights pertain to every nation, regardless of whether a country chooses to endorse them or not.³ Perhaps one of the most important pieces of legislation to stop torture is the Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment (CAT). In December of 1984, the UN General Assembly adopted this global treaty that not only defined torture, but called for a complete ban of torture around the world.⁹ The CAT was later ratified in 1987, and has since been adopted by 153 nations.¹⁰

Though studies have shown a significant percentage of refugees and asylum seekers have experienced torture, many never receive adequate treatment for their physical and psychological wounds. Refugees are uprooted for many reasons, the most common of which include war or fear of persecution due to religious, political, or social beliefs. When living in displacement camps before resettling, refugees often face problems such as poor nutrition and hygiene, and experience anxiety as a result of feeling like they have no power over their lives.^{11, 12} When seen by a medical professional, it is common for refugees to choose not to disclose incidences of torture.¹³

There are around 500,000 torture survivors living in the US as of 2012.¹⁴ Whether a provider works in primary or specialty care, chances are almost all will encounter a refugee or asylum seeker as a patient at some point in their career. Often times, survivors will not speak of the torture they went through because they do not understand the provider is in a position to deliver resources for treatment, because they are afraid of reliving the torture, or because their experience has made them mistrust those in positions of authority.^{8, 15} One of the dark truths of torture overseas is that physicians are sometimes actively involved in torturing captives. They may examine victims to expose weaknesses and then inform the torturers where the victims weaknesses lie.⁸

Tortured refugees and asylum seekers can often present with vague symptoms, causing an untrained provider to mistakenly gloss over an opportunity to deliver much-needed care.⁸ Asylum seekers in particular depend on providers to recognize and correctly document sequelae in order to secure their legal protection. While torture survivors often experience similar physical and psychological sequelae, signs and symptoms of torture can also vary depending on factors such as gender and the region from which the refugee came. Sequelae of torture can also lead to chronic disability and early mortality.¹⁶ With this knowledge, it is of vital importance for healthcare providers to be able to recognize the sequelae of torture in refugee patients in order to provide them with the best treatment possible.

Methods

This literature review was performed by searching the Pubmed and PsycINFO databases for pertinent articles using the Boolean search term “refugees and torture and psychological and physical.” The results were limited to primary research articles from peer-reviewed journals. The first search was performed in June of 2013, and again in July and August of 2013 to ensure the inclusion of any new articles. The abstract of every article was read and all the studies that dealt specifically with psychological and/or physical sequelae in adult refugee or asylum-seeking torture survivors were included. Additional inclusion criteria were a sample size ≥ 50 , and that all participants must be over the age of 16 years. To maximize the number of studies included, there was no timeframe limit placed upon publication dates of the articles within the search.

Results

The literature searches revealed 23 studies that met the inclusion criteria. The studies are broken down by design as seen in Figure 1. Seven of the studies took place in the United States (US), 4 in the United Kingdom (UK), 4 in Nepal, 2 in Denmark, and 1 each in Finland, Croatia, India, Mexico, the Netherlands, and Australia. The group of participants from the included studies originated from various countries within Latin America, Eastern Europe, Africa, the Middle East, and Southeast Asia. Of the 23 articles, 15 aimed to determine the prevalence of torture and resulting physical or psychological sequelae within a given sample, and 3 studies looked at how disability was influenced by psychological illness among torture survivors. Four intended to assess how various social factors such as religion, age, gender, and refugee status may influence mental health among torture survivors, and 2 looked at long-term mental health changes among torture survivors.

Physical Sequelae of Torture

An overview of common physical signs and symptoms of torture

The types of physical torture are so numerous it would be nearly impossible to address them all. However there are some that occur much more frequently than others and can leave telltale signs. Some of the most frequent methods of physical torture include beatings, electric shock, burning, asphyxiation, stretching, and sexual assault or genital torture.⁸ Providers who are able to recognize and address these signs or symptoms in a sensitive manner can help provide competent care. One must keep in mind that just because a refugee patient does not present with evidence of physical torture does not mean it did not take place. Some patients are unable to recall exactly what happened to them from being blindfolded, hooded, passed out, or from blocking out a traumatic incident.⁸

It is not uncommon for torturers to use various techniques in order to prevent scarring and evidence of torture. For example, to hide evidence of falanga, or beating the soles of a person's feet while suspending them from their ankles, the torturer may have the victim wear thin-soled shoes to aid in spreading the blows evenly over the surface of the feet.⁸ This causes extreme pain and tenderness but leaves no physical signs.¹³ Falanga, also called falaka, can lead to neuralgias and severe fascial injuries in the long-term, which can prove debilitating to the victim.¹⁵

Beatings, whether by hand or instruments, are by far the most common method of torture, and often result in misaligned fractures or osteomyelitis as victims usually do not have immediate access to medical care.¹³ One of the signs of caning are horizontal scars along the whole

backside of the body including the legs. Whipping usually leaves diagonal or downturned scars that bank in a sideways direction off the back and trunk.¹⁵ One way torturers prevent scars from beatings is to place a cloth between the skin and instrument of torture.⁸ Suspension by the extremities or being placed in stress positions can lead to torn ligaments, hyperextension of joints, and dislocations or subluxations among other symptoms.^{13, 15} A common method called “Palestinian hanging” is when the captor ties the victims arms behind their back and then suspends them from their arms, putting excruciatingly painful pressure on their chest and shoulders.¹² This can cause stretch marks near the front of the shoulders.¹⁶

Boxing or clapping the ears can cause hearing loss. With otoscopic examination, providers may see scarring of the tympanic membrane as a result of this type of injury, and patients may report pain and bleeding from the ears after the event. Repeated blows to the head can result in head injuries or traumatic brain injuries (TBI).¹³ Epilepsy and hearing loss or complete deafness may also be a consequence of experiencing head injury.¹² Refugee patients with head injuries or TBIs may complain that it is hard for them to concentrate or remember things.¹³

Shocks, cutting, and mutilation to include pulling out teeth and nails are also typical methods of torture. While electric shocks can be applied anywhere on the victim’s body, refugees often report electrodes or prods placed on the genitals or inside body orifices. Some shocks can be so extreme they result in fractures, as is the case with electrocuting a victim’s back. This sometimes causes muscle spasms so intense they produce vertebral fractures.¹⁵

While sexual torture is a physical act, it often leaves the most severe and lasting emotional sequelae. Though rape is what often comes to mind, sexual torture also includes genital mutilation or electrocution, being kept naked, and forcing victims to perform degrading sexual acts while others watch. These methods of torture are notoriously underreported, especially in men, due to the perceived stigma and overwhelming shame felt by the victims.^{15, 17} Women may fear being shunned by the community or being unable to marry because they feel being a victim of rape somehow makes them unworthy or unfit.¹³

Certain physical signs should make a provider suspicious of sexual assault or torture, but in many cases the victims show no bodily evidence. In men who have had items forced into the urethra, there may be thickening or scar tissue around the opening. Though dysuria is often caused by bladder infections or sexually transmitted diseases, it can also be caused by trauma. Women who have forcibly had their legs spread may experience pain around their hip joints later on. As one may imagine, both men and women alike can regularly experience difficulty with consensual sexual activity after enduring sexual torture.¹³ This is a delicate topic that must be broached with compassion, sensitivity, and reassurance by the provider.

Findings of the reviewed literature

The most commonly reported physical methods of torture in the studies from Figure 2 were beatings, sexual abuse, electric shock, cutting, burns, falanga, and suspension. In all of the cross-sectional studies, the subjects were interviewed and participated in surveys. The retrospective cohort and chart reviews gathered their data through surveys and documented interviews contained within the patient’s records. Accounts of physical torture among the studies fell between 45% and 100%. Two of the six studies reviewed pointed out that women are more likely than men to experience rape while imprisoned or tortured.^{18, 19, 20} Rates of sexual torture among the various populations studied ranged from 21% to 80% with the latter being previously

imprisoned Zairian women.^{21, 22} Among a population of Kurdish female refugees from who fled Southeast Turkey, 30% reported being sexually assaulted or raped.²⁰ Williams et al. found that of the 34 women in the sample who experienced sexual assault or rape, 50% described accompanying abdominal, back, and/or pelvic pain. An association with rape and pelvic pain in women displayed the strongest statistical significance, but association was also significant for general sexual assault and pain.¹⁹

Men reported anal rape, being penetrated with foreign objects, or being made to perform sexual acts upon others as common methods of sexual torture.²¹ Only a handful of men reported this type of torture in the studies, so the samples were too small to make any valid or significant generalizations. Researchers feel that while sexual torture in general is underreported by both sexes, it is more likely for males to withhold this information.

Compared with non-tortured controls, physical symptoms are twice as likely to occur in torture survivors. Headache and back pain are the most frequently reported symptoms of physical torture methods.²³ Unfortunately, all too often both are dismissed as psychosomatic complaints, which is not always the case. Bradley et al. found that in 22% of charts reviewed, refugee patients complained of chronic pain, half of which were headaches and the other half of which were back pain. Twelve percent in the same study stated their physical sequelae made it so they were unable to work or perform basic activities of daily living (ADL).²⁰ Zairian patients reported headaches as the most prevalent physical symptom experienced after torture.²¹ Eighteen percent of patients interviewed by Asgary et al. believed their chronic pain was a result of the physical torture they endured.²⁴ Researchers surmised that in many cases of refugee patients presenting with chronic pain, especially that of the head and back, a history of torture is the cause.²⁹

Scars were the most common sign of physical torture with the percentage of attributable scars ranging from 42% to 88%.²⁰⁻²⁴ In a study composed solely of Kurdish refugee torture survivors, another major physical finding was reduced capacity for movement due to torture. Overall 65% of Kurds interviewed had scars from dental or facial trauma (an average of 1.8 per person), 49% from cuts to the limbs or torso (an average of 3.3 per person), 18% from burns, and 14% from stab wounds.²⁰ The patients in Bradley's study had by far the most physical injuries reported.

Among the various studies, there were also some significant correlations determined between certain signs or symptoms and torture events. Males were found more likely than women to be beaten and denied basic necessities like food and water.¹⁸ Interestingly enough, there was no statistically significant association found between falaka and leg pain in the study done by Williams et al. There was also no significant association between shoulder and/or arm pain and suspension. Researchers did find an association between lower limb pain and torture specific to the shins or knees.¹⁹ Bradley et al. did not find significant associations between a history of head injury during torture events and chronic headaches, or that those with chronic pain had additional neurological sequelae.²⁰

Within the current literature, the physical signs and symptoms of torture tend not to be discussed nearly as often as the psychological. Six of the 23 studies reviewed here discussed both types of sequelae. However, none were concerned solely with physical sequelae of torture. It is uncertain as to why this trend exists in the literature. Clearly more research needs to be done in terms of studying the purely physical sequelae of torture.

Psychological Sequelae of Torture

An overview of the common signs and symptoms

Though psychological methods of torture leave no visible evidence of trauma, the emotional scars are usually much more difficult for the survivor to acknowledge and treat. Common methods of psychological torture involve threats to the victim or the victim's loved ones, isolation or solitary confinement, sleep and sensory deprivation, exposure to loud noise, or forcing a victim to watch or participate in the torture of others.⁸ Psychological sequelae are also a result of physical torture methods. For example, waterboarding is a physical torture method that simulates drowning, but the sheer terror of feeling like you are going to die produces psychological sequelae. Merging both physical and psychological torture methods leaves survivors with relentless long-term psychological sequelae.¹⁵

The most frequently occurring psychological signs and symptoms post torture include generalized anxiety disorder (GAD), depression, post-traumatic stress disorder (PTSD), and somatic conditions.¹⁵ Some of the other usual effects of torture are insomnia, nightmares, psychotic episodes, substance abuse, sexual dysfunction, weakness, and fatigue.^{8, 15}

PTSD is thought to be one of the most difficult psychiatric disorders to work through.⁸ It is important to keep in mind that with disorders like PTSD, different cultures may demonstrate the psychiatric sequelae in diverse ways. In the west, it is encouraged to talk about how you feel after trauma, but patients from other cultures may feel uncomfortable doing so. How badly one person is affected compared to another depends on many factors, including personal coping skills, types of torture endured, whether they have support available, and their living conditions after surviving torture.¹⁵

Findings of the reviewed literature

Psychological symptoms were found to be 2 to 3 times more common among torture survivors when compared with non-tortured refugees.²³ The studies seen in Figure 3 highlight some of the important findings related primarily to the psychological sequelae of torture in refugees. The most common types of psychological torture reported by these samples were threats, witnessing torture, mock execution, humiliation, and sensory, hygiene, or sleep deprivation.^{23, 25, 26} Tibetan refugees reported it was more likely for women to be kept naked in prison as a form of torture than men.²⁷ Consistent with data mentioned in the previous section, the most common diagnoses among the torture survivors in these studies were anxiety, PTSD, depression, and somatic complaints. Five out of six tortured refugees have a lifetime risk of developing a psychological disorder.²⁶

The most frequently reported psychological sequelae within the samples included sleep disturbances, being uncomfortable in situations reminding them of their torture experiences, feeling depressed or anxious, difficulty concentrating, irritability, nightmares, hypervigilance, reliving or incessant thinking about traumatic events, and emotional instability.^{21, 23, 25, 27} Kurdish torture survivors who suffered closed head injuries with loss of consciousness also exhibited difficulty with concentration and memory, as well as emotional instability.²⁰ If refugee patients report nightmares, difficulty sleeping or concentrating, and irritability they are significantly more apt to have experienced torture.²⁵

Torture survivors who met diagnostic criteria for PTSD fell between 10% and 63%.^{20, 22, 23, 27, 28} The wide range could be attributed to Western survey tools not being translatable to every culture, the differences in how various cultures express grief, or diverse study populations. The onset of PTSD usually occurs within two years of the onset of trauma.²⁶ PTSD, as well as dissociative and chronic pain disorders, were reported more frequently among torture survivors when compared to non-tortured refugees.^{25, 26, 27} In a sample of Iraqi male torture survivors, there was a significant association between reported physical or sexual torture and PTSD symptoms when combined with a perceived lack of social support in asylum.²⁸

Torture survivors diagnosed with PTSD are also significantly more likely to have somatoform disorders.^{22, 29} Among Latin American and Middle Eastern refugees, somatic complaints were most often neurological, musculoskeletal, or digestive in origin, and associated with a history of physical torture.²⁵ In a sample of patients who were mostly from Africa, 66% were found to have somatic complaints of either headaches or abdominal pain.²² Tibetan refugees in both the tortured and non-tortured control groups averaged the same number of somatic complaints, while Kurdish asylum seekers did not demonstrate a significant correlation between chronic pain and psychological sequelae.^{20, 27}

The prevalence of depression in said samples ranged from 7% to 45%.^{20, 22} 11% of tortured asylum seekers living in Denmark reported taking antidepressants compared with only 3% of non-tortured controls, suggesting a higher prevalence of depression among those who have experienced torture.²³ A sample of predominantly African torture survivors showed a significant association between depression and a history of sexual torture.²² In Iraqi males, inadequate social support during asylum was a significantly better predictor of the development of depression than a history of torture. What also set this population apart was the appearance of what researchers termed “neurotic depression” in 20% of the sample. Many of these participants spontaneously reported that they became obsessed with personal safety. For example, they reported checking their doors over and over again to ensure they were locked. Researchers in the study interpreted acts like this as a possibly different cultural expression of the hypervigilance seen in PTSD.²⁸

Tibetan torture survivors had a higher lifetime risk of suffering from GAD or affective disorders than the non-tortured control group. However, researchers found that having an intact marriage was somewhat protective against the development GAD in the same survivors. They also stated female torture survivors had a greater risk of suffering from any type of psychological disorder when compared with male torture survivors.²⁶ On the contrary, two of the studies involving tortured female refugees from Africa and Turkey found no significant correlation with gender and health or psychiatric symptoms.^{20, 22}

Long-term psychological sequelae

The two studies noted in Table 4 looked exclusively at long-term psychological sequelae in torture survivors. One study with a sample composed of primarily Iraqi, Iranian, and Lebanese men took place 10 years post trauma, while the other focused on Guatemalan refugees living in Mexico 20 years after fleeing their home country due to civil war. Both studies used the same diagnostic surveys, but the gap between the PTSD rates was drastically different. Participants in the 10-year follow up study had an estimated PTSD rate between 56% and 69%, and the Guatemalan refugees in the 20-year follow up showed PTSD rates around 12%.^{30, 31} Guatemalan refugees who fulfilled the criteria for PTSD were significantly associated with having witnessed the disappearance of family or having been close to death. Though 30% of survivors in the 10-

year follow up reported a substantial decrease in symptoms related to PTSD, depression, and anxiety, many still reported harrowing psychological symptoms.³⁰

Over half of the refugees in the 20-year follow up had symptoms of anxiety, which were associated significantly with witnessing a massacre or having been wounded.³¹ Carlsson et al. found that 10 years after traumatic events, about two-thirds of participants still experienced anxiety.³⁰ Though the 10-year study did not specifically address depression, it did report that 44% of respondents stated they had mood or affect disturbances. A history of headaches or mood swings in this population significantly predicted a low quality of life.³⁰ Close to 39% of Guatemalan refugees experienced depressive symptoms, which were significantly correlated with being female, widowed, or witnessing the disappearance of someone.³¹

Torture survivors in the US who seek mental health treatment

As seen in Table 5, three of the studies analyzed the psychiatric state of refugees or asylum seekers seeking treatment at centers for torture survivors in the US. The participants in all 3 studies reported the main reason they were persecuted was because of political affiliation, followed by religious beliefs and ethnicity.^{24, 32, 33} Piwowarczyk found that asylum seekers who report a history of torture are more likely to have been tortured because of their political beliefs, and to display PTSD or depressive symptoms.³³ Rates of psychological diagnoses varied from 40% to 82% with PTSD, 5% to 84% for depressive symptoms, and 1.5% to 81% for anxiety symptoms.^{24, 32, 33} Such wide gaps in prevalence were most likely due to different survey methods in the studies, as well as provider interpretation of symptoms in interviews or differences in incidence in populations. Asgary et al. attributed low depression rates as probable bias by physicians to preferentially diagnose PTSD over depression, since many symptoms in the diagnostic criteria intersect.²⁴

A statistically significant correlation was found in women with a history of rape and elevated levels of symptoms for PTSD, anxiety, and depression.^{24, 33} The respondent's country of origin also played a part in how well one processed their torture experiences.^{24, 32} Asian refugees in one study were found to have significantly lower levels of PTSD than South American refugees, who claimed the highest. African and European refugee rates of PTSD landed somewhere in the middle. Intriguingly enough, researchers found the Asian refugee's Buddhist religious beliefs to be a significant protective factor against PTSD symptoms.^{27, 32} Christians and Muslims in the same study did not demonstrate this protective factor. Asylum status played an important role in anxiety levels of survivors. Participants who had been granted asylum had less PTSD symptoms than those who had not applied or were waiting for their application to process.³²

Results of a meta-analysis on psychological sequelae in torture survivors

A meta-analysis from 2009 systematically reviewed medical literature concerning the psychological sequelae among torture survivors and those who experienced conflict and displacement. Researchers calculated a prevalence rate for PTSD of 46.2% for all studies in which over 40% of the participants reported a history of torture. This was true across the board, irrespective of the size of the study or the various methods used to sample. The amount of time passed since experiencing torture also significantly affected the prevalence of PTSD, explaining up to 21% of the variance in rates. Predictably, the lesser amount of time passed since being tortured, the higher the PTSD prevalence rate. Participants with less than 3 years lapsed since being tortured reported the highest rates of PTSD.³⁴

Among the surveys in which greater than 40% of participants reported a history of torture, the prevalence rate for depression was 49.6%. The samples reporting less than 20% torture rates had much lower rates of depression at 28.1%. Time since conflict also seems to play a significant role in reducing depression prevalence. Depression rates among populations that had escaped from mass conflict decreased from 34% at 1 year post-conflict to 19% at 6 years post-conflict. Several factors were found to influence a higher rate of depression in the studies, including small and/or non-random samples, and self-report questionnaires. The use of differing methods and surveys in the studies was responsible for between a 13% to 28% variance in PTSD and depression rates.³⁴

Overall the study found high prevalence rates for mental illness among torture victims from around the world. Of the 40 countries represented in the studies reviewed, 29 practiced torture, indicating a high prevalence rate of torture amid countries at war or in conflict. Reviewers agreed that future researchers must try and standardize the methodology and tools used to gather information from torture survivors in order to produce more generalizable data.³⁴

Social Factors in Relation to Sequelae of Torture

Several studies looked not only at the different sequelae among torture victims, but also as to how various social factors play a role in either exacerbating or improving the problems at hand. Table 6 highlights the findings of the studies involving social factors. In terms of gender, women were more likely to have endured sexual torture or to witness family members tortured, while men were more likely to be beaten, experience combat, and be imprisoned for a longer period of time.^{18, 35} In agreement with previous studies, those who reported sexual torture had higher PTSD rates when compared with those who did not.³⁶ In fact, one study found rape to be more significantly associated with PTSD symptoms than any other type of torture.¹⁸

Religion seems to play a role in coping with the sequelae of torture. In a sample of Somali and Oromo refugees, an increase in the number of psychological problems were found among those who reported a decrease in their religious practice after moving to the US.³⁷ Another study involving African torture survivors found that various religious coping methods like prayer or meditation, when done privately, helped to decrease symptoms of PTSD and depression among those who experienced physical torture methods—principally forced stress positions. This was not found to be true for public religious practice, such as attending church. Simply put, as religious coping methods decreased, psychological sequelae increased, and vice versa.^{36, 37}

Not surprisingly, researchers also found significant cultural and regional differences regarding sequelae among torture survivors. Southeastern European refugees had much higher PTSD rates and somatic symptoms than refugees from Southeast Asia, Africa, and the Middle East. Southeast Asian refugees reported the lowest numbers of depressive symptoms, but fell around the middle along with Middle Eastern refugees when it came to the number of somatic symptoms.³⁵ The study involving Somali and Oromo refugees found Oromo men and Somali women to have the most exposure to torture.³⁷ On the contrary, Hooberman et al. found no significant regional differences among torture survivors in his study.¹⁸

Several other factors were touched on in the studies as well. The higher the level of education, the less likely a refugee was to witness torture or report a family member being tortured.¹⁸ Employment, marriage, and being a high school graduate appeared to be protective against physical sequelae among Somali and Oromo refugees.³⁷ Psychological problems were more

frequent among women, those forced to leave their home country at an older age, as well as those having lived in the US for a long period of time.^{35, 37}

Disability in Relation to Sequelae of Torture

The three studies in Table 7 addressed disability related to torture sequelae among Bhutanese and Tibetan refugees living in Nepal, and Bosnian refugees living in Croatia. The term “disability” in this context meant anything that hindered the participant from functioning in their normal roles, whether it is at home, work, or play. Depending on the population studied, different psychological sequelae were associated with disability. In Thapa et al.’s study of Bhutanese refugees, significant relationships existed between disability and the presence of PTSD, dissociative disorders, and phobias, while GAD and depression did not appear to have an effect.³⁷ Mollica et al. found that Bosnian refugees exhibiting symptoms of PTSD and depression had a much greater chance of reporting disability in daily life, while Tol et al. found that anxiety and depression predicted disability in Tibetan refugees, but PTSD did not.^{39, 40}

An interesting finding with the Bhutanese refugees was that a history of torture did not make one more likely to have a disability. The rate for disability in both the tortured and non-tortured groups was approximately 1 in 5 people.³⁸ Unfortunately, this data was unavailable in the other two studies as neither included a control group. The type and number of psychological problems appeared to play a role in the incidence of disability as well.^{38, 40} Refugees were at significantly higher risk for disability if they reported a current physical disease, phobia, or PTSD. In fact, in survivors reporting 3 or more psychological symptoms in the last year, the odds ratio for disability quadrupled.³⁸ Mollica et al. found that Bosnian torture survivors with depressive symptoms had a 3.75 times higher risk of disability than those reporting no symptoms. In participants with comorbid PTSD and depression, the risk of disability was fivefold compared to those with no psychiatric symptoms.³⁹

Neither the duration of torture, nor the amount of time lapsed since the events took place had any correlation with disability among Bhutanese refugees. Gender, age, marital status, religion, and political affiliation also played no significant role in this population, but higher education was significant as a protective factor against disability.³⁸ Among Bosnian torture survivors, psychological symptoms, age, infirmity, and perceived personal health were associated with declaring disability.³⁹

Discussion

The studies reviewed demonstrate the variability of results when various factors such as culture, sample size, location, or methodology are taken into account. In the studies seeking to determine rates of sequelae among torture survivors, well over 90% did not include a control group, which makes it difficult to ascertain whether the data obtained is truly significant by comparison. In the vast majority of the studies, results cannot be generalized due to the small sample size. Perhaps some of the results that did not reach significance due to this factor would have had a larger sample been obtained.

Several types of bias may also contribute to irregularity of the data and lack of generalizability. Seven of the studies were retrospective chart reviews at specialty centers for survivors of torture, which created an unavoidable selection and referral bias. Non-random sampling methods could contribute to falsely high rates of physical and psychological sequelae. For instance, in the studies that were conducted at specialty centers for survivors of torture, the patients may have

more symptoms than torture survivors who do not seek treatment for their sequelae. Conducting more studies that include refugees who have not actively sought help at centers for survivors of torture would be a step in the right direction for more conclusive results.

Another limitation that could skew results was the use of self-report surveys in many studies, sometimes years after the offending events. This leaves much room for recall bias such as underreporting or overreporting by participants. Though the studies were conducted on refugees representing many cultures and regions across the world, researchers used Western survey tools to evaluate respondents. While some of the questionnaires were translated and validated for use in different cultures, others were not, and participants may have had a hard time understanding what was being asked of them. With some studies using these unstandardized tools, it makes it hard to determine whether the results presented are valid for clinical use. Some of the participants were illiterate and required an interpreter to ask questions and fill out their surveys. This may have caused the respondents to answer differently due to embarrassment and lack of anonymity. Interpreter bias could also be present as some words do not translate cross-culturally, and they might have inferred or misunderstood what the respondent was trying to communicate.

Reflecting on the limitations and somewhat inconsistent results of these studies, the question remains as to how applicable the results are for integration into a clinical setting. While rates of both psychological and physical sequelae vary between different cultures and circumstances, it is clear that refugees who have survived torture do have higher rates of sequelae than the non-tortured. Studies among these populations are an understandably difficult endeavor, given the sensitive nature of the topic, and the fact that so many variables and outliers can come into play. It is apparent that more studies need to be performed, along with work towards standardizing and translating the different survey tools, in order to achieve more generalizable results.

Conclusion

Turning on the television or skimming news web sites reveals images of war and mass conflict as a commonplace event, to a near numbing effect. Unfortunately, where there is mass conflict, torture often lurks in the shadows; it is an all too common happening. The pain caused by torture transcends the physical, and is never forgotten, with sequelae that can last a lifetime. The literature highlights the substantial problem of physical and psychological sequelae among torture survivors. It is hard to quantify how much healthcare is needed among those exposed to conflict and torture due to the diversity of sequelae rates amid numerous cultural groups.

Regardless of the rates of sequelae, however, experts agree that PTSD, depression, anxiety, and somatic complaints are the main psychological disorders directly resultant of torture exposure. The literature also showed sexual assault to be one of the most psychologically damaging types of torture for both sexes. Treating these patients can be a very complex and delicate endeavor. It is of the utmost importance for healthcare workers, particularly providers, to have the skills necessary to pick up a possible history of torture in refugee patients. This may be especially crucial for asylum seekers, who rely on proper medical documentation as evidence in their asylum requests. Unfortunately, though the odds of a provider treating a refugee patient are great, most never receive training on torture sequelae.

The English philosopher Edmund Burke once wrote, “the only thing necessary for the triumph of evil is for good men to do nothing.” This rings true in the context of the patient provider relationship. Though the evils of torture will likely continue as long as mankind exists, this does

not diminish the good that one may provide in the life of a torture survivor. When equipped to treat torture survivors, providers have the potential to change the course of a patient's life. As tens of thousands of refugees and torture survivors continue to make their way to the United States every year, the need for more research and educated health professionals in this area will remain.

Appendix:

Table 1: Results of Literature Search

Design:	Number of Studies:
Retrospective Chart Review	7
Cross-sectional Survey	12
Cohort Study	1
Survey	2
Systematic Review & Meta-Analysis	1
Total	23

Table 2: Studies that discuss the physical sequelae of torture in various populations.

First Author	Year	Study Design	Sample Size	Study Population	Aims of Study	Main Findings	Limitations
Masmas, TN =====	2008	Survey	N =142	- New asylum seekers in Denmark from 33 countries - 71% were male - Most from Afghanistan, Syria, Iran, & Chechnya.	- To determine the # of asylum seekers who were exposed to torture/trauma - To assess health status as a result of torture/trauma	- 45% reported being tortured - 37% of torture survivors reported health problems, while 27% of non-tortured reported health problems. - 63% of torture survivors met criteria for PTSD, while 10% of non-tortured met PTSD criteria.	- Sample was predominantly men (71%) - Interviewer bias. - No control group.
Hooberman, JB =====	2007	Retrospective chart review	N =325	- Torture survivors: 61% Male pts, 39% female pts. - 59% from Africa & 28% from Asia.	- To determine the different types of torture & sequelae experienced in various regions of the world, in order to expose torture patterns.	- Men were more likely to report being beaten, while women were more likely to experience sexual assault. - Pts who were raped had higher rates of PTSD. - African pts were more likely to report witnessing torture.	- Reporters only recorded a max of 5 types of abuse. - Recall bias - Sample may not be generalizable to other populations. - No control group.
Asgary, RG =====	2006	Retrospective chart review	N = 89	- Asylum seekers from 30 countries presenting to the Bronx Human Rights Clinic in New York. - 87% men	- To determine cause, nature, sequelae, timing, and types of torture - To list symptoms and signs of torture experience.	- Most common psych sx's: diff. sleeping, nightmares, sadness, flashbacks, and avoidance. - 40% of clients diagnosed with PTSD, and 5% w/depression - 87% had scars consistent w/ alleged torture. - Bone deformities/ fractures noted in 17	- Depression may have been under-recorded, possibly due to physicians preference to document PTSD, or overlap of depression sx's w/ PTSD sx's. - Referral bias

First Author	Year	Study Design	Sample Size	Study Population	Aims of Study	Main Findings	Limitations
						pts, and burns in 15.	
Tamblyn, J =====	2010	Retrospective chart review	N = 58	- Torture survivors living in Denver, CO. - Over 90% in this study are from Africa .	- To determine the relationship between different types of torture and pts reported physical/psych diagnoses.	- In those who reported sexual torture or were diagnosed with PTSD, somatic complaints were more frequent. - Researchers found a higher prevalence of depression, PTSD, and anxiety compared to the US population.	- No control group. - Small sample size. - Pts were screened for HIV and TB.
Williams, A =====	2010	Cohort study (Random 20% sample)	N = 178	- Pts attending a Specialty Center for survivors of torture in the UK in 2005. - Most commonly from Africa, Turkey, Iran, and Iraq .	- To determine the prevalence of chronic pain as well as associations between certain pains & types of torture.	- 78% of pts reported multiple pains, mostly in the head and low back. - There was a significant correlation between abd/pelvic/genital px in women who endured sexual assault/rape, and in men with anal px who endured rape. - Falaka was not assoc'd with foot/leg px. - Shoulder/arm px was not assoc'd with suspension/hanging.	- Probable under-reporting of rape/sexual assault among both genders. - In pts reporting multiple pains/torture methods, univariate analysis used was most likely inadequate to determine relationships in the data. - No control group.
Bradley, L =====	2006	Retrospective chart review	N = 97	- Kurds seeking asylum in the UK.	- To examine the physical injuries, pain, disability, and psychiatric illness as evidence of torture in Kurdish refugees seeking asylum.	- PTSD and depression occurred in all groups despite method of torture experienced. - There is a prevalence of psych sx's among females who experienced sexual assault in this population. - 14% fulfilled criteria for PTSD, while 7% met criteria for depression or anxiety.	- Recall bias - No control group.

Table 3: Studies primarily concerned with psychological sequelae of torture in various populations.

First Author	Year	Study Design	Sample Size	Study Population	Aims of Study	Main Findings	Limitations
Hondius, A =====	2000	Study 1: retrospective chart review Study 2: survey	Study 1: N=480 Study 2: N=156	Study 1: Latin American or Western Asian refugees (69% male) Study 2: Turkish & Iranian refugees (61% male)	- In both studies, researchers recorded the health problems of refugees and looked at relation to violence, demographics, and asylum status.	- In studies 1 & 2, 29% and 30% attributed their somatic sx's to torture. - 44% of refugees in study 1 reported experiencing torture as opposed to 77% in study 2. - Overall, study 2 pts had a greater number of somatic complaints. - Although many reported violent events, few had diagnosable PTSD.	- Selection bias is present, so results can't be generalized - No control group.
Crescenzi, A =====	2002	Cross sectional survey	N=150	- Newly arrived Tibetan refugees in Dharamsala, India. - 76 previously imprisoned & 74 never imprisoned - 45% were Tibetan clergy.	- To look at how political imprisonment effects anxiety, depression, and PTSD symptoms of refugees.	- Imprisoned refugees experienced more torture/trauma and had significantly more anxiety than non-imprisoned, but not depression or somatic sx's. - Most frequent problems among imprisoned: recurring thoughts of torture, difficulty concentrating, hypervigilance, anger outbursts, and nightmares.	- The sample was mostly those who lived in institutions, so it may not be generalized to those who live freely. - Trauma survey was only given to imprisoned refugees and not the control group.
Gorst- Unsworth, C =====	1998	Cross- sectional survey	N = 84	- Iraqi males (torture survivors) arriving in the UK between 1990-1993.	- To determine how torture factors and/or social factors in exile produce various psych sequelae.	- Researchers found that poor social support s/p severe torture/trauma is a greater predictor of depression than trauma alone. - Diagnosis of PTSD was assoc'd with sexual torture. - Only 10.7% of	- No records of psych illness before arrival in UK. - No control group.

First Author	Year	Study Design	Sample Size	Study Population	Aims of Study	Main Findings	Limitations
						participants had PTSD, but 44% were depressed.	
Van Ommeren, M =====	2001	Cross-sectional survey	N=810	- A population based sample of tortured and non-tortured Bhutanese refugees living in Nepal.	- To determine the impact of torture on the prevalence of psych disorders on Bhutanese refugees living in Nepal.	- Tortured vs non-tortured refugees were shown to report 12-month PTSD, dissociative, and chronic somatoform disorders. - Lifetime rates of PTSD, GAD, and dissociative disorder were higher in the tortured group.	- Most self-reported data was taken 3-11 yrs s/p torture events, so there may be under-reporting of events.
Van Ommeren, M =====	2002	Cross-sectional survey	N = 1052	- A matched sample of tortured and non-tortured Bhutanese refugees living in Nepal.	- To determine whether the relationship between PTSD and somatic illness is independent of comorbidities anxiety and depression.	- Somatic illness was more frequent in the tortured group than the non-tortured group. - The tortured group reported a higher number of organ systems with somatic complaints, There was an association between PTSD sxs and health status independent of anxiety & depression.	- Physicians conducting the interviews only received 1 day of training on assessing PTSD. - Torture was self-reported which could increase the likelihood of a Type II error.
Bradley, L =====	2006	Retrospective chart review	N = 97	- Kurds seeking asylum in the UK.	- To examine the physical injuries, pain, disability, and psychiatric illness as evidence of torture in Kurdish refugees seeking asylum.	- PTSD and depression occurred in all groups despite method of torture experienced. - There is a prevalence of psych sxs among females who experienced sexual assault in this population. - 14% fulfilled criteria for PTSD,	- Recall bias - No control group.

First Author	Year	Study Design	Sample Size	Study Population	Aims of Study	Main Findings	Limitations
						while 7% met criteria for depression or anxiety.	
Masmas, TN =====	2008	Survey	N=142	- New asylum seekers in Denmark from 33 countries - 71% were male - Most from Afghanistan, Syria, Iran, & Chechnya.	- To determine the # of asylum seekers who were exposed to torture/trauma - To assess health status as a result of torture/trauma	- 45% reported being tortured - 37% of torture survivors reported health problems, while 27% of non-tortured reported health problems. - 63% of torture survivors met criteria for PTSD, while 10% of non-tortured met PTSD criteria.	- Sample was predominantly men (71%) - Interviewer bias. - No control group.
Tamblyn, J =====	2010	Retrospective chart review	N = 58	- Torture survivors living in Denver, CO. - Over 90% in this study are from Africa.	- To determine the relationship between different types of torture and pts reported physical/psych diagnoses.	- In those who reported sexual torture or were diagnosed with PTSD, somatic complaints were more frequent. - Researchers found a higher prevalence of depression, PTSD, and anxiety compared to the US population.	- No control group. - Small sample size. - Pts were screened for HIV and TB.
Peel, MR =====	1995	Retrospective chart review	N = 92	- Asylum seekers from Zaire newly arrived in England. - 78% men	- To describe the health effects of Zaire's government on tortured Zairian asylum seekers.	- All of the imprisoned were beaten, and 72 had scars attributable to the beatings. - 15 of 20 women reported being raped, 12 multiple times. - 76% were considered to have major psych problems as a result.	- No control group. - Selection bias

Table 4: Studies addressing long-term psychiatric sequelae of torture.

First Author	Year	Study Design	Sample Size	Study Population	Aims of Study	Main Findings	Limitations
Carlsson, JM =====	2006	Cross sectional survey	N=139	- Tortured refugees who completed a pretreatment assessment between Jan 1, 1991 to Dec 31, 1994 at the Rehab & Research Center for Torture Victims in Denmark.	- To identify predictors of mental sx's and health in torture survivors 10 yrs after referral to a rehab center. - To study long-term mental changes.	- Victims still reported high symptom scores 10 years after treatment, indicating severe emotional distress. - Reporting headache (px in head/face) was the most significant predictor for mental sx's and low health-related quality of life in survivors. - Long education was a predictor for higher levels of anxiety.	- Individuals in this study do not represent all of those who have been exposed to torture. - sample was not completely random. - No control group.
Sabin, M =====	2003	Cross-sectional survey	N=170	Guatemalan refugees living in refugee camps in Mexico 20 yrs post conflict.	- To determine prevalence of psych illness and factors assoc'd with it.	- 54% and 38% reported sx's of anxiety & depression. 11.8% met criteria for PTSD. - 14% reported being tortured, & 32% observed torture. - Witnessing family members disappear, being near death, and living w/ 9-15 was assoc'd with PTSD sx's	- Only 5 of 60 refugees camps were surveyed, so results can't be generalized – Interviewer bias. - Women may have under-reported sensitive events if interviewed by a man. -No control group.

Table 5: Studies addressing torture survivors in the US who seek treatment for mental health.

First Author	Year	Study Design	Sample Size	Study Population	Aims of Study	Main Findings	Limitations
Keller, A =====	2006	Survey	N=325	Convenience sample of refugees from 54 countries seeking treatment a center for torture survivors.	- To examine the rate and nature of psych illness (PTSD, depression, & anxiety) among torture survivors seeking help at	- PTSD, anxiety, and depression were higher among women, as well as anyone who reported receiving a death threat. - Predictors of	- Small sample size - No control group. - Selection bias- due to the fact that the study took place at a

First Author	Year	Study Design	Sample Size	Study Population	Aims of Study	Main Findings	Limitations
				- Most represented were Tibet , Sierra Leone , and Guinea .	an urban torture treatment center.	PTSD included death threats, rape, family torture experiences, religion, and age. - South Asian refugees showed the lowest levels of PTSD, while Latin Americans showed the highest. - Buddhists reported significantly fewer PTSD symptoms than Christians or Muslims.	torture treatment center, prevalence may be over-estimated
Piowarczyk, L =====	2007	Retrospective chart review	N=134	Asylum seekers in the US - 80% were from Africa - 2/3 were female	- To determine the demographics of selected asylum seekers, experiences of torture, previous psych treatment, and psych presentation.	- 84% reported surviving torture. - 82% were diagnosed with PTSD at intake, and 96% with depression. - 1/2 of the sample reported rape or attempted rape.	- Original info was self-reported, leading to possible recall bias. - Selection bias - Results may not be generalized to other populations. - No control group.
Asgary, RG =====	2006	Retrospective chart review	N = 89	- Asylum seekers from 30 countries presenting to the Bronx Human Rights Clinic in New York. - 87% men	- To determine cause, nature, sequelae, timing, and types of torture - To list symptoms and signs of torture experience.	- Most common psych sx's: diff. sleeping, nightmares, sadness, flashbacks, and avoidance. - 40% of clients diagnosed with PTSD, and 5% w/depression - 87% had scars consistent w/ alleged torture. - Bone deformities/ fractures noted in 17 pts, and burns in 15.	- Depression may have been under-recorded, possibly due to physicians preference to document PTSD, or overlap of depression sx's w/ PTSD sx's. - Referral bias

Table 6: Studies concerning social factors in relation to psychiatric sequelae of torture survivors.

First Author	Year	Study Design	Sample Size	Study Population	Aims of Study	Main Findings	Limitations
Jaranson, JM =====	2004	Cross-sectional survey	N = 1,134	- Non-probability sample of Somali and Oromo (Ethiopian) refugees	- To determine the prevalence of torture and it's associated symptoms among Somali and Oromo refugees living in Minnesota.	- Torture prevalence in this population ranged from 25% to 69%. - Women were found to be tortured just as often as men. - Oromos were more likely to be tortured than Somalis (55% to 36%). - 90% reported having both physical and psych problems.	- Could not use a random sample, so prevalence rates are not definite. - No control group for either population studied.
Leaman, SC =====	2011	Cross sectional survey	N =131	- African refugee torture survivors living the US.	-To determine the relationship between torture, psych distress, and religious coping methods among African refugees	- Almost half of the sample reported sexual assault, and reported significantly more PTSD than those who weren't assaulted. - Negative religious coping was significantly assoc'd with PTSD symptoms and depression.	- Can't be generalized to torture survivors who have not sought treatment. - No control group. - No knowledge of psychiatric illness or religious coping prior to treatment.
Hooberman, JB =====	2007	Retrospective chart review	N =325	- Torture survivors: 61% Male pts, 39% female pts. - 59% from Africa & 28% from Asia .	- To determine the different types of torture & sequelae experienced in various regions of the world, in order to expose torture patterns.	- Men were more likely to report being beaten, while women were more likely to experience sexual assault. - Pts who were raped had higher rates of PTSD. - African pts were more likely to report witnessing torture.	- Reporters only recorded a max of 5 types of abuse. - Recall bias - Sample may not be generalizable to other populations. - No control group.
Schubert, C =====	2011	Cross sectional survey	N = 78	- Help-seeking Refugees from 14 countries in	- To assess the role of culture, refugee status, and gender in relation to	- Psych sx's and somatic complaints were very high in Southeastern	- Small sample size. - No control group. - Interviewer

First Author	Year	Study Design	Sample Size	Study Population	Aims of Study	Main Findings	Limitations
				the Middle East, Central Africa, Southern Asia, and Europe. - 62.8% men	somatic, and mental health in torture survivors.	European torture survivors. - Overall, PTSD and psych illness levels measured 78-88% for all groups.	bias may be present.

Table 7: Studies looking at disability associated with psychiatric sequelae of torture.

First Author	Year	Study Design	Sample Size	Study Population	Aims of Study	Main Findings	Limitations
Tol, W =====	2007	Cross-sectional survey	N =201	- Help-seeking torture survivors in rural Nepal with ≥ 2 psych problems. - 80% male	- To look at the relationship between psych symptoms and disability of torture survivors.	- 59% had PTSD, 85% had anxiety, & 81% had depression. - The presence of comorbid PTSD and anxiety most significantly predicted disability among survivors.	- Non-random, self-selection of participants - Selection bias by researchers due to screening for ≥ 2 psych problems. - No control group
Mollica, RF =====	1999	Cross-sectional survey	N =534	- Bosnian refugees living in Croatia who experienced torture/trauma - 59% female	- To determine if certain risk factors and psych illness are related to disability in Bosnian refugees.	- 18% reported being tortured. - 39.2% and 20.6% met diagnostic criteria for depression and PTSD. - Those reporting comorbid depression and PTSD were at increased risk of disability.	- No separation of results from pts reporting trauma vs. torture. - Recall bias/ data gathered through self-report. - No control group.
Thapa, SB =====	2003	Cross-sectional survey	N =810	- A matched sample of tortured and non-tortured Bhutanese refugees living in Nepal.	- To assess the psychiatric disability in tortured vs. non-tortured Bhutanese refugees living in Nepal.	- 20% in both groups were found to be disabled. - In the tortured group, PTSD, phobias, and current phys illness influenced disability. - In the non-tortured group: current phy illness, old age, & GAD were assoc'd with disability	- Recall bias - Interviewers were not blinded as to who experienced torture or not. - the study under-represented disability, as 3% died before completing it, and others were too ill to finish.

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