2010

Gender Differences in Severity and Symptoms of Post War Trauma and the Effects of Persisting Psychological Trauma on Quality of Life Among Bosnian Refugees Living in the United States

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GENDER DIFFERENCES IN SEVERITY AND SYMPTOMS OF POST WAR TRAUMA AND THE EFFECTS OF PERSISTING PSYCHOLOGICAL TRAUMA ON QUALITY OF LIFE AMONG BOSNIAN REFUGEES LIVING IN THE UNITED STATES

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Bachelor of Arts in Psychology

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August 2006

Submitted in partial fulfillment of requirements for the degree

MASTERS OF ARTS IN PSYCHOLOGY

at the

CLEVELAND STATE UNIVERSITY

February, 2010

This thesis has been approved

for the Department of PSYCHOLOGY

and the College of Graduate Studies by

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ABSTRACT

Bosnian refugees, living in Cleveland Ohio, completed questionnaires during the months of March and April of 2009. This study sample consisted of 41 participants, 21 males and 20 females, who have lived in Bosnia for any duration of time during the civil war that took place between May of 1992 to November of 1995. This study employed several assessment measures: Posttraumatic Stress Disorder Checklist (PCL), Impact of Event Scale-Revised (IES-R), Symptom Checklist-90-R (SCL-90-R) and Multidimensional Index of Life Quality (MILQ). The Following hypothesis were proposed: 1) Manifestation of PTSD symptoms of post war trauma will be significantly higher amongst the female Bosnian refugees. 2) The presence of PTSD symptoms and their severity will be negatively associated with the quality of life currently experienced by Bosnia refugees.

Present sample of Bosnian war refugees did not present a higher prevalence of PTSD symptoms in the female population of this sample. However, results from the second hypothesis analysis revealed a strong negative relationship between health and quality of life experienced and PTSD manifestation in the current sample. This shows that the presence of PTSD and its symptoms indicate diminished health and quality of life among Bosnian war refugees.

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CHAPTER I

INTRODUCTION

The country of former Yugoslavia consisted of six republics and two autonomous regions. As a result of the breakup of former Yugoslavia, beginning in the early 90's, these became independent nations. The war in Bosnia and Herzegovina, one of the republics of former Yugoslavia, took place between March of 1992 and November of 1995. Bosnia and Herzegovina has historically been a state of many ethnicities, which mostly consisted of Bosniak, Serb, and Croats. Beside the different ethnicities, it housed different religions, with the majority being Muslim, Catholic, and Eastern Orthodox.

The war produced a large number of refugees who found shelter throughout Europe, Australia, United States, and Canada. The majority of these refugees have witnessed and experienced many of the war's atrocities. Each and every experience was completely different and unique, but some of the more common onse were daily bombings, rape, physical assault, loss of loved ones, witnessing of death or rape of a loved one, extreme hunger or thirst, and betrayal from family and friends due to religion or ethnicity differences. War crimes against civilians were by far the worst and most barbaric acts seen in Europe since World War II (Spasojevic, 2000). Accompanying damage of the war in former Yugoslavia still continues to have a significant impact on all of the survivors, whether they stayed in the old country or

sought refuge somewhere else in the world (Gibson, 2002). Since the Bosnian civil war began in the spring of 1992, the United States alone has become a home to 98765 Bosnian refugees (US Census Bureau, 2000). Not only did these individuals experience all the horrible atrocities of the war, but they also went through the experience of migration to another country. They left their homes, properties, families and sometimes identities behind, having to start their lives completely anew.

Fazel, Wheeler & Danesh (2005) did a systematic review of surveys about prevalence of Posttraumatic Stress Disorder (PTSD), major depression, and psychotic illnesses in general refugee populations residing in western countries. This meta-analysis, which provided data for a total of 6743 adult refugees, suggested that resettled refugees were about ten times more likely to be suffering from PTSD than the general population. PTSD has been defined as an anxiety disorder characterized by a set of symptoms of avoidance, numbing, intrusiveness, and hyperarousal, brought about by a traumatic event or experience (American Psychiatric Association [DSM-IV-TR], 2000). Other studies conducted in the United States for the purpose of exploring the impact of war on refugees and their psychological well-being, yielded not so surprising results. Approximately 50% or more were diagnosed with PTSD (Weine et al., 2005; Thulesius & Hakansson, 1999).

Unlike survivors of many other traumatic events and experiences, refugees must also deal with a variety of other stressors besides the effects of trauma itself. Some of the recognized and researched stressors that effect quality of life and long-term adjustment of refugees are: exile, acculturation, resettlement and gender. Although only a handful of studies have addressed the issue of gender differences in the presence of PTSD symptoms, several studies have found that females who have experienced trauma are more vulnerable to persisting effects of trauma and

development of PTSD and its symptoms. The Detroit Area Survey of Trauma (Breslau et al., 1998) revealed that the conditional probability of lifetime PTSD was 13% in women and 6.2% in men. Not only do women seem to be much more vulnerable and at a greater risk of being diagnosed with PTSD, but they also show more habitual symptoms than men do. Breslau et al. also concluded that the median length of time for PTSD, from onset to remission, was four years for women and only one year for men.

Traumatic experiences are capable of affecting individuals in many different ways, physically and psychologically. Quality of life is a concept being used to describe individuals general well-being, including self-perceived health status, mental status, stress level, and sexual functioning. It is still not clear as to how and if PTSD effects an individual overall well-being, but existing research indicates that individuals suffering from PTSD have been found to experience reduced quality of life in general (Stein, Walker, Hazen, Forde, 1997). Reportedly, women diagnosed with PTSD have reported a higher rate of poor health than men with the same condition (Wagner, Wolf, Rotnitsky, Proctor, & Erickson, 2000).

The purpose of this study

The purpose of this study, therefore, was to examine a population of Bosnian survivors of war who found refuge in the United States of America: the primary objectives were 1) to examine gender differences in severity and symptoms of Posttraumatic Stress Disorder experienced by participants, 2) to compare persisting psychological effects of trauma to quality of life in these individuals. Secondary objective of this study is to evaluate the feasibility of these relationships for a large scale study.

CHAPTER II

REVIEW OF THE LITERATURE

Posttraumatic Stress Disorder

PTSD has had a very long and interesting history and it has plagued the human race for centuries, but only recently has it been recognized as a psychological disorder. In 1980, the term Posttraumatic Stress disorder has been introduced into the third edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-III), for the first time (Wilson, J. P. & Keane, T. M., 2004, p. 7). Unlike some other mental health conditions where etiology is unknown, PTSD has a specific cause and develops in individuals who have witnessed, experienced, or have been confronted by "an event or events that involve actual or threatened death or serious injury or threat to the physical integrity of self or others" (American Psychiatric Association [DSM-IV-TR], 2000).

Wilson & Keane painted a picture as to what happens, following such traumatic event:

> In response to these stressors, the person's reaction involves fear and horror (emotions), helplessness (a learned behavior), or denial (cognitive alterations and ego defenses)...There are two primary interrelated substrates of PTSD as a prolonged stress response system: biological and psychological. The *biological* process refers to the neurophysiological substrates that are innate, pre-programmed capacities of the organism. The *psychological* processes involve perception, memory, cognition, learning, personality processes, and the self-structure. The two primary substrates are the organismic "soil" from which PTSD develops and forms adaptive patterns of behavior-the epigenesis of traumatic stress development (2004, p. 8)

This disorder is comprised of a set of 17 rather complex symptoms, which were divided into three groups: re-experiencing or intrusion symptoms (intrusive recollections, traumatic nightmares, PTSD flashbacks, trauma related/stimulus evoked psychological distress, trauma related/stimulus evoked physiological reactions), hyperarousal (insomnia, irritability, difficulty concentrating, hypervigilance, exaggerated startle response) and avoidance/numbing (efforts to avoid trauma related thoughts/feelings and activities/places/people, psychogenic amnesia for trauma-related memories, diminished interest, feeling detached or being estranged, restricted range of affect, sense of shortened future) . The traumatic events in question may include, but are not limited to rape, violent crimes, natural disasters, accidents, war, or any other unusual and life threatening event that individuals sometimes experience. However, during the recent decade the concept of trauma has changed from an external event to an actual psychological response of an individual to an overwhelming event (Friedman, 2003).

Most individuals faced with a traumatic event do experience a considerable amount of distress, however, such reactions usually last only temporarily from which individuals recover completely after a short amount of time (Friedman, 2003). This explains the interesting fact that not everyone who experiences such an event develops PTSD, which indicates that there is a rainbow of other possible factors that could play a role in this condition, besides the experience of a traumatic event itself. Symptoms can and often do last for decades after the actual experience of a traumatic event (Deykin et al., 2001). In addition, PTSD carries a similar load of symptoms to depressive disorders in terms of suicidal thinking, disability and the use of general medical services (Kessler, 2000). The complete diagnostic criteria of PTSD, as recorded in DSM-IV, appears in Appendix I.

Gender and Posttraumatic Stress Disorder

Posttraumatic stress disorder is the fourth most common psychiatric disorder (Olff, Langeland, & Gersons, 2005), which is characterized by persistent avoidance of stimuli that resemble some aspect of trauma, general numbing of responsiveness, persistent increased arousal and withdrawal behavior. Weine et al. conducted a study of Bosnian refugees in Chicago, one year after their arrival. Using the PTSD Symptom Scale (PSS) this study found that 74% of the participants in this study met the diagnostic criteria for PTSD (1998). However, even more than a decade later Bosnian civil war survivors are still suffering from PTSD, with 83.7% meeting a PTSD criteria in a recent study by Priebe et al. (2009).

One of the factors noted as significant throughout the recent PTSD research, as far as personal characteristics are concerned, is simply being of female gender (Bre win, Andrews, & Valentine, 2000; Gavranidou and Rosner, 2003). Almost without any exceptions, empirical research has found and demonstrated that the chance of developing PTSD is significantly higher for women than it is for men (Simmons, 2007). There is still a great deal of speculation as to if and why women tend to be at a greater risk for being diagnosed with PTSD and/or having more prolonged PTSD symptoms, but a meta-analyses of 290 studies that was conducted by Tolin and Foa (2006) with an aim to investigate this claim further. The results of the meta-analysis showed that frequency of PTSD among female participants was statistically significant, where the odds of meeting a PTSD criteria were almost twice as high for women. Even though across studies male participants were significantly more likely to report traumatic experience than were female participants. Women appear to develop PTSD more frequently and readily once trauma has occurred (Gavranidou & Rosner, 2003; Kimerling, Ouimette, & Wolfe, 2002) and it tends to last much longer

with median duration of 48.1 months for women and 12 months for men (Breslau et al., 1998).

One common explanation for the gender difference is that women experience sexual trauma more commonly than men do, which is one of the types of trauma that leads most likely to development of PTSD (Breslau, Kessler, Chilcoat, Schultz, Davis & Andreski, 1998; Creamer, Burgess & McFarlane, 2001; Kessler, Sonnega, Bromet, Hughes & Nelson, 1995). Other current plausible explanations of this phenomenon are: biological differences, inflated rates due to methodological gender bias, socially defined social roles and confounding stressors, and differences in cognitive perceptions of traumatic events. However, each of these explanations lacks significant empirical evidence (Simmons, 2007). Even when traumatic events experienced between men and women are comparable, women appear to experience these as more threatening than men (Kimerling et al., 2002). Stein, Walker & Forde confirmed through their study, that even in the case where individuals who were ex posed to sexual trauma were excluded from the analysis, women still remained at higher risk than men in developing of PTSD (2000).

Spahic-Mihajlovic, Crayton, and Neafsey (2005) examined a sample of Bosnian refugees diagnosed with PTSD due to traumatic war experiences and came across significant gender differences, with the results indicating higher scores for female participants diagnosed with PTSD on all 17 items of PTSD Symptom Scale (PSS). Vojvoda, Weine, McGlashan, Becker, & Southwick (2008) also conducted a study in an attempt to understand and describe the evolution of traumatic symptoms in a group of Bosnian refugees. Shortly after arriving to the United States twenty-one refugees were administered standardized psychological assessments with follow ups a year and three and a half years later. At baseline 76 percent of these refugees met the diagnostic

criteria for PTSD, whereas at one year 33 percent, and at three and a half years 24 percent of the total sample met the criteria of PTSD. However, during the three and a half year evaluation only 8 percent of men and a vast 44 percent of women still met the criteria for PTSD. Female refugees were found to be five times more likely to be diagnosed with PTSD in this study, whereas the symptoms they were experiencing were two and a half times more severe than that of male Bosnian refugees. The authors noted that women in this study had greater PTSD symptom severity score in all three evaluations, even though women and men had experienced the same amount of trauma. Therefore, the finding implicated that female refugees seem to be more vulnerable to lasting symptoms of PTSD.

Quality of Life and Posttraumatic Stress Disorder

Quality of life has been defined as mental, physical, and social well-being of an individual (World Health Organization, 1948). Over the past several decades recognition has been gained for the quality of life concept, due to it being a major component of health (Kaplan, 2003), as well as how mental health disorders can have a negative impact on quality of life (Schnurr, Lunney, Bovin, & Marx, 2009). The most often researched mental health disorders in correlation with quality of health have been anxiety disorders, with a recent meta-analysis showing findings of a large effect sizes for PTSD across multiple quality of life domains (Olatunji, Cisler, & Tolin, 2007). As a matter of fact, changes that occur in one domain result in corresponding changes in the other, indicating a longitudinal association between PTSD and quality of life and implicating that PTSD predicts poor quality of life at some later time (Schnurr et al., 2009).

As indicated previously, the presence of PTSD has been linked to reduced quality of life, which has been confirmed by reports indicating that initial PTSD predicts a

lower quality of life at follow-up intervals (Zatzick, Jurkovich, Gentilello, Wisner, & Rivara, 2002; Stam, 2007). Another recent study found that 59% of patients who were diagnosed with PTSD had severe quality of life impairments, which was comparable 63% of patients with major depression disorder (Rapaport, Clary, Fayyad, & Endicott, 2005). Schnur, Lunney, Hayes, McFall, and Uddo (2006) found similar results in a longitudinal analysis of Vietnam veterans, where higher PTSD
severity was in fact associated with lower psychosocial and physical health related to quality of life at the initial assessment. Studies conducted with child Holocaust survivors' more than 50 years later revealed as well a lower quality of life when compared to their counterparts who did not live through the same atrocities of war (Amir & Lev-Wiesel, 2003).

Finally, Bosnian refugees who still had PTSD in a recent research study reported a lower quality of life as well, even after this negative association of PTSD and quality of life was independent of the influence of age, education, war-related variables, and aspects of the objective social situation after the war (Priebe et al., 2009).

When it comes to physical health, which was a large part of our life quality assessment, multiple areas of investigation have pointed out the fact that having been diagnosed with PTSD is a risk factor for physical morbidity and that this effect does not appear to be constrained to one organ system (Wilson & Keane, 2004).

Hypothesis

Therefore, the attempt of this research is to explore gender differences in severity and present symptoms of post war trauma and to examine the effects of persisting psychological trauma on quality of life among Bosnian refugees currently living in United States.

1. **The first hypothesis is that the manifestation of PTSD symptoms of post war trauma will be significantly higher amongst the female Bosnian refugees.**
2. The second hypothesis is that the presence of PTSD symptoms and their severity will be negatively associated with the quality of life currently experienced by Bosnia refugees.

CHAPTER III

HISTORICAL BACKGROUND OF BOSNIA AND CROATIA

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Throughout centuries, Croatians and Bosnians have been exposed to multitudes of wars, oppressive occupation, and/or religious persecutions. Warfare has been the lot of the Croats since they migrated south across the Carpathians and settled along the shores of the Adriatic in the seventh century (Gazi, 1993, pp. x - xi & Tanner, 1997, p. x). In addition, Croatia is a border land. It is located on the geographical border between Central Europe and the Balkans, and between the Mediterranean and continental Europe. It is also the cultural and religious border between Eastern Byzantine Christendom and the Latin West. The fate of a border land is always precarious, and it frequently moves, shrinks and expands across the generations to an astonishing degree. Furthermore, it is often trampled on, crossed over, colonized, defended, and abandoned in turn by stronger neighboring powers. Thus, the people of border lands are not relaxed about their heritage or culture. Tanner (1997) writes that "Of all the countries which have emerged after the collapse of Communism and the second 'springtime of nations', Croatia has perhaps the richest, most tangled and most turbulent history" (pp. x - xii).

Similarly, Bosnia is the meeting ground of the eastern and the western

religions. From the ninth century, Christian missions from Rome and Constantinople pushed into the Balkans. Rome won Croatia and most of Dalmatia, and the Orthodox succeeded in Bulgaria, Macedonia, and eventually most of Serbia. "Bosnia lying in between, is often called a meeting ground between east and west" (Pinson, 1993, p. 4). Eventually most Bosnians converted to Catholicism; however, in the mid-thirteen century, the Bosnians severed ties with Rome, and established a Bosnian Church. In 1463, the Ottoman conquest of Bosnia brought religious changes during which a large number of Bosnians converted to Islam (Pinson, 1993, p. 11). Malcolm (1994) states that "The years 1992 and 1993 will be remembered as the years in which a European country was destroyed. It was a land with a political and cultural history unlike that of any other country in Europe. The great religions and great powers of European history had overlapped and combined there; the empires of Rome, Charlemagne, the Ottomans, and the Austro-Hungarians, and the faiths of Western Christianity, Eastern Christianity, Judaism, and Islam" (p. xix). He continues explaining that only a few individuals on the Balkan peninsula (of which Croatians, Serbians, and Bosnians are a part) can claim racially pure ancestry, and that "there is no such thing as typical Bosnian face." The Bosnians are an amalgamation of different people that passed, conquered, and settled in Bosnia-Herzegovina regions (Malcolm, 1994, p. 1).

In the above statement, Malcolm described Bosnia-Herzegovina, but the history of Bosnia and Herzegovina intertwined and paralleled Croatia's history, and a diverse culture is a unique element of both. Before Christ, Illyrians were inhabitants of the Balkan Peninsula and other parts of Eastern and Central Europe. By the first century AD, Romans had a control over all of the Balkan. In the third and fourth centuries, a Germanic tribe, the Goths, moved into the Balkan followed by Asiatic Huns and Iranian Alans in the fourth and fifth centuries. In the sixth century, the Byzantine

Empire exerted its suzerainty over Bosnia, Croatia, and other Balkan lands. The sixth and seventh century marked the arrival of Slavs along with Avars. In the late sixth century, Slavs moved in large numbers into Balkan; "they were colonist and agriculturist, not just raiders; and they established settlements all the way down to the southern tip of Greece" (Malcolm, 1994, pp. 8-9). The second quarter of the seventh century marked the arrival of Croatians and Serbians, who (according to some historians) are of the Iranian and not the Slavic race, but were assimilated by the far more numerous Slavs in the region (Donia & Fine, 1994, p.283). The late eight century marked the arrival of Charlemagne's Franks; during that time, "the old tribal system in Bosnia and Croatia began to be remodel into a form of West European feudalism" (Malcolm, 1996, p. 9).

The Christianity promoted by both Rome and Byzantium took hold in the ninth century (Donia & Fine, 1994, p. 17). It has been speculated that Judaism arrived in the Balkans as early as the third and fourth centuries. Some Jews arrived along with the Avars in the eighth and ninth centuries. Others migrated down south after the expulsion of the Jews from Hungary in the fourteenth century. "But the largest influx was at the end of the fifteenth century, when Jews, expelled from Spain, were welcomed and well treated by the Ottoman Empire" (Malcolm, 1996, pp. 107-113). It appears that Islam was present in the Balkans from the beginning of the ninth century and throughout the Middle Ages. In the ninth century, the merchants and the raiders introduced Islam to the Balkans, and the Turkic tribes reinforced it in the fourteenth century. However, "the Islamicization of a large part of the population under the Turks remains the most distinctive and important feature of Modern Bosnian history" (Malcolm, 1996, p. 51).

Croatia achieved its greatness during the reign of King Tomislav (910-928); its

territory extended into what is today known as Bosnia and Herzegovina, and the Kings Trpimir II (928-935) and Kresimir I (935-945) maintained the country at the same level of greatness (Gazi, 1993, pp. 27-29). During the tenth, eleventh, and twelfth centuries, the land of the Croats and Bosnians was always under foreign rule, either Roman, Byzantine, or Hungarian (Gazi, 1993, pp. 41-54; Malcolm, 1996, pp. 13-15). However, because of the Bosnian mountainous terrain, the foreign rulers had little impact on its inhabitants (Donia & Fine, 1994, pp. 14-15; Malcolm, 1996). In the years between 1326 and 1391 Bosnian Kings Kotromanic and later Trvtko established and maintained an independent state of Bosnia, whose borders extended into parts of Croatia (Donia & Fine, 1994, pp. 20-29; Malcolm, 1996, pp. 12-22). In the spring of 1463, a large Turkish (Ottoman) Army under Mehmed II occupied Bosnia. From then untill the early nineteenth century, the Ottomans ruled over all of Bosnia, Serbia, and some parts of Croatia. Their arrival brought Islam and Eastern culture (Malcolm, 1996, p. 23). Austro-Hungarian rule lasted from 1878 through 1914; during which time Christianity was reemphasized and western culture reintroduced, adding even more diversity to the region's genome and culture. (Malcolm, 1996, p. 136).

In the 1914, World War I (WW I) began, and during that war people of Croatia and Bosnia fought alongside the Austro-Hungarians as well as Serbia and a newly formed pan-Slavic group (Gazi, 1993, pp. 235-257). Those supporting Serbia and pan-Slavic factions strived for independence from any foreign rule, and in 1918 at the end of W.W.I, a new country, the Kingdom of Serbia, Croatia, and Slovenia, was born, of which Bosnia-Herzegovina, Macedonia, and Montenegro were part (Gazi, 1993, pp. 235-251; Donia, & Fine, 1994, p. 285; Malcolm, 1996, pp. 156-192). This dream of sovereignty was soon destroyed. In 1929, King Alexandra, a dictator who was of the

Serbian royal line, renamed the country Yugoslavia (South Slavia) and divided it into Banovine, removing all the borders along the historic and national lines (Donia & Fine, 1994, pp. 129-131). This Yugoslav unit meant different things to Serbian government officials than it did to Croatian and Slovenian officials. The conflicting expectations aggravated by the very different perceptions caused repeated clashes in the years between 1918 and 1941. The new state was to be a democratic parliamentary monarchy, but, from the beginning, it was in many aspects a triumph of Serbian predominance. Therefore, during Royal Yugoslavia, among each nationality different political parties were formed seeking a separation from Yugoslavia and freedom from Serbian dominance (Donia & Fine, 1994, pp. 124-126).

Just before and during the early days of WW II, Yugoslavia fell apart, and two new independent states were formed under Hitler's control. One was Serbia and the other was Croatia, with most of Bosnia-Herzegovina's territory. During this time, hundreds of thousands of Jews, Muslims, Serbians, and Croatians perished because of their ethnic and religious backgrounds (Donia & Fine, 1994, pp. 137-138). In addition, under the leadership of Josip Broz (Tito), communism spread throughout royal Yugoslavia. The Yugoslav communist party consisted of members from all nationalities. Tito and Yugoslav communists (who fought during WW II to preserve Yugoslavia) were Russian allies. At the end of WW II, a new socialist Yugoslavia was created called "the Democratic Federate Yugoslavia" with Josip Broz Tito as a president. The new Yugoslav constitution recognized five nationalities: Serbs, Croats, Slovenes, Macedonians, and Montenegrins. The Bosnian Muslims were considered as a separate group with a national identity. Six republics (Slovenia, Macedonia, Montenegro, Bosnia-Herzegovina, Serbia, and Croatia) and two autonomous provinces Vojvodina (with Hungarian, German, Croatian, and Serbian population),

and Kosovo (with Serbian and Albanian population) were recognized as separate political and social identities. Bosnia-Herzegovina was the only republic with no ethnic majority and no national name. Its boundaries closely the followed prior border recognized by both Austro-Hungarian and Ottoman Empires making it among the oldest continuous borders in Europe (Donia & Fine, 1994, pp. 161-164). A most unique distinction between Yugoslavia and other Eastern-block communist countries was that Tito broke relations with Stalin in 1949, and Yugoslavia became a country of open borders and free movement. Most of the migrant workers were Bosnian and they primarily worked in West Germany, Austria and Switzerland. The workers brought back hard currency, western goods, and culture (Donia & Fine, 1994, p. 188).

During Tito's Yugoslavia, there were tensions between different ethnic groups and dissatisfaction with the government. However, Josip Broz Tito was able to keep it under control either by force or by the mere fact of implementing the open border policy. After his death, there was no one that was either able or willing to maintain the balance and the country in one piece. Thus, nationalistic feelings surfaced; among them Serbian nationalism under the leadership of Slobodan Milosevic appeared to be both the strongest and the most expressed. The Serbian desire was to unite (either under the name of Yugoslavia or even Serbia) all the lands where Serbians lived and create the "Great Serbia." Mestrovic et al. (1993) claim that even the communism in former the Yugoslavia was a Serbian disguised attempt to impose Greater Serbia on all other ethnic groups. This was understood by other republics; thus, in the late 1980's, after the collapse of communism, the republics of the former Yugoslavia, except Montenegro, seized the opportunity to free themselves from Serbian oppression. "In response to these freedom movements, the Belgrade government reinforced its hard-line leanings and engaged in pitiless war against its neighbors, in

its openly proclaimed quest to establish a Greater Serbia" (pp. vii-viii). Milosevic began with taking away the autonomy of Vojvodina and Kosovo, which resulted in the unrest of the Albanian population in Kosovo, and with time, the breakup of Yugoslavia. Eventually full scale war in Croatia and Bosnia-Herzegovina during which millions of people were displaced and hundreds of thousands brutally killed (Donia and Fine, 1994, pp. 286-287; Malcolm, 1996. pp. 213-234). Donia and Fine (1994) write that "The war that began in Bosnia in 1992 encompassed death, atrocities and terror on a scale unknown in Europe since World War II," and that "the perpetrators of the Bosnian war seemed to know no bounds in the cruelty, brutality, and havoc they wrought on their adversaries and on the innocent inhabitants of the land" (p. 2).

The above historical description indicates that Croats and Bosnians have endured the hardships of wars throughout centuries. Some studies indicate that accumulative and transgenerational factors may contribute to the development of PTSD (Motta et al., 1997, pp. 901-902; Wilson & Kurtz, 1997, pp. 364-366). In addition, exposure to war trauma is positively associated with the development of PTSD and other mental health problems (O'Brien, 1994, p. 443). In their recent past, both Croatians and Bosnians have been exposed to atrocities of the war. Thus there is a great likelihood for this people to develop PTSD and/or other mental health problems.

However, individual characteristics and coping abilities are known to mediate the affects of traumatic events (Lazarus & Folkman, 1984; Parker & Endler, 1992; Parker et al., 1993). The above historical description appears to indicate that both Croatians and Bosnians are an amalgamation of different genetic material and cultural backgrounds. In order to have a more productive life, and more importantly to survive, they learned to accept and live under different rulers, cultures, and religions.

Nevertheless, they were capable of preserving their identity and cultural continuity. This is evident in the Bosnians' practice of tattooing, which dates back to Illyrian tribes (Malcolm, 1996 p. 4). This continuity is also evident in their preservation of Slavic pagan religious names and rituals. Some of the streets and places are named after Slavic pagan gods, and many signs of Slavic pagan practices were carried over first into Christianity and later into Islam (Malcolm, 1996, p. 8). Furthermore, even though communist ideology does not acknowledge any religions, a large number of former Yugoslavia's population continued with religious practices. Mestrovic et al. (1993) asserts that "the people who were ruled by Communism were not brainwashed. The cultures that preceded Communism survived beneath the surface" (p. 125). Throughout their historical and cultural evolution, Croatians and Bosnians were exposed to stressful events. Thereby, as van der Kolk et al. (1996) suggest, they developed an extraordinary ability to adapt, and, as Jenkins (1997) claims, they became more resilient and creative in dealing with the severe trauma of the past Balkan war.

CHAPTER IV

METHODS

Methods and Procedures

Study Design

The design of the proposed study was of non-experimental nature, consisting of a two group correlative comparison: group 1) 20 female Bosnian refugees of any ethnicity who have spent some time in the war zone, group 2) 21 male Bosnian refugees of any ethnicity who have spent some time in the war zone.

Target Study Population

Inclusion and exclusion criteria: This study enrolled 21 male and 20 female Bosnian refugees, age 18 and over, of any ethnicity (Serbian, Croatian, Muslim). All the participants had spent some time in the war zone and had been relocated to United States. Inclusion criteria's for the participants in this study were: the ability to provide informed consent, be over the age of 18, have lived for some time in Bosnia during the civil war that took place between May 1992 to November 1995, and be living in United States now.

Recruitment

Participants for this study were recruited through advertisement and word of the mouth in Bosnian community gathering places. Additionally, participants were

recruited through the snowball method, where individuals who have already agreed to participate in this study referred us to other individuals from their community who were willing to participate.

Procedure

The data for this study was collected by means of questionnaires that were translated into Serbo-Croatian language and back translated by professional interpreters, who are fluent in both English and Serbo-Croatian language. Participants in both groups were rated on the following four self reported measures: PTSD Checklist (PCL), Impact of Event Scale-Revised (IES-R), Symptom Checklist-90-R (SCL-90-R), and Multidimensional Index of Life Quality (MILQ).

The PCL is a 17-item self-report questionnaire. It is a symptom scale of PTSD based on the criteria given in the *Diagnostic and Statistical Manual of Mental Disorders-Fourth Edition* (DSM – IV). The instrument requires a 10th-grade reading and comprehension level takes less than 10 minutes to complete (Terhakopian, Sinaii, Engel, Schnurr, & Hoge, 2008). Participants are instructed to indicate the degree to which they have been troubled by each symptom during the past month by rating each item from 1 - "not at all" to 5 - "extremely." . A study using a sample population of adults who were either victims of sexual assault or have been involved in severe automobile accidents, indicated that the overall correlation of PCL total score with Clinicians Administered PTSD Scale (CAPS) total score was 0.92. Furthermore, when compared to the CAPS, the PCL with a cutoff score of 44 was concluded to have a diagnostic efficiency of 0.90, a sensitivity of 0.94, and a specificity of 0.86 (Blanchard, Jones-Alexander, Buckley, & Forneris, 1996). All participants in this study were administered the PCL in order to assess PTSD and PTSD symptoms.

The Impact of Event Scale-Revised (IES-R) is a 22-item self reported questionnaire. It is an updated version of the Impact of Event Scale (IES) developed by Horowitz, Wilner, & Alvarez (1979) that was initially made up of 15 items and developed in order to measure war related intrusion and avoidance (Briere & Elliot, 1998) and a B and C criteria of the diagnosis of PTSD (Weiss & Marmar, 1997). Horowitz et al. (1979) reported acceptable reliability for both the Intrusion and Avoidance scales, alpha of .78 and .82 respectively. However, the scale was compromised because it did not cover the third major symptom cluster of PTSD, persistent hyperarousal. In order to address this deficit, a revised version of the scale, including six hyperarousal items, was created (IES-R; Weiss & Marmar, 1997). In addition the IES-R kept the original 15 items, seven-day time frame, and the original IES format of a four-point scale of 0, 1, 3, and 5 measuring the frequency of symptoms (Weiss & Marmar, 1997). A total score of 24 or more presents clinical concern for a PTSD diagnosis, with individuals who do not have full PTSD will have partial PTSD or some symptoms of it (Asukai et al., 2002). Reportedly, best cutoff for a probable diagnosis of PTSD is total score of 33 and above (Creamer, Bell, & Failla ,2003). Using a sample of treatment-seeking Vietnam veterans with a confirmed PTSD diagnosis and a community sample with varying levels of traumatic stress symptomatology, Creamer et al. (2003) concluded that the IES-R demonstrated high internal consistency for the total scale (Cronbach's alpha = .96), as well as the three subscales (intrusion = .94, avoidance = .87, and hyperarousal = .91).

Symptom Checklist-90-R (SCL-90-R) is a 90-item self-report inventory, used to assess overall mental well being (Derogatis, Lipman, & Covi, 1973). Each of the 90 items indicates a psychological symptom and are rated on a five-point Likert scale, ranging from 0 = “not at all” to 4 =”extremely”. The items are combined in nine

primary symptom dimensions, somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, anger-hostility, phobic anxiety, paranoid ideation, and psychoticism. Derogatis and Lazarus (1994) cited studies which found satisfactory alpha coefficients, ranging from a low of .77 for psychoticism to a high of .90. They also cited sufficient test-retest coefficients, ranging from a low of .70 for obsessive-compulsive to a high of .83 for paranoid ideation (p. 219). Attributes of a German SCL-90-R version were studied in two clinical samples, psychosomatic outpatients and primary care patients, where the internal consistencies of all of the original nine subscales were good, and Cronbach's alpha ranged from 0.78 to 0.90 for both samples (Schmitz, Hartkamp, Kiuse, Franke, Reister, & Tress, 2000). Carlozzi & Long (2008) examined the psychometric properties of the PTSD subscale, the SCL-90-R, by conducting two separate studies. In the first study the sample consisted of 2,361 female undergraduate students, whereas the second study sample recruited 533 female, 537 male, and 7 undergraduate students who failed to report their gender. Results from the study indicated that the PTSD subscale is reliable. The overall internal consistency for the study 1 was Cronbach's alpha of .93. Study 2 confirmed the studies 1 findings with a Cronbach's alpha of .92 for male participants and .91 for female.

The Multidimensional Index of Life Quality (MILQ) is a 35-item instrument designedto measure multiple domains of quality of life. It is an easy to score instrument that can be completed in less than 10 minutes. Each item is rated on a 4 and 7-point Likert scale, ranging from 1 = “not important” to 4 = “very important” and 1 = “very dissatisfied” to 7 = “very satisfied”. The instrument covers nine major life domains: mental health, physical health, physical functioning, cognitive functioning, social functioning, intimacy, productivity, financial status, and

relationship with health professionals. Internal consistency was found to be .76 or higher on all domains except social functioning, and test-retest reliability ranged .73 or greater for seven out of nine domains (Avis, Smith, Hambelton, Feldman, Selwyn, & Jacobs, 1996).

Additionally, participants completed a demographics form which captured information such as age, education, gender, marital status, occupation, years in exile, time spent in the war zone. The demographics information was used to give a description of the characteristics of the study sample population.

Statistical Methods

The Windows Statistical Package for Social Sciences, version 15 (SPSS 15, Chicago, IL, USA), was employed in the process of statistical analysis. In the process of analyzing the first hypothesis an Independent Samples Test (T-Test) was performed to determine if there is a significantly higher manifestation of PTSD symptoms of post war trauma in the female population of the sample. For the analysis of the second hypothesis Bivariate Correlations were performed in order to examine if PTSD symptoms and their severity are negatively associated with the quality of life, as currently experienced by Bosnian refugees in this sample.

Population

The study population consisted of 21 male and 20 female participants of any ethnicity (e.g. Bosnian, Serbian, Croatian) and any religion (e.g. Muslim, Catholic, Eastern Orthodox), who are at least 18 years of age, and currently living in United States. The participants must have lived in Bosnia and must have spent some time in the war zone during the Bosnian civil war. The participants met with the investigator at a mutually agreed upon location where the investigator explained the study and answered any questions the participant might have had, before signing the informed

consent form. The participants were informed that the participation in this study was completely voluntary.

Once the consent was signed, the co-investigator provided participants with a questionnaire. Completion of the questionnaire lasted approximately 30 to 50 minutes. However, more time was provided to participants who needed it. In order to further aid in maintaining confidentiality and anonymity of the participants, no identifying information was recorded on the actual responses. The signed informed consent forms were collected separately from the survey, where participants names could not be linked to their answers. In addition, the participants were provided with the names and phone numbers of mental health professionals and/or institutions in the case that participation in this study were to affect their psychological well being.

Risk and benefits

Risk and Injury

This study did not involve assessments of any treatment efficacy, thus no serious adverse effect were expected to occur as a result of participation. However, due to the nature of the questioning, it was reasonable to expect subjects to become somewhat distressed during the completion of assessments. These risks were considered minimal and no more than would normally be expected in other daily life situations. No participants reported experiencing severe distress after completing the questionnaire. However, if in the future any participants express experiencing distress and need for professional help, referrals to appropriate service would take place.

Benefits

Potential benefits from this study include a possible alleviation of symptoms by completing the self-report questionnaires. Additionally, participants may learn more about themselves and the symptoms they are experiencing through the completion of

this questionnaire. Furthermore, if needed the participants may receive help with referrals for additional mental health counseling and treatment. Finally, even though as an indirect benefit to participants of this study, a better understanding of gender differences in manifestation of PTSD symptoms and its effects on overall quality of health of Bosnian refugees have been obtained.

CHAPTER V

RESULTS

Subject Demographics

The final sample consisted of 41 Bosnian refugees who participated in this study, from which 21 were male and 20 were female. The mean age of the sample was almost 43, ranging from 19 to 63 years of age. Additionally, participants education averaged about 12 years with most of the participants completing high school or some kind of trade school. When it comes to religious affiliation of the sample, Muslim accounted for 22%, Roman-Catholic for 36.6%, Eastern-Orthodox for 22%, Christian for 9.8%, and 9.8% of the sample identified with "no affiliation" option. With 92.7% employment rate this sample can best be described as highly employed. Further descriptives demonstrate that the vast majority of participants are married, accounting for 78%, followed by 14.6% of single and 7.3% of separated or divorced participants. Additionally 85.4% of the total sample have children, ranging from one to four children per family. From this sample 87.8% of Bosnian refugees have already obtained United States citizenship, whereas 43.9% of the participants are still experiencing various difficulties because of English language.

All of the participants spent at least one month and some up to three and a half years in the war zone. During this time the participants indicated following: 45%

experienced extreme hunger and thrust, 48.8% witnessed someone close to them experience extreme hunger and thrust, and 73.2% learned from others that someone close to them experienced extreme hunger and thrust; 90.2% were victims of shelling themselves; 96% were in situations where their own life was in danger; 95.1% were in hiding for some period of time during the war; 2.4% were raped or experienced sexual violence, 4.9% have witnessed someone close to them being raped or experiencing sexual violence, and 34.1% have learned from others that someone close to them was raped or had experienced sexual violence; 24.4% have witnessed someone close to them get killed and 87.8% have learned from others that someone close to them has been killed; 7.3% have suffered severe physical injury or harm, 56.1% have witnessed someone close to them suffer severe physical injury or harm, and 80.5% have learned from others that someone close to them suffered severe physical injury or harm. They lived in a continuous fear for their own safety and safety of their loved ones. Additionally, after leaving the country of Bosnia most of the participants had found temporary refuge in one or more countries (Croatia, Germany, Serbia, Netherlands, and Sweden) before settling in United States. Demographics can be found in Table I.

Hypothesis Testing

Hypothesis 1

A total of three assessment measures were used to assess gender difference in the manifestation of PTSD and its symptoms among this Bosnian refugee population sample. PTSD Checklist (PCL) , Impact of Event Scale-Revised (IES-R), Symptom Checklist-90-R (SCL-90-R). The first hypothesis was analyzed through the use of 1-tailed Independent Samples Test (T-Test) with the goal to determine if there is a significantly higher manifestation of PTSD symptoms of post war trauma in the

female population of the sample.

Table 1

General Demographics of Bosnian Refugees, N = 41

Gender	N	%	Age		Education	
			M	SD	M	SD
Total	41		43.10	11.44	12.76	2.14
Male	21					
Female	20					
Marital Status						
Single	6	14.6				
Married	32	78				
Separated/Divorced	3	7.3				
Number of Children						
Zero	6	14.6				
One	9	22				
Two	22	53.7				
Three	3	7.3				
Four	1	2.4				
Employed	38	92.7				
Religion Affiliation						
Muslim	9	22				
Roman Catholic	15	36.6				
Eastern Orthodox	9	22				
Other Christ. Denom.	4	9.8				
No Affiliation	4	9.8				

As the use of Independent Sample T-Test analysis in the SPSS program provides only an option of a 2-tailed statistical significance, 1-tailed statistical significance was obtained through splitting of the obtained 2-tailed p-values in half (Kinnear & Gray, 2004, p. 196).

PCL is a 17-item self-report questionnaire where participants indicate the degree to which they have been troubled by each symptom during past month (based

on war experiences) by rating each item from 1 – "not at all" to 5 – "extremely. Of all the participants in this study, 14 (34.1%) qualify for a PTSD based on the cutoff score of 44 ((Blanchard et al., 1996). The total score of PCL as well as PCL subscales (intrusion, numbing/avoidance and arousal) were used as dependent variables and gender as a predictor variable. These variables were chosen based on the previous well established findings (Fullerton, Ursano, Epstein, Crowley, Vance, & Kao et al., 2001) which suggest a gender difference in the development of PTSD, with women being more likely to develop PTSD following an exposure to trauma. However, the results of Independent T-Test (displayed in Table 2) in this study revealed that the total PCL score, nor any of its subscales were statistically significant at the alpha level of .05. The results showed no significant differences between the gender groups with female group mean (M = 43.30, SD = 18.49) and male group mean (M = 40.05, SD = 16.43), $t(39) = -.60$, $p = .278$, revealing that previous research findings were not supported with this study and no gender differences were found in this sample.

Another measure used to test the first hypothesis was IES-R entailing 22 self-report items which are rated on a four-point scale, ranging from 0 – "not at all" to 5 – "often." As with PCL, the IES-R total score as well as the subscales (avoidance, intrusion and hyperarousal) scores were used. A total score of 24 or more presents clinical concern for a PTSD diagnosis (Asukai et al., 2002), whereas best cutoff for a probable diagnosis of PTSD is total score of 33 and above (Creamer, Bell, & Failla, 2003). According to these suggested cutoffs, 28 participants (68.3%) out of the total sample present a clinical concern for a PTSD, whereas 26 (63.4%) out of the 41 participants qualify for the probable PTSD diagnosis. Analysis of this measure through the use of Independent T-Test with the 95% confidence interval yielded not statistically significant results (displayed in Table 2), meaning that this sample did not

reveal any gender differences, with female mean (*M* = 48.95, *SD* = 30.85) and male group mean (*M* = 36.14, *SD* = 28.60), *t*(39) = -1.38, *p* = .088. However, avoidance subscale was approaching significance with female group mean (*M* = 20.35, *SD* = 10.71) and male group mean (*M* = 14.76, *SD* = 11.37), *t*(39) = -1.62, *p* = .057, indicating that women did experience higher, but not statistically significant higher avoidance symptoms than men on this scale.

A third assessment measure, used to assess and analyze if the manifestation of PTSD symptoms of post war trauma is significantly higher among the female participants in this sample of Bosnian refugees, is the SCL-90-R. This assessment measure is a 90-item self-report inventory which is used to assess overall mental well being (Derogatis, Lipman, & Covi, 1973). This measure has nine primary symptom dimensions (somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, anger-hostility, phobic anxiety, paranoid ideation, and psychoticism) as well as a PTSD subscale (Schmitz, Hartkamp, Kiuse, Franke, Reister, & Tress, 2000). The results of the t-test for the total SCL-90-R scale scores revealed no significant differences, with the mean scores for female group (*M* = 101.55, *SD* = 90.10) and male group (*M* =76.95, *SD* = 75.46), *t*(39) = -.95, *p* =.174. For the purpose of hypothesis one, only PTSD subscale was used with no significant differences between groups, female (*M* = 31.55, *SD* = 28.87) and male group (*M* = 24.33, *SD* = 24.33), *t*(39) = - .87, *p* = .196 . An Independent T- Test was conducted to examine whether the female participants in this study showed significantly higher PTSD symptoms than men. The results (displayed in Table 2) revealed no statistical significance in total scale scores and in subscale scores. Female participants in this sample did not report statistically significant higher manifestation of PTSD and its symptoms nor any other symptom dimensions measured with the SCL-90-R scale.

Table 2

Comparison of Gender Variables Means with PCL, IES-R and SCL-90-R Total and Subscale Scores

				Male		Female	
	df	t	α	M	SD	M	SD
Total IES-R	39	-1.38	.088	36.14	28.60	48.95	30.85
Avoidance IES-R	39	-1.62	.057	14.76	11.37	20.35	10.72
Intrusion IES-R	39	- .93	.179	11.48	9.88	14.40	10.25
Hyperarousal IES-R	39	-1.36	.091	9.90	8.79	14.20	11.31
Total PCL	39	- .60	.278	40.05	16.43	43.30	18.49
Intrusion PCL	39	- .14	.446	11.43	5.07	11.65	5.21
Numbing/Avoidance PCL	39	- .88	.194	16.95	6.90	19.00	8.06
Arousal PCL	39	- .52	.305	11.67	5.80	12.65	6.45
Total SCL-90-R	39	- .95	.174	76.95	75.46	101.95	90.10
Anxiety	39	-1.17	.126	7.43	8.98	11.15	11.40
Somatization	39	- .73	.237	12.20	12.15	15.00	13.51
Anger/Hostility	39	- .59	.280	5.00	4.64	5.95	5.66
Obsessive/Compulsive	39	-1.27	.106	10.86	9.67	14.90	10.70
Phobic Anxiety	39	-1.41	.084	3.33	4.91	5.95	6.87
Interpersonal Sensitivity	39	- .91	.186	7.00	8.12	9.55	9.92
Paranoid Ideation	39	- .33	.371	6.10	5.37	6.70	6.23
Depression	39	-1.32	.098	12.10	12.62	17.70	14.63
Psychotism	39	- .54	.296	6.33	6.75	7.70	9.25
PTSD SCL-90-R	39	- .87	.196	24.33	24.33	31.55	28.87

Hypothesis 2

In order to analyze the second hypothesis in this study a Multidimensional Index of Life Quality (MILQ) was distributed and then correlated with the three previously introduced assessment measurements (IES-R**,** PCL, and SCL-90-R). MILQ is an easy to administer 35-item instrument designed to measure multiple domains of quality of life**.** The items are rated on a 4 and 7-point Likert scale, ranging from 1 = “not important” to 4 = “very important” and 1 = “very dissatisfied” to 7 = “very satisfied”. Nine major life domains (mental health, physical health, physical functioning, cognitive functioning, social functioning, intimacy, productivity,

financial status, and relationship with health professionals) are covered in this instrument.

In order to analyze if the presence of PTSD symptoms and their severity is negatively associated with the quality of life, as currently experienced by Bosnia refugees, a Bivariate Correlation was conducted. Results of 1-tailed and 2-tailed Bivariate Correlation revealed the same results. As expected, the results (represented in Table 3) of the Bivariate Correlations revealed a statistically significant negative relationship between the PTSD symptoms and their severity, and the quality of life as currently experienced by this sample of Bosnian refugees, showing that the higher manifestation of PTSD symptoms indicates lower levels of quality of life.

Table 3

Bivariate Correlations Among MILQ, PCL, IES-R, SCL-90-R and PTSD Subscale (SCL-90-R) Total Scale Scores

Scales	M	SD	1	2	3	4	5
1.MILQ	217.68	43.18	--	-.540**	-.539**	-.691**	-.666**
2.PCL	41.63	17.32		--	.858**	.785**	.791**
3.IES-R	42.39	30.05			--	.753**	.751**
4.SCL-90-R	88.95	82.81				--	.990**
5.PTSD (SCL-90-R)	27.85	26.55					--

*$p < .05$, **$p < .01$

The nine MILQ domains have shown to have a significant negative relation with almost all of the scales used to assess PTSD symptoms in this sample, indicating that the higher PTSD symptoms, the lower health and overall life quality. Only the relationship with health professionals MILQ subscale was not significantly negatively correlated with IES-R and PCL total scores, as well as MILQ intimacy subscale was not significantly correlated with the PCL total scale score. The bivariate correlations between nine MILQ subscales (mental health/Mnthlth, physical health/Phsclhlth,

physical functioning/Phsclfunct, cognitive functioning/Cgntfunct, social functioning/ Socfunct, intimacy, productivity, financial status/Finclstat, and relationship with health professionals/Rlthlthprof) and PCL, IES-R, SCL-90-R and (SCL) PTSD subscale total scores are displayed in Table 4.

In summary, regarding hypothesis one and two the following observations were made: First, the statistical analysis and the results thereof did not seem to support previously cited research on gender differences in the manifestation of PTSD and its symptoms. This specific sample of Bosnian refugees did not present higher prevalence of PTSD and its symptoms in the female population. Second, statistical analysis conducted in order to explore hypothesis number two did reveal a strong negative relationship of statistical significance between health and quality of life and PTSD manifestation in this sample of Bosnian refugees, showing that the presence of PTSD and its symptoms indicate diminished health and quality of life in the present sample.

Other interesting findings that were not part of the two hypotheses proposed were discovered as well. These findings might be of help in understanding this population of refugees. Additionally, they might evoke more interests for further research within this population in the future. An Independent T-Test analysis of quality of life revealed significant gender differences, with female population of this sample experiencing significantly lower scores on several MILQ subscales. The following significant results were evident: cognitive functioning mean difference between male and female groups were $MD = 2.94$, $t(39) = 2.02$, $p = .025$; physical functioning mean differences $MD = 2.89$, $t(39) = 1.91$, $p = .032$; productivity $MD = 2.40$, $t(39) = 1.86$, $p = .036$; intimacy at $MD = 3.27$, $t(39) = 1.76$, $p = .044$; and mental health mean differences at $MD = 2.78$, $t(39) = 1.71$, $p = .048$.

Another interesting finding was revealed with the help of Bivariate Correlation analysis within the demographic section of the survey. All of the following variables were found to be significantly correlated (2-tailed significance, note: * = alpha level of .05 and ** = alpha level of .01). Marital status was negatively correlated with social functioning at -.345*, intimacy (MILQ) at -.393*, indicating that marriage was associated with lower social functioning and lower intimacy levels and marital status was positively correlated with total IES-R score at .371* and all of its subscales, somatization (SCL-90-R) at .383*, obsessive-compulsive (SCL-90-R) at.325*, talking on the phone to other Bosnian refugees at .355*, showing that marriage indicated higher scores on these scale and subscales and negative relationship with alcohol consumption at -.338*, meaning that married individuals indicated less alcohol consumption.

Employment was positively correlated with total MILQ score at .367*, mental health (MILQ) at .337*, physical health (MILQ) at .416**, physical functioning (MILQ) at .329*, social functioning (MILQ) at .340*, cognitive functioning (MILQ) at .340*, and productivity (MILQ) at .367* meaning that being currently employed indicated better health and life satisfaction, and negatively correlated with total SCL-90-R score at -.337*, somatization (SCL-90-R) at -.368*, interpersonal sensitivity (SCL-90-R) at -.318*, depression (SCL-90-R) at -.341*, psychotism (SCL-90-R) at –.380*, and PTSD (SCL-90-R) at -.341*, indicating that employed was associated with lower levels of PTSD symptoms, depression, psychotism, somatization, and interpersonal sensitivity. Work hours per week were negatively correlated with psychotism (SCL-90-R), suggesting that more work hours

Table 4

Bivariate Correlations of MILQ Subscales (Mental and Physical Health, Physical, Cognitive, and Social Functioning, Intimacy, Productivity, Financial Status, and Relationship with Health Professionals) and PCL, IES-R, SCL-90-R, PTSD (SCL-90-R) Total Scale Scores

Scales	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Mnthlth	--	.788**	.770**	.660**	.787**	.594**	.577**	.685**	.695**	-.516**	-.540**	-.639**	-.620**
2. Phsclhlth		--	.717**	.631**	.807**	.312*	.627**	.624**	.662**	-.611**	-.530**	-.685**	-.677**
3. Phsclfunct			--	.706**	.835**	.461**	.575**	.386*	.633**	-.504**	-.482**	-.771**	-.764**
4. Cgntfunct				--	.771**	.648**	.575**	.491**	.573**	-.485**	-.433**	-.640**	-.631**
5. Socfunct					--	.514**	.620**	.612**	.722**	-.594**	-.564**	-.721**	-.713**
6.Intimacy						--	.269	.400**	.440**	-.235	-.365*	-.444**	-.408**
7.Productivity							--	.554**	.485**	-.454**	-.388*	-.465**	-.434**
8. Finclstat								--	.562**	-.475**	-.543**	-.421**	-.411**
9. Rlthlthprof									--	-.274	-.246	-.422**	-.404**
10.PCL										--	.858**	.785**	.791**
11.IES-R											--	.753**	.751**
12.SCL-90-R												--	.990**
13.PTSD(SCL)													--

*$p < .05$, **$p < .01$

per week were associated with lower levels of psychotic symptoms.

Amount of alcoholic beverages consumed was positively correlated with physical functioning (MILQ) at .316*, attendance of Bosnian gatherings at .309*,meaning that higher amounts of alcohol consumption in this sample indicated better physical functioning and more community gathering attendance, and negatively correlated with total IES-R score at -.318*, avoidance (IES-R) at -.365*, anxiety (SCL-90-R) at -.310*, showing that more alcohol consumption indicated less avoidance and anxiety symptoms in this sample.

Church or mosque attendance was positively correlated with the total SCL-90-R score and all of the subscales at .453**, total PCL-C score at.312*,intrusion (PCL-C) at .408**, total IES-R score at .328*, avoidance (IES-R) at .316*, intrusion (IES-R) at .363*, indicating that individuals with higher symptoms endorsements on PTSD, intrusion, and avoidance attended church and mosque more often.

Age in years was positively correlated with total PCL-C at .326*, intrusion (PCL-C) at .316*, avoidance ((IES-R) at .309*, meaning that older individuals indicated experiencing higher levels of traumatic, intrusion, and avoidance symptoms, even though they endorsed low levels of war exposure, showing a negative relationship at -.403**.

Difficulty with the second language was positively correlated with total PCL-C at .390*, intrusion (PCL-C) at .445**, arousal (PCL-C) at.364*, total IES-R score at .334*, avoidance (IES-R) at .319*, hyperarousal at .410**, obsessive-compulsive (SCL-90-R) at .330*, age in years at .519**, marital status at .352*, number of children at .326*, meaning that older, married individuals with children are experiencing more difficulties with the second language, as well as difficulties with the second language indicated higher PTSD, intrusion, arousal, avoidance, hyper-

arousal, and obsessive-compulsive symptoms.

Female gender was negatively correlated with cognitive functioning at –.309*, amount of alcoholic drinks consumed per week at -.569**, meaning that females indicated lower levels of cognitive functioning on the MILQ scale and drank less alcoholic beverages per week than males in this sample

Number of children was positively correlated with the intrusion subscale (PCL-C) at .411**, total IES-R score at .453**, avoidance (IES-R) at .468**, intrusion (IES-R) at .433**, hyperarousal (IES-R) at.381*, talking on the phone with other Bosnian refugees at .351*, meaning that the more children an individual has the higher levels of intrusion, avoidance, PTSD, and hyper-arousal symptoms they indicated, and negative relationship with attending Bosnian community gatherings at –.368*, meaning they attended less community gatherings but they spent more time talking on the phone with other Bosnian refugees.

Having United States citizenship was negatively correlated with productivity at -.369*, attendance of Bosnian community gatherings at -.407**, which means that individuals who have received United States citizenship indicated being less productive and less attendance to community gatherings. However, talking to other Bosnian refugees over the phone was positively correlated with productivity at .326*, meaning that individuals who spent more time talking to other Bosnian refugees over the phone indicated being more productive.

Affiliation with other Bosnian refugees was positively correlated with financial status (MILQ) at .395*, amount of alcoholic beverages at .350*, and negatively correlated with number of children at -.368*, showing that individuals who affiliated with other Bosnian refugees more often indicated having better financial status, having less children and drinking more alcoholic beverages per week.

CHAPTER VI

DISCUSSION AND CONCLUSION

Two hypothesis were tested with this Bosnian refugee sample, using two statistical procedures, namely Independent T-Test and Bivariate Correlations. The first hypothesis of this study stated that the presence and manifestation of PTSD symptoms of post war trauma will be significantly higher and more severe amongst female population of the present sample. The second proposed hypothesis stated that the presence of PTSD and its symptoms will have a significantly negative association with the quality of life as currently experienced by Bosnian refugees in this sample.

In this study, the results of Independent T-Test analysis did not support previous findings (Gavranidou & Rosner, 2003; Kimmerling et al., 2002; Simmons, 2007; Stein et al., 2000; Tolin & Foa, 2006) and the notion of the first hypothesis, that the women will manifest PTSD significantly more than men. Women's higher risk for and manifestation of PTSD has clearly been shown for the general population throughout the literature, however this study did not support these notions and one possibility offered by Kimerling et al. (2002) is that men's risk for PTSD may catch up with women's PTSD overtime in communities that were torn by war and violence. However, even though not of statistical significance, several subscales and one scale total score did approach the significance level and deserve to be mentioned in this

section. The closest to statistical significance was the avoidance subscale of the IES-R scale with the mean difference between male and female groups of *MD* = -5.59, *t*(39) = -1.62, *p* = .057, followed by phobic anxiety subscale of the SCL-90-R scale with a mean difference *MD* = -2.62, *t*(39) = -1.41, *p* = .084, total IES-R scale score with a mean difference between male and female groups of *MD* = -12.81, *t*(39) = -1.38, *p* = .088, hyper arousal subscale of the IES-R scale with a mean difference *MD* = -4.30, *t*(39) = -1.36, *p* = .09, and depression subscale of the SCL-90-R scale with the mean difference of *MD* = -5.60, *t*(39) = -1.32, *p* = .098.

The statistical results of the present study did support the previous findings (Amir & Lev-Wiesel, 2003; Olatunji et al., 2007; Priebe et al., 2000; Rapaport et al., 2005; Schnurr et al., 2006; Schnurr et al., 2009; Stam, 2007; Zatzick et al., 2002) and the assertion of the second hypothesis, which proposed that the presence of PTSD symptoms will be negatively associated with the quality of life as currently experienced by Bosnian refugees in this sample. The Bivariate Correlations analysis revealed a statistically significant negative relationship between the PTSD symptoms and the quality of life, showing that the manifestation of PTSD symptoms indicates lower levels of quality of life across all domains (mental health, physical health, physical functioning, cognitive functioning, social functioning, intimacy, productivity, financial status, and relationship with health professionals. The only subscales that were not significantly correlated in this sample were the relationship with health professionals MILQ subscale with the IES-R and PCL total scores, as well as MILQ intimacy subscale with the PCL total scale score.

Additionally, even though not part of the first or second hypothesis, an Independent T-Test analysis of quality of life revealed some interesting results. Namely a significant gender differences were found, with female population of this

sample experiencing significantly lower levels on several MILQ subscales. This finding is consistent with previous findings that women with PTSD have been reporting a higher rate of poor health than men with PTSD (Wagner et al., 2000). Another study compared Bosnian female refugees to Swedish female population and found that 40% of female Bosnian refugees had reported bad global health compared with a quarter of Swedish females, as well as poorer quality of life in almost all areas, regardless of their health (Sundquist, Behmen-Vincevic, & Johansson, 1998). In summary, it seems that manifestation of PTSD indicates significantly lower health and quality of life in Bosnian female refuges when compared to men from the current sample of this study, or when compared to other women as the literature reveals. This lends further support to the call for the investigation of the role of gender on the manifestation and progression of PTSD and its symptoms, as well as the relationship of PTSD and quality of life.

Other interesting results that might spark some interest for future research and possibly help us understand this population of refugees better were introduced in the result section as well. Some were surprising and the opposite of what we normally would expect, for example individuals who attended church services more often indicated more mental health, PTSD, intrusion, and avoidance symptoms. Participants who endorsed having difficulty with English language were older, married, and had more children. They also indicated experiencing higher PTSD, intrusion, arousal, avoidance, hyperarousal, and obsessive-compulsive symptoms. Employed individuals indicated better health and life satisfaction, and lower levels of interpersonal sensitivity and lower levels of PTSD, depressive, psychotic, and somatic symptoms. In this case employment seemed as a positive buffer of negative mental health symptoms and indicated better quality of life in these individuals. Higher

consumption of alcoholic beverages seemed to indicate better physical functioning and lower avoidance and anxiety symptoms in this sample, where men indicated consuming more alcoholic beverages per week. Female population indicated statistically significant lower levels of cognitive functioning then men.

Limitations

Clearly, there are many difficulties that arise when it comes to collecting data and working with refugees populations from war torn areas such as participants withholding information out of wide variety of reasons like lack of trust, shame, numbing, lack of emotional expression, and the stigma of mental illness (Nicholl & Thompson, 2004). As with other studies, this study has limitations that may affect the translation and interpretation of our results to other studies and populations.

One limitation of the present study is the use of convenience sample, meaning that the results of this study cannot be generalized to all refugees from Bosnia, who are currently living in United States. Another limit of this study is its relatively small sample size. Small sizes can contribute to unstable relationships among variables (Miller et al., 2002) and the results of this study as well should be viewed within a context of other research studies which examined the relationship between gender differences and PTSD as well as PTSD and quality of life. A larger sample and more heterogeneous sample of Bosnian refugees would allow for a better comparison of differences and similarities between the two gender groups in the presence of PTSD.

Another important limitation is this study's reliance on self-report measures with potential retrospective reporting biases (Miller et al., 2002). Previous research has found that individuals with long-standing elevated PTSD symptoms may recall more prior trauma (Roemer, Litz, Orsillo, Ehlich, & Friedman, 1998) in the chronic phase of their illness than they reported shortly after their index trauma occurred.

PTSD symptoms are capable of increase over the years for some reasons and can also decrease for other reasons (Hasanovic, Sinanovic, & Pavlovic, 2005). This study may be helpful in better understanding of gender differences and quality of life in relation to posttraumatic stress disorder.

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APPENDICES

I – Diagnostic Criteria for 309.81 Posttraumatic Stress Disorder

A. The person has been exposed to a traumatic event in which both of the following were present:
   1. the person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others
   2. the person's response involved intense fear, helplessness, or horror, **Note:** In children, this may be expressed instead by disorganized or agitated behavior

B. The traumatic event is persistently reexperienced in one (or more) 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 episode, including those that occur on awakening or when intoxicated). **Note:** In young 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. physiological reactivity on exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event

C. Persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness (not present before the trauma), as indicated by three (or more) 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 recollection 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 a foreshortened future (e.g., does not expect to have a career, marriage, children, or a normal life span)

D. Persistent symptoms of increased arousal (not present before the trauma), as indicated by two (or more) of the following:
   1. difficulty falling or staying asleep
   2. irritability or outburst of anger
   3. difficulty concentrating
   4. hypervigilance
   5. exaggerated startle response

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

F. 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 3 months

Chronic: if duration of symptoms is 3 months or more

Specify if:

With Delayed Onset: if onset of symptoms is at least 6 months after the stressor

II - Consent Form

My name is Irina Bransteter, and I am a graduate student at Cleveland State University(CSU). My principal investigator is Dr. John Wilson, a professor at CSU psychology department. For my masters' thesis, I am conducting a study examining gender differences in severity and symptoms of post war trauma and the effects of persisting psychological trauma on quality of life among Bosnian refugees currently living in United States.

Your participation is voluntary. If you decide to participate, you will be asked to complete a survey consisting of 4 different already established questionnaires, along with demographic questions, such as age and gender. Completion of this survey will take between 30 to 50 minutes. However, more time will be provided to those who need it. Before completing the survey, please read and sign one of the copies of this consent form and keep the other one for your records. To keep your information anonymous, no identifying information will be asked on the actual responses. Please detach consent forms, and turn in signed copy separately from the survey, so that your name cannot be linked to your answers.

Potential risk may include distress and discomfort of disclosing information. Some of the items on the questionnaires might trigger painful memories, resulting in distress. If that occurs, you may skip the question. If distress persists, you can contact professionals found on a separate sheet to help you deal with any distress you may experience. In addition, you may skip any questions you don't feel comfortable answering, and you may stop at any time without penalty.

As an indirect benefit, your participation in this research will provide additional information about gender differences in manifestation of posttraumatic stress symptoms and their effects on quality of life. Additionally, your disclosure of symptoms and experiences may have therapeutic effects on your well-being. Please understand that you will not receive monitory compensation for completing this survey and that there will be no cost to you for participating in this research study.

Your data is of value to this research project, and we hope that your participation contributes to your learning about psychological research. If you have any questions, please feel free to ask. Questions that may affect the outcome of the study may be deferred until the end of session. If you consent to participate, we will use the data for preparation of scientific reports. A separate form will be provided for the names and emails of participants wanting to know the results of the study.

Thank you for your valuable contribution to this research and for you cooperation and support. Signing bellow indicates you are 18 years or older and that you agree to participate.

Consent

I consent to participate in this research. I have read and understand the information that has been provided regarding this procedure; my tasks; the purpose of this research; any risks that may be involved and the safeguards that have been taken; benefits that may result from the research; and educational feedback that I will receive

after participating. I understand that my participation is voluntary, and that I may terminate my involvement at any time, without penalty.

I understand that if I have any questions about my rights as a research participant, I can contact Cleveland State University's Institutional Review Board at (216) 687-3630. If I have questions about this research project, I can contact Irina Bransteter at (440) 476-1004, or her advisor, Dr. John Wilson, at (216) 687-2541.

Printed Name of Participant:

_____

Signature of Participant:

_____ **Date** _____

Printed Name of the Researcher

_____

Signature of the Researcher

_____ **Date** _____

III – Demographic Form

1. What is your gender? (please circle one)

•Male •Female

2. How old are you? _____

3. What is your current marital status? (please circle one)

a)Single b)Married c)Separated/Divorced d)Widowed

4. How many children do you have? _____

5. How many years of school did you complete? _____ (number in years)

6. Your religious affiliation: (please check)
   a) ____ Muslim
   b) ____ Roman-Catholic
   c) ____ Eastern-Orthodox
   d) ____ Christian
   e) ____ No Affiliation
   f) ____ Other (please specify)

7. Your spouses/partners religious affiliation: (please check)
   a) ____ Muslim
   b) ____ Roman-Catholic
   c) ____ Eastern-Orthodox
   d) ____ Christian
   e) ____ No Affiliation
   f) ____ Other (please specify)

8. How religious are you? (please circle one)

a) very religious b) somewhat religious c) not religious at all

9. How often do you attend church or a mosque? (please **check** only one)
   a) ____ once a day or more
   b) ____several times a week
   c) ____once a week
   d) ____several times a month
   e) ____once a month
   f) ____few times a year
   g) ____not at all

10. What city and country where you born in?_____ _____
City Country

11. When did you leave the country of Bosnia and Herzegovina?

• month and year: _____/_____

12. What city or village in Bosnia did you live in before you left Bosnia?
_____

13. After you left Bosnia, what country did you find refuge in? _____

14. When did you come to United States? month and year: _____/_____

15. Are you currently employed? (**circle** answer) •Yes •No

16. How many hours per week do you usually work? _____

17. What is your occupation now? _____

18. What was your occupation before leaving Bosnia? _____

19. Do you experience difficulties because of the language? (**circle** answer)
• Yes • No

20. Have you obtained United States citizenship? (**circle** answer)
•Yes •No

21. How many alcoholic beverages do you drink per week? _____
(the number of drinks)

22. What kind of alcoholic beverages do you usually consume?
Check all that apply: a) ____Beer
b) ____Wine
c) ____Brandy
d) ____Vodka
e) ____Whiskey
f) ____ Other: _____
(if non of the above, write in the space provided)

23.How often do you affiliate with other Bosnian refugees?
a) ____once a week or more
b) ____once a month or more
c) ____once a year or more
d) ____not at all

24. How often do you attend Bosnian community gatherings of any kind (e.g. dances, concerts) ?
a) ____once a week or more
b) ____once a month or more
c) ____once a year or more
d) ____not at all

24. How many times per week do you talk on the phone with other Bosnian refugees ?

_____
(write in number)

25. Please describe the stresses and difficulties you experienced as a refugee when leaving Bosnia and when coming to United States:

IV - PTSD Checklist, Civilian Version (PCL-C)

Instructions: Below is a list of problems and complaints that people sometimes have in response to stressful life experiences. Please read each one carefully, put an "X" in the box to indicate how much you have been bothered by that problem *in the last month.*

No.	Response:	Not at all (1)	A little bit (2)	Moderately (3)	Quite a bit (4)	Extremely (5)
1.	Repeated, disturbing *memories, thoughts,* or *images* of a stressful experience from the past?					
2.	Repeated, disturbing *dreams* of a stressful experience from the past?					
3.	Suddenly *acting* or *feeling* as if a stressful experience *were happening again* (as if you were reliving it)?					
4.	Feeling very *upset* when *something reminded* you of a stressful experience from the past?					
5.	Having *physical reactions* (e.g., heart pounding, trouble breathing, or sweating) when *something reminded* you of a stressful experience from the past?					
6.	Avoid *thinking* about or *talking* about a stressful experience from the past or avoid *having feelings* related to it?					
7.	Avoid *activities* or *situations* because they *remind* you of a stressful experience from the past?					
8.	Trouble *remembering important parts* of a stressful experience from the past?					
9.	Loss of *interest in things* that you used to *enjoy*?					
10.	Feeling *distant* or *cut off* from other people?					
11.	Feeling *emotionally numb* or being unable to have loving feelings for those close to you?					
12.	Feeling as if your *future* will somehow be *cut short*?					
13.	Trouble *falling* or *staying asleep*?					
14.	Feeling *irritable* or having *angry outbursts*?					
15.	Having *difficulty concentrating*?					
16.	Being *"super alert"* or watchful on guard?					
17.	Feeling *jumpy* or easily startled?					

V - Impact of Event Scale-Revised

Instructions: Below is the list of difficulties people sometimes have after stressful life events. Please read each item, and then indicate how distressing each difficulty has been for you **during the past seven days** with respect to _____, how much were you distressed or bothered by these difficulties?

	Not at all	**Rarely**	**Sometimes**	**Often**
1. Any reminder brought back feelings about it.	0	1	3	5
2. I had trouble staying asleep.	0	1	3	5
3. Other things kept making me think about it.	0	1	3	5
4. I felt irritable and angry.	0	1	3	5
5. I avoided letting myself get upset when I thought it or when I was reminded about it.	0	1	3	5
6. I thought about it when I didn't mean to.	0	1	3	5
7. I felt as if it hadn't happened or wasn't real.	0	1	3	5
8. I stayed away from reminders about it.	0	1	3	5
9. Pictures about it popped into my mind.	0	1	3	5
10. I was jumpy and easily startled.	0	1	3	5
11. I tried not to think about it.	0	1	3	5
12. I was aware that I still had a lot of feeling about it, but I didn't deal with them.	0	1	3	5
13. My feelings about it were kind of numb	0	1	3	5
14. I found myself acting or feeling like a I was back . at that time	0	1	3	5
15. I had problems with insomnia.	0	1	3	5
16. I had waves of strong feelings about it.	0	1	3	5
17. I tried to remove it from my memory.	0	1	3	5
18. I had trouble concentrating	0	1	3	5
19. Reminders of it caused me physical reactions, such as sweating, trouble breathing, nausea, or pounding heart.	0	1	3	5
20. I had dreams about it.	0	1	3	5
21. I felt watchful and on-guard.	0	1	3	5
22. I tried not to talk about it.	0	1	3	5

Avoidance Subscale = sum of items 5, 7, 8, 11, 12, 13, 17, 22
Intrusion Subscale = sum of items 1, 2, 3, 6, 9, 16, 20
Hyperarousal Subscale = sum of items 4, 10, 14, 15, 18, 19, 21

Items response levels are:
0 = Not at all
1 = Rarely
3 = Sometimes
5 = Often

VI - Symptom Checklist-90-Revised

Below is a list of problems and complaints that people sometimes have. Read each one carefully, and select one of the numbered descriptors that best describes **how much discomfort that problem has caused you during the past year including today.** Place the number in the open block to the right of the problem Do not skip any items, and print your number clearly. If you change your mind, erase your first number completely. Read the example below before beginning and if you have any questions please ask the technician.

How much were you distressed by:
Descriptors 0. Not at all, 1. A little bit, 2. Moderately, 3. Quite a bit, 4. Extreme

1. Headaches .....
2. Nervousness or shakiness inside .....
3. Repeated unpleasant thoughts that won't leave your mind..
4. Faintness or dizziness .....
5. Loss of sexual interest or pleasure .....
6. Feeling critical of others .....
7. The idea that someone else can control your thought .....
8. Feeling others are to blame for most your troubles .....
9. Trouble remembering things .....
10. Worried about sloppiness or carelessness .....
11. Feeling easily annoyed or irritated .....
12. Pains in heart or chest .....
13. Feeling afraid in open spaces or on the streets .....
14. Feeling low in energy or slowed down .....
15. Thoughts of ending your life .....
16. Hearing voices that other people do not hear .....
17. Trembling .....
18. Feeling that most people can't be trusted .....
19. Poor appetite .....
20. Crying easily .....
21. Feeling shy or uneasy with opposite sex .....
22. Feeling of being trapped or caught .....
23. Suddenly scared for no reason .....
24. Temper outbursts that you could not control .....
25. Feeling afraid to go out of your house alone .....
26. Blaming yourself for things .....
27. Pains in lower back .....
28. Feeling blocked in getting things done .....
29. Feeling lonely .....
30. Feeling blue .....
31. Worrying too much about things .....
32. Feeling no interest in things .....
33. Feeling fearful .....
34. Your feelings being easily hurt .....
35. Other people being aware of your private thoughts.....
36. Feeling others don't understand or are unsympathetic..
37. Feeling that people are unfriendly or dislike you .....
38. Having to do things very slowly to correctness .....
39. Heart pounding or racing .....
40. Nausea or upset stomach .....
41. Feeling inferior to others .....
42. Soreness of your muscles .....
43. Feeling that you are watched or talked about by others
44. Trouble falling asleep .....
45. Having to check and double-check what you do .....
46. Difficulty making decisions .....
47. Feeling afraid to travel on buses, subways, or trains ....
48. Trouble getting your breath .....
49. Hot or cold spells .....
50. Having to avoid certain things, places or activities because they frighten you .....
51. Your mind going blank .....
52. Numbness or tingling in parts of your body .....
53. A lump in your throat .....
54. Feeling hopeless about the future .....
55. Trouble concentrating .....
56. Feeling weak in parts of your body .....
57. Feeling tense of keyed up .....
58. Heavy feelings in your arms or legs .....
59. Thoughts of death or dying .....
60. Overeating .....
61. Feeling uneasy when people are watching or talking about you .....
62. Having thoughts that are not your own .....
63. Having urges to beat, injure, or harm someone .....
64. Awakening in the early morning .....
65. Having to repeat the same actions such as touching, counting, washing .....
66. Sleep that is restless or disturbed .....
67. Having urges to break or smash things .....
68. Having ideas or beliefs that others do not share .....
69. Feeling very self-conscious with others .....
70. Feeling uneasy in crowds, such as shopping or at a movie
71. Feeling everything is a an effort .....
72. Spells of terror or panic .....
73. Feeling uncomfortable about eating or drinking in publi
74. Getting into frequent argument .....
75. Feeling nervous when you are left alone .....
76. Others not giving you proper credit for your achievements .....
77. Feeling lonely even when you are with people.....
78. Feeling so restless you couldn't sit still .....
79. Feelings of worthlessness .....
80. The feeling that something bad is going to happen to you .....
81. Shouting or throwing things .....
82. Feeling afraid you will faint in public .....
83. Feeling that people will take advantage of you if you let them .....
84. Having thoughts about sex that bother you a lot .....
85. The idea that you should be punished for your sins .....
86. Thoughts and images of a frightening nature .....
87. The idea that something serious is wrong with your body .....
88. Never feeling close to another person
89. Feelings of guilt .....
90. The idea that something is wrong with your mind .....

VII - Multidimensional Index of Life Quality (MILQ)

Section A

The first few questions I have are about your health and overall life satisfaction.

A.1. In general, how would you say your health is right now?

1. Excellent
2. Very good
3. Good
4. Fair
5. Poor

A.2. On a 7-point scale where "1" indicates complete dissatisfaction and "7" indicates complete satisfaction, which number comes closest to how you feel about your life as a whole these days?

1	2	3	4	5	6	7
complete dissatisfaction						complete satisfaction

A.3. Imagine a ladder with 10 steps representing the "Ladder of Life". The top ladder represents the best possible life for you. The bottom of the ladder represents the worst possible life for you. On which of these 10 steps of the ladder do you feel you personally stand at the present time?
(The number "one" represents the worst possible life and the number "ten" represents the best possible life.)

Section B

How important to you is...	Not Important	Somewhat Important	Important	Very Important
B.1. your physical health in general?	1	2	3	4
B.2. your ability to physically do basic daily activities without assistance from others?	1	2	3	4
B.3. being in good spirits?	1	2	3	4
B.4. your relationship with your spouse or partner?	1	2	3	4

*If you do not have spouse/partner, for questions C.17, C.18, and C.19, circle "8" please.

B.5. your social life with family, friends, and community?	1	2	3	4

How important to you is...	Not Important	Somewhat Important	Important	Very Important
B.6. your financial situation?	1	2	3	4
B.7. your ability to concentrate and to remember things?	1	2	3	4
B.8. your relationship with your doctor and other medical staff?	1	2	3	4
B.9. feeling productive?	1	2	3	4

Section C

How **satisfied** are you with different aspects of your life **at the present time?**

1 = very dissatisfied
2 = dissatisfied
3 = somewhat dissatisfied
4 = neither satisfied nor dissatisfied
5 = somewhat satisfied
6 = satisfied
7 = very satisfied

How satisfied are you with...							
C.1. your overall mood?	1	2	3	4	5	6	7
C.2. how hopefull you fell about the future?	1	2	3	4	5	6	7
C.3. how happy you are?	1	2	3	4	5	6	7
C.4. feeling calm?	1	2	3	4	5	6	7
C.5. how you feel physically?	1	2	3	4	5	6	7
C.6. your energy to do what you want?	1	2	3	4	5	6	7
C.7. being free of pain?	1	2	3	4	5	6	7
C.8. the physical exercise you get?	1	2	3	4	5	6	7
C.9. being able to perform tasks for yourself?	1	2	3	4	5	6	7
C.10. your ability to lift and carry things around the house?	1	2	3	4	5	6	7
C.11. being physically able to take vacations or trips?	1	2	3	4	5	6	7

How **satisfied** are you with different aspects of your life **at the present time?**

1 = very dissatisfied
2 = dissatisfied
3 = somewhat dissatisfied
4 = neither satisfied nor dissatisfied
5 = somewhat satisfied
6 = satisfied
7 = very satisfied

How satisfied are you with...

C.12. physically being able to work?	1	2	3	4	5	6	7
C.13. your family letting you do the things you want?	1	2	3	4	5	6	7
C.14. being able to help family members by babysitting, caring for relatives, etc.?	1	2	3	4	5	6	7
C.15. the amount of time you spend with friends?	1	2	3	4	5	6	7
C.16. participating in community activities?	1	2	3	4	5	6	7

*If you do not have spouse/partner, for questions C.17, C.18, and C.19, circle "8" please.

*C.17. the activity you do with your spouse/partner?	1	2	3	4	5	6	7	8
*C.18. the amount of affection your spouse/partner expresses toward you?	1	2	3	4	5	6	7	8
*C.19. being able to confide in your spouse/partner?	1	2	3	4	5	6	7	8
C.20. your sex life?	1	2	3	4	5	6	7	
C.21. feeling alert?	1	2	3	4	5	6	7	
C.22. your ability to concentrate?	1	2	3	4	5	6	7	
C.23. your ability to make decisions by yourself?	1	2	3	4	5	6	7	
C.24. being able to remember things that happened a a while ago?	1	2	3	4	5	6	7	
C.25. your household income?	1	2	3	4	5	6	7	
C.26. your ability to pay monthly expenses?	1	2	3	4	5	6	7	

How **satisfied** are you with different aspects of your life **at the present time?**

1 = very dissatisfied
2 = dissatisfied
3 = somewhat dissatisfied
4 = neither satisfied nor dissatisfied
5 = somewhat satisfied
6 = satisfied
7 = very satisfied

How satisfied are you with...

C.27. the amount of money you have in savings?	1	2	3	4	5	6	7
C.28. your financial security?	1	2	3	4	5	6	7
C.29. the information you get from your doctor?	1	2	3	4	5	6	7
C.30. being able to ask your doctor questions?	1	2	3	4	5	6	7
C.31. the quality of medical care you are getting?	1	2	3	4	5	6	7
C.32. the support you get from your doctors and other health professionals?	1	2	3	4	5	6	7
C.33. the amount of time your health permits you to work?	1	2	3	4	5	6	7
C.34. being able to do the type of work you want?	1	2	3	4	5	6	7
C.35. feeling productive?	1	2	3	4	5	6	7

C.36. Is there anything else that you wish to add that is important to your quality of life that has not been covered in these questions?

1. NO

2. YES (specify)

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