

Differences in the Symptoms of Complex PTSD and PTSD in North Korean Defectors by Trauma Type*

Kim Hee Kyung**

The purpose of this research was to explore the varying levels of complex post-traumatic stress disorder (Complex PTSD), post-traumatic stress disorder (PTSD) symptoms and depression in North Korean defectors according to the type of trauma. The study was conducted on 531 North Korean defectors (170 males and 361 females) in Hanawon(resettlement center for North Korean defectors). 432 (81.4%) of the subject population experienced ≥ 1 traumatic events. Those with ≥ 4 traumatic experiences scored higher on complex PTSD and PTSD symptoms, and they had higher levels of depression compared to those who had or had not experienced 1~3 traumatic events. Analysis of different types of traumatic events found that the survivors of interpersonal trauma or serious illness had higher levels of complex PTSD, PTSD symptoms and depression than others. No significant difference was found across all symptoms between those who had and had not experienced noninterpersonal trauma. Among the trauma survivors, 11.3% were diagnosed with complex PTSD, 14.6% with PTSD, and 26.2% with both. The rate of dual diagnosis was high among those with interpersonal trauma or serious illness. The dual diagnosis group exhibited significantly higher levels of depression than the complex PTSD or PTSD group. Logistic regression analysis found that those with interpersonal trauma were 2.11 times more likely to receive a diagnosis of complex PTSD than non-diagnosed group. Those with interpersonal trauma or serious illness were 2.39 times and 2.85 times more likely to receive a dual diagnosis than non-diagnosed group, respectively. There was no particular trauma type that discriminated between the PTSD group and the non-diagnosed group. This study suggests that it is the type of traumatic event rather than the frequency or amount that is more important in the diagnosis of complex PTSD and PTSD in North Korean defectors. This paper discussed the implications of the research findings for the diagnosis and treatment of PTSD in North Korean defectors and proposed directions for future research.

Keywords: North Korean defector, complex post-traumatic stress disorder, post-traumatic stress disorder, trauma, depression

* Translated from the article published in *Korean Journal of Psychology: General* vol. 31, no. 4 (2012), with permission from the Korean Psychological Association.

** Department of Counseling Psychology, Dongshin University

Post-traumatic stress disorder (PTSD) is a diagnosis of continued psychological distress and other symptoms after being subjected to a traumatizing event. According to DSM-IV (American Psychiatric Association 1994) criteria for PTSD diagnosis, the person must have been exposed to a traumatic event; show a response involving intense fear, helplessness, or horror; and display core symptom clusters including a re-experience of the event, persistent avoidance of stimuli associated with the traumatic event, and hyperarousal. A traumatic event is defined as experiencing, witnessing, or being confronted with an event that involves actual or threatened death or serious injury, or a threat to the physical integrity of oneself or others. There are no separate criteria for the type, category or duration of traumatic events. Therefore, it is the responses and symptoms such as fear and helplessness that are important in the diagnosis of PTSD than the traumatic event itself.

However, the impact of trauma on people can vary depending on its severity and type. The psychological impact of intentional and man-made traumas like war, abuse, and torture could be different from that of unintentional traumas like car accidents and industrial disasters, or natural disasters like floods and earthquakes (Schiraldi 2000). Generally, psychological impact is the most severe if the trauma is man-made, repeated, unpredictable, multifaceted, sadistic and malevolent, undergone in childhood, and perpetrated by a caregiver (Allen 1995). Interpersonal violence tends to cause more severe and more long-term psychological damage than other types of traumas. Repeated or prolonged traumatic events characterized by interpersonal violence (including childhood abuse, domestic violence, and refugee experience) are known to cause unique symptoms outside the core PTSD symptoms of re-experiencing, avoidance, and hyperarousal described in DSM-IV (H.N. Ahn 2007).

Because the severity and nature of a traumatic experience is also significant in addition to the presence of the experience itself, PTSD alone may not be adequate as the minimum criteria for the symptoms that appear in the wake of a trauma. First of all, PTSD has high co-morbidity with other psychological conditions. PTSD patients often exhibit not just the core PTSD symptoms but also other symptoms including somatization, depression, anxiety and repeated dissociative symptoms; when these symptoms become chronic, the result may be schizophrenia or other more severe mental disorders (S.S. Oh

2006). In particular, prolonged traumas involving interpersonal element can bring about large affective, behavioral, and interpersonal changes, which are not adequately captured by the traditionally diagnosed PTSD symptomology (Herman 1992; Spitzer, Kaplan, and Pelcovitz 1989). Second, the diagnostic term PTSD was originally coined to refer to the psychological distress suffered by war veterans and is thus limited to men and war-related trauma types (Courtois 2004). Therefore, PTSD does not sufficiently encompass the psychological consequences of interpersonal traumas such as rape and domestic violence, or the impact of a traumatic event on the victim's self-perception or relationships with others (Van der Kolk and Courtois 2005).

The concept of complex PTSD was introduced in the face of criticisms that PTSD is unrepresentative of the full range of symptoms that appear in the aftermath of various types of traumatic events. Repeated and prolonged traumas characterized by interpersonal violence were referred to as complex trauma, type II trauma (Terr 1992), or developmental trauma (Van der Kolk 2005). The victims of these traumas tended to exhibit symptoms that are different from DSM-IV's PTSD symptom clusters, demonstrating limitations in PTSD diagnosis as well as the need for a different therapeutic approach.

COMPLEX PTSD

Herman (1992) pointed out the limitations in PTSD diagnosis, and proposed the categorization of repeated interpersonal traumas and their unique psychological symptoms as complex PTSD as opposed to simple PTSD. The traumatic events that cause simple PTSD are usually brief, single events such as traffic accidents, robbery, or rape, while complex PTSD is characterized by repeated and prolonged traumatic events such as childhood abuse, domestic violence, and prolonged war situations. Individuals exposed to complex traumas experience various psychological problems including depression, anxiety, despair, self-hatred, dissociative symptoms, substance abuse, self-destructive behaviors, and interpersonal impairment (Taylor, Asmundson, and Carleton 2006), and also display alterations in personality structure (Courtois 2004).

Herman (1992), Pelcovitz et al. (1997) categorized the complex PTSD

symptoms often found in survivors of complex trauma as “disorders of extreme stress not otherwise specified (DESNOS).” DESNOS includes the poor regulation of affect and impulses; alterations in attention and consciousness; alterations in self-perception; alterations in one’s perception of the perpetrator; alterations in one’s relations with others; somatization; and alterations in systems of meaning. Having difficulty in the regulation of affect and impulses is one of the core symptoms observed in those who have experienced prolonged psychological trauma. This symptom encompasses difficulties in modulating anger, self-destructive behaviors or suicidal preoccupation, difficulties modulating sexual involvement preoccupation, and excessive risk-taking. Trauma survivors use denial, numbing and avoidance as defenses to keep traumatic information at the subconscious level (Horowitz and Wilner 1976). However, because these strategies are insufficient for dealing with repeated traumatic events, victims of complex trauma resort to separating their consciousness from reality. This act leads to symptoms such as temporary amnesia, dissociation, and depersonalization. Complex trauma alters the victim’s self-perception as well. Repeated traumatic events erode faith in oneself, and the negative self-perception leads to an increased sense of helplessness and shame, which in turn results in withdrawal and isolation. Some blame themselves for the trauma they experienced and feel intense guilt. These alterations in self-perception violate the victim’s previously sustained belief system, and eventually their system of meaning about life and the world. Complex trauma also affects interpersonal functioning. The victims can experience difficulties in forming bonds with others because of distrust, become revictimized, and sometimes victimize themselves and others (Fleming et al. 1999). Prolonged exposure to trauma by a perpetrator could lead the victim to attribute total power to the perpetrator or even idealize him or her.

DSM-IV does not yet recognize complex PTSD as a freestanding diagnosis but it does present DESNOS as associated symptoms of PTSD. The symptoms of PTSD are severe and long-lasting when the stressful event is man-made such as torture or forced imprisonment. The symptoms include the impairment of affect regulation, self-injury or impulsive behaviors, dissociative symptoms, and other physical symptoms. In addition, they entail a sense of shame, hostility, helplessness, and despair. The victims also feel

that they have been permanently damaged and consistently threatened, and they could also suffer from the loss of sustaining faith, failed interpersonal relationships, withdrawal, and alterations in the personality structure (American Psychiatric Association 1994).

Complex PTSD caused by interpersonal trauma such as rape, physical abuse, sexual abuse, or violent attacks has much higher lifetime prevalence than PTSD caused by disasters or road accidents (Kessler et al. 1995; Resnick et al. 1993). Complex PTSD symptoms typically accompany PTSD symptoms. Those who only exhibit DESNOS without any PTSD symptoms accounted for just 6% of the clinical participants with trauma, and just 4% of the community participants (Pelcovitz et al. 1997).

Those who have experienced prolonged and repeated traumas display complex PTSD symptoms in addition to PTSD symptoms including depression, anxiety, self-harm, dissociation, substance abuse, preoccupation with self-abuse or other risky behaviors, revictimization, interpersonal problems and difficulties in forming intimate relationships, somatization, and despair (Courtois 2004). Compared to the group diagnosed with PTSD alone, those with both PTSD and complex PTSD had greater dissociative symptomatology (Zucker et al. 2006) and greater maladaptive cognitive distortions (Newman, Riggs, and Roth 1997). Depression is a mental disorder with a high co-morbidity with PTSD (Goenjian et al. 2000; Shore, Vollmer, and Tatum 1989; Sierles et al. 1986). In particular, trauma victims such as refugees who are likely to be exposed to repeated traumatic events have a high risk of developing major depressive disorders along with PTSD (Kinzie 1986; Sack, Seeley, and Clarke 1997; Shalev et al. 1998).

Distinguishing complex PTSD and PTSD diagnosis is significant for treatment because the treatments for PTSD have limited or no efficacy in treating complex PTSD (Berlinger and Saunders 1996; Hall, Mullee, and Thompson 1995). Also, the co-existence of PTSD and complex-PTSD has a negative effect on the treatment outcome of PTSD and could lead to behavioral problems (Ford and Kidd 1998; Zlotnick 1999).

TRAUMATIC EXPERIENCES OF NORTH KOREAN DEFECTORS AND PTSD

North Korean defectors are exposed to many traumatic events in the process of escaping from North Korea, staying in a third country, and entering South Korea. The most common traumas include the threat of death due to food shortage, the death of a family member, the witnessing of public executions, the violation of one's human rights by the Chinese who threaten to report them, the being a victim of human trafficking, and the fear of forcible repatriation. After fleeing North Korea and/or while staying in a third country, some refugees are arrested by the border guards or the Chinese police and are repatriated to North Korea. They then face severe flogging by the public security officers and other forms of punishment including torture, beating, extortion, and imprisonment as well as sexual assault such as rape (H.R. Kwak 2001; S.H. Cho 2002). The prevalence of PTSD among North Korean defectors varies depending on the criteria. It has been found to be 9.2% before entering South Korea (J.J. Yu 2006), 25~30% shortly after entering South Korea (S.R. Kang 2001; H.K. Kim and S.S. Oh 2010), and 27.3% during the stage of settling in South Korea (C.H. Hong et al. 2006).

Previous studies on the traumatic experiences and PTSD of North Korean defectors have mainly focused on the traumatic events that take place over the course of living in North Korea, fleeing North Korea and eventually entering South Korea. According to S.R. Kang (2001), the most common traumatic events that the defectors were exposed to in North Korea included the witnessing of : public executions (86.3%), people dying of starvation (85.3%), beatings (75.3%), people being punished for wrongful political reasons (67.4%) as well as the experience of being unable to provide appropriate care or treatment for ill family members (63.2%). During the escape, they experienced traumas including the fear of being found (84.2%), a border check by the North Korean authorities (60.0%), a border check by the Chinese border guards (55.8%), and rejection of the request for asylum (54.7%). The group diagnosed with PTSD experienced more traumatic events than the non-PTSD group, and their experience in North Korea had a more decisive influence than their experience during the escape. The above study

showed that the amount of trauma differs between the two groups but failed to show what types of trauma have a direct relationship with PTSD. C.H. Hong (2005) argued that the type and nature of trauma is more significant than the amount of trauma because no significant difference was found in the level of trauma experienced in North Korea, during the escape, and overall between the full-PTSD group that satisfies all DSM-IV criteria for PTSD diagnosis and the partial-PTSD group that satisfies only some of the criteria.

C.O. Park (2007) analyzed the relationship between PTSD symptoms and interpersonal traumatic events by categorizing separation with family, witnessing the death of family members and those they were close to, witnessing the deaths of others, domestic violence, physical assault, sexual assault, verbal abuse, torture, forced imprisonment, and threat to organizational status into interpersonal trauma. The study found that those who had undergone more traumatic experiences were more likely to have re-experiencing symptoms, but there was no meaningful correlation between the amount of traumatic events and avoidance or hyperarousal symptoms. The study showed some correlation between trauma and PTSD symptoms, but it is unclear whether separation with family or witnessing the death of family members and others could be regarded as interpersonal trauma. Also, it did not compare the different levels or symptoms of PTSD by the type of trauma. E.J. Sohn (2010) analyzed the relationship between traumatic experience and symptoms of complex PTSD, PTSD and other psychological symptoms based on the possibility that the trauma of North Korean defectors could have characteristics of complex trauma. In an analysis of 81 North Korean defectors (11 males, 70 females) in South Korean communities, 33 were diagnosed with complex PTSD. The group diagnosed with complex PTSD reported more PTSD symptoms of re-experiencing, avoidance, and hyperarousal than the non-complex PTSD group; showed significantly higher scores on all symptom scales of a Symptom-CheckList-90-R (SCL-90-R); and experienced more complex PTSD symptoms. The study made some suggestions about the relationship between complex PTSD and PTSD symptoms among North Korean defectors as well as their psychological distress. However, it did not show how the presence, nature, characteristics, and type of traumatic experience influence the diagnosis and symptoms of PTSD and complex PTSD because it focused only on the symptoms without

consideration of the subjects' traumatic experience.

Child abuse, domestic violence, and refugee experience are some of the most common types of complex trauma (H.N. Ahn 2007). There have been domestic studies on the complex PTSD of victims who suffered from emotional abuse in childhood (Y.S. Ra et al. 2009) and female victims of domestic violence (K.R. Yang 2008), but there is a lack of studies on the refugee experiences of North Korean defectors in the context of complex PTSD. Victims of complex trauma diagnosed with both complex PTSD and PTSD have experienced more severe trauma and display greater depression and anxiety (J.M. Lee and C.H. Hong 2008; J.S. Jeong and H.N. Ahn 2008). There is a high likelihood of refugees suffering from both PTSD and major depressive disorders (Kinzie 1986), but these correlations have not yet been established for North Korean defectors.

In order to gain a systematic understanding of PTSD in North Korean defectors and decide on appropriate therapeutic intervention methods, it is necessary to examine the different psychological aftereffects according to the type and nature of traumatic events. This study aims to find out how the type of trauma experienced by North Korean defectors affects the symptoms and diagnosis of complex PTSD and PTSD as well as depression. The study questions are as follows. First, does the frequency of a traumatic event influence the level of complex PTSD, PTSD symptoms and depression? Second, does the type of traumatic event influence the level of complex PTSD, PTSD symptoms and depression? Third, does the type of traumatic event influence dual diagnosis? Fourth, what are the types of traumatic events that influence complex PTSD, PTSD, and dual diagnosis?

METHOD

Subjects

This research was conducted on North Korean defectors in Hanawon. Hanawon is an institution that provides basic education to North Korean defectors to help them acclimate to South Korean society before they enter a community. Therefore, the subjects of this study had virtually no experience

with South Korean society. A total of 531 defectors, 170 males (32.0%) and 361 females (68.0%), took part in the study. As of December 2011, the gender ratio of North Korean defectors who had entered South Korea was 30% male and 70% female (Ministry of Unification, 2012); thus the gender composition of this study is nearly identical to the gender composition of North Korean defectors as a whole. The mean age of the subjects was 34.6 years old (SD=9.23), 34.2 years old (SD=10.51) for males and 34.7 years old (SD=8.57) for females, with no significant gender difference ($t[529]=-0.541$, $p>.10$). In terms of the level of education, 68.7% (or 365) were senior middle school graduates, 10.4% (or 55) did not have a senior middle school diploma, and 20.9% (or 111) had a college diploma or higher. The mean period of education was 10.38 years (SD=2.63) for males and 10.19 years (SD=2.14) for females with no significant gender difference ($t[529]=0.188$, $p>.10$). North Korea's education system includes four years of people's school, six years of senior middle school, and four to seven years of college or university, which means that the subjects' average level of education is equivalent to that of high school graduates in South Korea.

Instruments

Traumatic events questionnaire

Traumatic events were measured using the 11-item trauma checklist (serious accident, natural disaster, physical assault, sexual assault, imprisonment or torture, illness, etc.) from the Post-traumatic Diagnostic Scale (PDS) developed by Foa et al. (1997) and adapted by H.N. Ahn (2005). The questionnaire also included the three most frequently observed traumatic events among North Korean defectors (the death of a family member or relative, the death of others, being arrested by the police or being forcibly repatriated) from the trauma scale of North Korean defectors developed by S.R. Kang (2001).

Complex PTSD symptom scale

Complex PTSD symptoms were measured using Quimette, Saxe, and van der Kolk (1996)'s Complex PTSD Interview (CPTSD-I) revised into a questionnaire form by J.M. Lee (2007). CPTSD-I is a 37-item interview that

addresses the key symptoms of complex PTSD and includes the following: alterations in regulation of affect and impulses (18 items), alterations in attention or consciousness (12 items), alterations in self-perception (14 items), alterations in perception of the perpetrator (6 items), alterations in relations with others (12 items), somatization (8 items), and alterations in systems of meaning (4 items). The frequency and intensity of each symptom are rated on a 5-point scale (0~4 points), and symptom severity was calculated by frequency+intensity/2. In Lee's study, the internal consistency reliability coefficient (or Cronbach α) was .91, and in this study it was .96. Cronbach α for the subscales was .91 for alterations in regulation of affect and impulses, .88 for alterations in attention or consciousness, .92 for alterations in self-perception, .83 for alterations in perception of the perpetrator, .85 for alterations in relations with others, .88 for somatization, and .90 for alterations in systems of meaning.

PTSD symptom scale

PTSD symptoms were measured using a scale developed by Foa et al. (1997) to evaluate PTSD symptoms and their severity and was adapted by H.N. Ahn (2005). It is a 49-item scale but this study used just 17 items corresponding to the DSM-IV diagnostic criteria B (7 items on re-experiencing), C (5 items on avoidance), and D (5 items on hyperarousal). The frequency of each symptom over the past month is rated on a 4-point scale (0~3 points). In H.N. Ahn's study, the internal consistency coefficient (Cronbach α) was .91. In this study, Cronbach α was .90 for total items, .83 for re-experiencing, .76 for avoidance, and .80 for hyperarousal.

CES-D

Depression was measured using the CES-D (Center for Epidemiological Study for Depression) scale created by Radloff (1977) and adapted by K.K. Chon and M.K. Rhee (1992). This scale is a 20-item measure designed to evaluate depressive symptoms by rating the symptom frequency over the past week on a 4-point scale (0~3 points). The scale has been used by J.N. Kim, Y.K. Choi, and J.M. Chae (2008) to measure depression in North Korean defectors. In their study, Cronbach α was .84 and it was .85 in this study.

Data Analysis

A simple frequency analysis was carried out to examine the frequency of traumatic events that the North Korean defectors experienced. χ^2 test was used to analyze gender difference. Symptoms and diagnosis were compared by the trauma type categorized into the following according to characteristics and nature: “noninterpersonal trauma” (war, incidents, accidents, and natural disasters-); “interpersonal trauma” (physical or sexual assault by an acquaintance or stranger); and “serious illness” (life-threatening illness). Imprisonment and torture, arrest by the police and forcible repatriation, all of which were reported frequently by North Korean defectors, were categorized as “imprisonment and repatriation.” The death of family members and others was categorized as “death trauma.” T-test was used to compare the levels of complex PTSD, PTSD symptoms and depression according to the presence of each category of traumatic events.

The traumatized subjects were divided into the complex PTSD group, PTSD group, and dual diagnosis group. In line with preliminary research (J.M. Lee 2007; Quimette, Saxe, and van der Kolk 1996), those who met three or more of the six diagnostic criteria, excluding alterations in perception of the perpetrator, were classified as the complex PTSD group. Those who met one or more items in DSM-IV diagnostic criterion B (re-experiencing), three or more in criterion C (avoidance), and two or more in criterion D (hyperarousal) were classified as the PTSD group. Those who met both diagnostic criteria were diagnosed as having both complex PTSD and PTSD and were classified as the dual diagnosis group. Analysis of variance (ANOVA) was carried out to see if the levels of complex PTSD, PTSD symptoms and depression differed among the three groups. Where significant differences were detected, Post hoc comparisons were performed using Tukey’s test. Lastly, in order to identify the type of traumatic events that best differentiates each group from non-diagnosed group who had experienced traumatic events but do not meet the criteria for complex PTSD or PTSD exploratory logistic regression analysis was used by constructing the following comparison groups: 1) the complex PTSD group and non-diagnosed group, 2) the PTSD group and non-diagnosed group, and 3) the dual diagnosis group and non-

diagnosed group.

RESULTS

Frequency of traumatic experiences

Table 1 shows the frequency of North Korean defectors' traumatic experiences and the gender difference. Out of a total of 531 North Korean defectors, the largest number of 192 defectors (36.2%) reported having experienced or witnessed the deaths of others from starvation, accidents or public executions; followed by 173 (32.6%) having been jailed, held hostage, or imprisoned in re-education camps, labor training camps or concentration camps; 165 (31.1%) having been in a serious incident or accident; and 162 (30.5%) having been arrested by the police or forcibly repatriated. Natural disasters were experienced by 141 defectors (26.6%), life-threatening illness by 134 (25.2%), and the unexpected death of a family member, relative or close person by 130 (24.5%).

The most frequently observed traumatic experience in male defectors (170) was witnessing or experiencing a serious incident or accident reported by 80 (47.1%), followed by witnessing the deaths of others by 76 (44.7%), being subjected to forced imprisonment by 69 (40.6%), surviving a natural disaster by 57 (33.5%), and witnessing the death of a family member by 52 (30.6%). For female defectors (361), the most frequent traumatic experience was witnessing or experiencing the deaths of others reported by 116 (32.1%), followed by being arrested by the police or being forcibly repatriated by 114 (31.6%), being subjected to forced imprisonment by 104 (28.8%), illness by 99 (27.4%), and being involved in a serious incident or accident by 85 (23.5%). There was a significant gender difference in the ratio of those with particular types of traumatic experience. A higher ratio of men experienced a serious incident or accident, natural disaster, physical assault by a stranger, forced imprisonment, torture, and the death of family member or the deaths of others compared to women. Meanwhile, a higher ratio of women experienced sexual assault by an acquaintance or stranger compared to men.

Table 1. Frequency of traumatic experiences (%)

Type	Nature	Total (N=531)	Male (n=170)	Female (n=361)	χ^2 (df=1)
Noninter- personal Trauma	Serious incident or accident	165(31.1)	80(47.1)	85(23.5)	29.83***
	Natural disaster	141(26.6)	57(33.5)	84(23.3)	6.24*
Interpersonal Trauma	Physical assault by an acquaintance	75(14.1)	31(18.2)	44(12.2)	3.49
	Physical assault by a stranger	70(13.2)	34(20.0)	36(10.0)	10.15***
	Sexual assault by an acquaintance	9(1.7)	0(0.0)	9(2.5)	4.31*
	Sexual assault by a stranger	23(4.3)	0(0.0)	23(6.4)	11.32***
	Sex before 18 years old	10(1.9)	3(1.8)	7(1.9)	.02
Imprisonment and repatriation	Forced imprisonment	173(32.6)	69(40.6)	104(28.8)	7.30**
	Torture	75(14.1)	39(22.9)	36(10.0)	16.03***
	Arrest by the police or forcible repatriation	162(30.5)	48(28.2)	114(31.6)	.61
Serious Illness	Illness	134(25.2)	35(20.6)	99(27.4)	2.86
Death Trauma	Death of a family member	130(24.5)	52(30.6)	78(21.6)	5.04*
	Deaths of others	192(36.2)	76(44.7)	116(32.1)	7.91**

* $p < .05$, ** $p < .01$, *** $p < .001$.

Different levels of complex PTSD, PTSD symptoms and depression according to the frequency of traumatic experiences

Table 2 shows the result of ANOVAS that tested how levels of complex PTSD, PTSD symptoms and depression vary according to the frequency of traumatic experiences.

There were meaningful differences in the levels of complex PTSD, PTSD symptoms and depression among the group without any traumatic experience, the group with one to three traumatic experiences, and the group with four or more traumatic experiences. The group with four or more traumatic experiences scored higher on alterations in attention or

Table 2. Mean and Standard Deviation of complex PTSD, PTSD symptoms and depression according to the frequency of traumatic experiences

Symptoms	Frequency of traumatic experiences			<i>F</i> (2, 528)	Tukey
	None ¹ (<i>n</i> =99)	1~3 ² (<i>n</i> =281)	4 or more ³ (<i>n</i> =151)		
Alterations in regulation of affect and impulses	5.40(5.16)	6.66(4.82)	8.38(5.57)	10.92***	3>1,2
Alterations in Attention or consciousness	2.50(2.89)	3.33(3.34)	4.46(3.89)	10.48***	3>1,2
Alterations in self-perception	2.83(3.48)	4.17(4.41)	6.35(5.36)	19.48***	3>2>1
Alterations in the perception of the perpetrator	0.87(1.69)	1.20(1.95)	2.10(2.35)	13.74***	3>2>1
Alterations in relations with others	2.53(2.54)	3.23(2.87)	5.03(3.82)	23.48***	3>1,2
Somatization	2.42(2.73)	3.30(3.37)	4.62(3.72)	13.80***	3>1,2
Alterations in systems of meaning	0.57(1.05)	0.83(1.46)	1.41(1.93)	10.47***	3>1,2
Re-experiencing	1.71(2.10)	3.32(3.01)	4.69(3.28)	31.01***	3>2>1
Avoidance	1.89(2.37)	3.32(3.31)	4.58(3.69)	20.47***	3>2>1
Hyperarousal	2.80(2.87)	4.17(3.53)	5.37(3.88)	16.20***	3>2>1
Depression	13.98(7.49)	15.48(8.63)	17.91(10.45)	6.31***	3>1,2

*** $p < .001$.

consciousness, alterations in attention or consciousness, alterations in relations with others, somatization, and alterations in systems of meaning compared to the other two groups. The group with four or more traumatic experiences scored the highest on alterations in self-perception, alterations in perception of the perpetrator, re-experiencing, avoidance, and hyperarousal symptoms, followed by the group with one to three traumatic experiences and then the group without any traumatic experience. The group with four or more traumatic experiences scored significantly higher on the level of depression compared to the other two groups.

Different levels of complex PTSD, PTSD symptoms and depression according to the type of traumatic experiences

In order to compare the levels of complex PTSD, PTSD symptoms and depression according to the trauma type, t-test was carried out between the group that experienced each type of traumatic experience and the group that did not among the 432 North Korean defectors with one or more traumatic experiences. Table 3 shows the results. The group that experienced interpersonal trauma such as physical and sexual assault by a stranger had significantly higher scores on all complex PTSD and PTSD symptoms as well as more severe depression compared to the group that did not. The group that had experienced forced imprisonment, torture, arrest by the police or forcible repatriation scored significantly higher on alterations in attention or consciousness, alterations in perception of the perpetrator, alterations in relations with others, re-experiencing, avoidance, and hyperarousal symptoms as well as depression compared to the group that did not. The group that experienced life-threatening illness had significantly higher scores on all complex PTSD symptoms except for alterations in perception of the perpetrator and all PTSD symptoms compared to the group that did not. The group that had experienced or witnessed the death of a family member or the deaths of others showed significant differences with the group that had not when it came to alterations in attention or consciousness in perception of the perpetrator but showed no significant difference in PTSD symptoms. The group that had experienced noninterpersonal trauma like a serious incident or accident or a natural disaster did not have any statistically significant difference with the group that had not in the levels of complex PTSD, PTSD symptoms and depression.

Ratio of complex PTSD, PTSD and dual diagnosis according to the type of traumatic experiences

432 defectors who had suffered from traumatic experiences were classified according to the diagnostic criteria of complex PTSD and PTSD, and 207 (47.9%) were not classified as either. 49 (11.3%) corresponded to complex

Table 3. Mean and Standard Deviation of complex PTSD, PTSD symptoms and depression according to the type of traumatic experiences (The table below seems to have formatting issues.)

Symptoms	Noninterpersonal trauma		Interpersonal trauma		Imprisonment and repatriation		Serious illness		Death trauma			
	Yes (n=233)	No (n=199)	Yes (n=139)	No (n=293)	Yes (n=215)	No (n=217)	Yes (n=134)	No (n=298)	Yes (n=251)	No (n=181)	t (430)	
Alterations in regulation of affect and impulses	6.87 (4.98)	7.72 (5.32)	8.87 (5.65)	6.50 (4.72)	7.77 (5.31)	6.83 (4.97)	8.77 (5.47)	6.59 (4.86)	7.71 (5.44)	6.65 (4.68)	4.15 ^{***}	2.11 [*]
Alterations in attention or consciousness	3.76 (3.62)	3.68 (3.53)	4.44 (3.84)	3.38 (3.40)	4.16 (3.62)	3.28 (3.48)	4.92 (4.40)	3.18 (2.99)	3.82 (3.82)	3.59 (3.21)	4.81 ^{***}	.64
Alterations in self-perception	5.15 (4.89)	4.68 (4.83)	6.82 (5.21)	4.04 (4.43)	5.31 (5.03)	4.56 (4.68)	6.03 (5.16)	4.44 (4.65)	5.26 (5.04)	4.48 (4.59)	3.18 ^{**}	1.65
Alterations in perception of perpetrator	1.58 (2.11)	1.44 (2.18)	2.38 (2.37)	1.10 (1.89)	1.74 (2.20)	1.29 (2.06)	1.56 (2.12)	1.50 (2.11)	1.71 (2.37)	1.25 (1.74)	.25	2.25 [*]
Alterations in relations with others	4.09 (3.51)	3.59 (3.13)	4.96 (3.69)	3.33 (3.03)	4.46 (3.66)	3.27 (2.88)	4.38 (3.40)	3.63 (3.29)	4.13 (3.54)	3.48 (3.02)	2.16 [*]	1.97 [*]
Somatization	3.96 (3.64)	3.52 (3.43)	4.43 (3.58)	3.44 (3.49)	4.11 (3.70)	3.41 (3.37)	5.03 (4.00)	3.18 (3.17)	3.85 (3.54)	3.63 (3.56)	5.12 ^{***}	.65

* p<.05, ** p<.01, *** p<.001.

Table 3. (continued)

Symptoms	Event trauma			Interpersonal trauma			Imprisonment and repatriation			Illness			Death trauma		
	Yes (n=233)	No (n=199)	t (430)	Yes (n=139)	No (n=293)	t (430)	Yes (n=215)	No (n=217)	t (430)	Yes (n=134)	No (n=298)	t (430)	Yes (n=251)	No (n=181)	t (430)
Alterations in meaning systems	1.06 (1.69)	1.00 (1.62)	.33	1.61 (2.07)	0.76 (1.34)	5.08***	1.21 (1.79)	0.85 (1.49)	2.25*	1.31 (1.83)	0.91 (1.56)	2.36*	1.14 (1.78)	0.89 (1.47)	1.56
Re-experiencing	3.96 (3.21)	3.61 (3.13)	1.15	4.87 (3.47)	3.29 (2.89)	4.97***	4.31 (3.19)	3.29 (3.08)	3.35***	4.49 (3.27)	3.49 (3.08)	3.08**	4.02 (3.55)	3.40 (3.67)	1.93
Avoidance	3.82 (3.52)	3.68 (3.45)	.42	4.58 (3.75)	3.37 (3.29)	3.93***	4.30 (3.71)	3.23 (3.16)	3.23***	4.54 (3.48)	3.41 (3.44)	3.14**	4.02 (3.55)	3.40 (3.37)	1.81
Hyperarousal	4.57 (3.71)	4.62 (3.69)	-.16	5.26 (3.80)	4.28 (3.61)	2.60**	5.11 (3.92)	4.08 (3.39)	2.93**	5.95 (3.83)	3.98 (3.48)	5.26***	4.69 (3.85)	4.45 (3.49)	.66
Depression	15.86 (9.13)	16.89 (9.62)	-1.14	18.39 (9.93)	15.36 (8.94)	3.17**	17.52 (10.15)	15.16 (8.38)	2.64**	18.75 (9.68)	15.25 (9.03)	3.64***	16.26 (9.60)	16.44 (9.05)	-.19

* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 4. Ratio of complex PTSD, PTSD and dual diagnosis according to the type of traumatic experiences (%)

Type of trauma	Experience	Diagnosis				χ^2 (df=3)
		Non-diagnosed	Complex PTSD	PTSD	Dual diagnosis	
Noninterpersonal trauma	yes(n=233)	113(48.5)	28(12.0)	33(14.2)	59(25.3)	.44
	no(n=199)	94(47.2)	21(10.6)	30(15.1)	54(27.1)	
Interpersonal trauma	yes(n=139)	47(33.8)	21(15.1)	18(12.9)	53(38.1)	22.67***
	no(n=293)	160(54.6)	28(9.6)	45(15.4)	60(20.5)	
Imprisonment and repatriation	yes(n=215)	92(42.8)	22(10.2)	34(15.8)	67(31.2)	7.36
	no(n=217)	115(53.0)	27(12.4)	29(13.4)	46(21.2)	
Serious illness	yes(n=134)	49(36.6)	16(11.9)	17(12.7)	52(38.8)	17.64***
	no(n=298)	158(53.0)	33(11.1)	46(15.4)	61(20.5)	
Death trauma	yes(n=251)	114(45.4)	28(11.2)	37(14.7)	72(28.7)	2.27
	no(n=181)	93(51.4)	21(11.6)	26(14.4)	41(22.7)	

*** $p < .001$.

PTSD diagnostic criteria, 63 (14.6%) to PTSD criteria, and 113 (26.2%) to both. There was no significant gender difference in diagnosis ($\chi^2(3)=2.20$, $p > .10$). Table 4 shows the ratio of diagnosis according to the type of trauma. There were statistically significant differences in the diagnosis according to the presence of Interpersonal trauma or serious illness. The groups with one of these two types of trauma were significantly more likely to be diagnosed with both complex PTSD and PTSD compared to the groups without one of them. There was no significant group difference in the diagnosis between those with or without noninterpersonal trauma, imprisonment and repatriation, or death trauma. The dual diagnosis group had a significantly higher level of depression ($M=24.15$, $SD=9.92$) compared to the complex PTSD group ($M=18.18$, $SD=7.18$) or PTSD group ($M=16.81$, $SD=6.53$).

Predictability of trauma type for complex PTSD, PTSD, and dual diagnosis

Logistic regression analysis was carried out to identify the type of traumatic experience that would effectively discriminate each diagnosis group from the non-diagnosed group of those who had experienced trauma but do not meet the criteria for either complex PTSD or PTSD. Table 5 shows the results. Each type of traumatic experience and its total score was entered as the predictor variable, and it was found that interpersonal trauma ($\beta=.75$, $p<.01$) was the only meaningful predictor variable in discriminating the complex PTSD group from the non-diagnosed group. Those with interpersonal trauma were 2.11 times more likely to be diagnosed with complex PTSD than not. None of the trauma types had significant discriminatory value between the PTSD group and non-diagnosed group. Interpersonal trauma ($\beta=.87$, $p<.001$) and illness trauma ($\beta=1.05$, $p<.001$) had significant discriminatory power between the dual diagnosis and non-diagnosed group. Those with interpersonal

Table 5. results of logistic regression analysis on the discrimination of complex PTSD, PTSD, and dual diagnosis group

Step	Predictor variable	$\chi^2(df)$	$\chi^2_{\text{chg}}(df)$	β	SE	Wald	Exp(β)	CL(95%)	
								Lower	Upper
Complex PTSD group and non-diagnosed group									
1	Interpersonal trauma	9.24(1)***	-	.75	.24	9.64**	2.11	1.32	3.37
PTSD group and non-diagnosed group									
Dual diagnosis group and non-diagnosed group									
1	Interpersonal trauma	21.25(1)***	-	.87	.19	19.80***	2.39	1.63	3.50
2	Serious illness	37.76(2)***	16.51(1)***	1.05	.26	16.26***	2.85	1.71	4.75

Note. CL: confidence interval. β , Wald, and Exp(β) reflect values from the final regression equation.

** $p<.01$, *** $p<.001$.

trauma or serious illness were 2.39 times and 2.85 times more likely to be classified as the dual diagnosis group than non-diagnosed group, respectively.

DISCUSSION

This study aimed to explore whether the levels of complex PTSD, PTSD symptoms and depression differed by the type of trauma that North Korean defectors had experienced. Analysis of the trauma experienced by 531 North Korean defectors in Hanawon found that the most common traumatic experience was witnessing the deaths of others, which was reported by 36.2% of the respondents; followed by being subjected to forced imprisonment by 32.6%; being involved in a serious incident or accident by 31.1%; and experiencing arrest by the police or forcible repatriation by 30.5%. The number of male defectors who had experienced trauma was higher than that of females for most traumatic events apart from arrest by the police and forcible repatriation, but the ratio of those who were sexually assaulted by a stranger or acquaintance was higher among females. The comparison of symptoms according to the frequency of traumatic experiences found that the group with four or more traumatic experiences had higher scores on all symptoms of complex PTSD and PTSD as well as higher level of depression than the group with one to three traumatic experiences. These findings partially support the opinion that traumatic experiences have a cumulative effect and thus, higher frequency leads to higher risk of PTSD (Yehuda 2001). The results of the study also show that there is a positive correlation between the frequency of trauma and the re-experiencing of symptoms of PTSD (C.O. Park 2007). This demonstrates that the amount of trauma experienced by North Korean defectors can influence the levels of complex PTSD, PTSD symptoms and depression.

But, analysis of different types of traumatic events found that there were significant differences in symptoms according to interpersonal trauma, imprisonment and repatriation, and serious illness. Those who had experienced interpersonal trauma scored significantly higher on all symptoms of complex PTSD and PTSD than those who had not, and those who had suffered a life-threatening illness had significantly higher scores on

all symptoms of complex PTSD and PTSD except for alterations in perception of the perpetrator. Meanwhile, those who had experienced imprisonment and torture, arrest by the police and forcible repatriation scored significantly higher on alterations in attention or consciousness, alterations in relations with others, somatization, and alterations in systems of meaning. Those who had experienced interpersonal trauma or serious illness were more likely to be diagnosed with both complex PTSD and PTSD and thus classified as the dual diagnosis group compared to those who had not experienced these traumas. Interpersonal trauma or serious illness was also identified as an important discriminatory factor between the complex PTSD and dual diagnosis group. Those who had experienced interpersonal trauma were 2.11 times more likely to be diagnosed with complex PTSD compared to those who had experienced trauma but were not diagnosed with either complex PTSD or PTSD. Those who had experienced interpersonal trauma or serious illness were more likely to have a dual diagnosis by 2.39 times and 2.85 times than did not experienced these trauma, respectively.

These results on the relationships among trauma types and levels of symptoms, ratio of diagnosis, and predictability for diagnosis all illustrated that among the different types of traumatic events, interpersonal trauma and serious illness are the most important in understanding complex PTSD and PTSD of North Korean defectors. Interpersonal traumas are man-made and serious illnesses are directly linked to the person's life. These characteristics seem to be the reasons that they leave behind a more severe psychological impact on North Korean defectors compared to noninterpersonal trauma or witnessing the death of a family member and the deaths of others. There was not much difference between this study and preliminary studies (S.R. Kang 2001; J.M. Lee 2005) in terms of the frequency of trauma often experienced by North Korean defectors. For instance, being arrested by the police, being forcibly repatriated to North Korea or witnessing the deaths of family members and others were found to be high-frequency traumatic events in this study as well. However, in this study, these events did not provide any meaningful explanation about complex PTSD and PTSD in North Korean defectors. The group that had experienced more traumatic events did score higher on levels of complex PTSD, PTSD symptoms and depression, but logistic regression analysis demonstrated that it was more the type of trauma,

such as interpersonal trauma or serious illness, than the frequency of the traumatic events that had greater influence on the diagnosis.

These results suggest several factors that must be considered when addressing the relationship between North Korean defectors' traumatic experiences and PTSD. Firstly, it is necessary to pay attention to the type and nature of traumas in addition to their amount and frequency in order to better understand PTSD in North Korean defectors. In this study, the total score of traumatic events was not included as statistically significant predictor variables. Also, noninterpersonal traumatic events had a higher frequency than interpersonal trauma or serious illness, but they did not have significant influence on the symptoms and diagnosis of complex PTSD and PTSD. This demonstrates that the nature of trauma is more important than the amount, which is in line with the preliminary research (C.H. Hong 2005) that found no difference in the level of trauma between the group of North Korean defectors who meet all DSM-IV diagnostic criteria for PTSD and the group who only partially meet the criteria.

Secondly, the severity of trauma is also important. Studies on North Korean defectors' trauma have found that high-frequency traumas include witnessing public executions, people dying of starvation, and beatings or people being punished for wrongful political reasons; the fear of being found; and experiencing border checks by guards (S.R. Kang 2001). The refugees who leave North Korea to come to South Korea have to live with extreme anxiety and tension until they finally enter South Korea. But we need to be careful in determining whether their experiences in North Korea or during their stay in a third country correspond to the traumatic events as defined by the DSM-IV diagnostic criteria for PTSD. For instance, it needs to be determined whether witnessing public executions in North Korea corresponds to "experiencing, witnessing, or being confronted with an event that involves actual or threatened death or serious injury, or a threat to the physical integrity of oneself or others" and if it is accompanied by "intense fear, helplessness, or horror" afterward. This study found that witnessing the deaths of family members or others did not have a significant impact on the diagnosis of complex PTSD or PTSD, and this suggests that the severity of these traumatic events and the level of psychological effect that these events had on the individual must be understood as well.

Thirdly, complex PTSD must be considered in addition to PTSD in the psychological evaluation and treatment of North Korean defectors. In this study, 14.6% of the traumatized defectors were diagnosed with PTSD and 11.3% with complex PTSD, but those meeting both diagnostic criteria accounted for a much higher 26.2%. This supports the opinion of Pelcovitz et al. (1997) that symptoms of complex PTSD often accompany symptoms of PTSD. This result also shows that approaching North Korean defectors' traumas and psychological aftereffects from the perspective of PTSD alone could risk overlooking the presence of complex PTSD and its psychological impact. Complex PTSD cannot be treated effectively with PTSD treatments (Berlinger and Saunders 1996; Hall, Mullee, and Thompson 1995), and the comorbid of DESNOS could have a negative influence on the treatment of PTSD (Ford and Kidd, 1998; Zlotnick 1999). Therefore, when providing psychological treatment for traumatized North Korean defectors, it would be effective to systematically evaluate them for the possible diagnosis of complex PTSD first.

Fourth, there must be considerations about the possibility of defectors suffering from both complex PTSD or PTSD and depressive disorder. This study found that the dual diagnosis group, which is composed of those who meet the diagnostic criteria for both complex PTSD and PTSD, have a significantly higher risk of having depression compared to the groups diagnosed with either complex PTSD or PTSD only, indicating that the dual diagnosis group struggles the most with psychological difficulties. The mean score of the CES-D scale for the dual diagnosis group was 24, which is lower than the diagnostic criteria for major depressive disorders (25) but higher than the cut-off score of 21 for this scale (M.J. Cho and K.H. Kim 1993), showing that their depression is sufficiently severe to warrant clinical attention. These results are in line with the opinion that those who experienced interpersonal trauma display depressive symptoms and complex PTSD symptoms in addition to PTSD symptoms (Courtois 2004) as well as preliminary research findings that the group with both complex PTSD and PTSD suffers from a higher level of anxiety and depression (J.M. Lee and C.H. Hong 2008). The fact that depressive symptoms are more severe in the dual diagnosis group suggests that treatment for North Korean defectors with complex PTSD and PTSD must be accompanied by a therapeutic approach

for depression.

This study is meaningful because it identifies the different symptoms of complex PTSD and PTSD for different trauma types, and demonstrates that traumatic events that are man-made or are directly linked to life such as interpersonal trauma and serious illness have a more significant influence on the diagnosis than noninterpersonal traumas. Another meaningful contribution of this study is that it shows the need to consider complex PTSD and dual diagnosis in addition to simple PTSD in order to understand and treat the psychological health problems of traumatized North Korean defectors. Despite such meaningful results, the study does not take into account the time of escaping from North Korea or the cumulative frequency and duration of particular traumatic events and thus fails to prove how these factors influence the symptoms and diagnosis. Future research should explore how the level of trauma experienced by the defectors during their stay in a third country impacts their psychological health as well as the impact of repeated and prolonged exposure to interpersonal trauma on their psychological health. This study was unable to examine changes in the level of symptoms and depression over a period of time because it focused on PTSD symptoms and diagnosis only in North Korean defectors who had recently arrived in South Korea and at a single point in time. The effect of North Korean defectors' traumatic experiences on depression could change over the course of settling in South Korea (Y.A. Cho et al. 2005). Therefore, a longitudinal study that examines the relationship among traumas and complex PTSD, PTSD and depression can identify how trauma type influences changes in symptoms and diagnosis.

REFERENCES

Books and Articles in Korean

- Ahn, Hyun-Nie. 2005. "An Exploratory Study on the Effects of Psychological Trauma on Posttraumatic Stress Symptoms and Personality Characteristics in Adolescents." *Korean Journal of Counseling and Psychotherapy* 17 (1): 217-231.
- _____. 2007. "An Empirical Review of Complex Trauma." *Korean Journal of*

- Psychology: General* 26 (1): 105-119.
- Cho, Maeng-Je, and Kye-Hee Kim. 1993. "Diagnostic Validity of the CES-D(Korean Version) in the Assessment of DSM-III-R Major Depression." *Journal of the Korean Neuropsychiatric Association* 32 (3): 381-399.
- Cho, Sang-Hyuk. 2002. "Human Right Problem for the North Koreans Displaced in China : State and Aid." Master's thesis. Chonnam National University.
- Cho, Young-A, Woo-Taek Jeun, Jong-Ja Yu, and Jin-Sup Um. 2005. "Predictors of Depression Among North Korean Defectors: A 3-year Follow-up Study." *Korean Journal of Counseling and Psychotherapy* 17 (2): 467-484.
- Chon, Kyum-Koo, and Min-Kyu Rhee. 1992. "Development of Korean Version of CES-D: A Preliminary Study." Presented at the Annual Conference of the Korean Psychological Association.
- Hong, Chang-Hyung. 2005. "(The) 3 year follow up study of posttraumatic stress disorder of North Korean defectors." Master's thesis. Yonsei University.
- _____, Jong-Ja Yu, Young-A Cho, Jin-Sup Um, Hyun-Ji Ku, Seung-Won Seo, Eun-Mi Ahn, Sung-Gil Min, and Woo-Taek Jeun. 2006. "A 3-Year Follow-Up Study of Posttraumatic Stress Disorder among North Korean Defectors." *Journal of the Korean Neuropsychiatric Association* 45 (1): 49-56.
- Jeong, Ji-Sun, and Hyun-Nie Ahn. 2008. "School Violence in Adolescents as a Complex Trauma." *Korean Journal of Counseling and Psychotherapy* 20 (1): 145-160.
- Kang, Seong-Rok. 2001. "Development of trauma scale for North Korean refugee." Master's thesis. Yonsei University.
- Kim, Hee-Kyung, and Soo-Sung Oh. 2010. "The MMPI-2 Profile of North Korean Female Refugees." *Korean Journal of Psychology: General* 29 (1): 1-20.
- Kim, Jong-Nam, Yun-Kyung Choi, and Jung-Min Chae. 2008. "North Korean Defectors' depression through the CES-D and the Rorschach test." *Korean Journal of Psychological and Social Issues* 14 (2): 41-61.
- Kwak, Hae-Ryong. 2001. "Study on the Situations and Problems of North Korean Defectors." Master's thesis. Myongji University.
- Lee, Ji-Min. 2007. "Syndrome in Survivors of Pologned Repeated Trauma: Centered on Prostituted Women." Master's thesis. Pusan National University.
- _____, and Chang-Hee Hong. 2008. "The Complex Post-Traumatic Stress Disorder of Prostituted Women." *Korean Journal of Counseling and Psychotherapy* 20 (2): 553-573.
- Lee, Sook-Young. 2005. "Correlations between Traumatic Experience and Marital Satisfaction Scale of an Escapee from North Korea: Centered on Dwelling

- in North Korea, Escaping from North Korea, Adapting to South Korea.” Master’s thesis. Korea University.
- Ministry of Unification. 2012. *Entrance of North Korean Defectors*. <http://uniko-rea.go.kr>.
- Oh, Soo-Seong. 2006. *Report on the Study of Life and Aftereffects in Activists of May 18 Democratic Uprising*. May 18 Memorial Foundation.
- Park, Chol-Ok. 2007. “The relationship between interpersonal trauma exposure, experiential avoidance, forgiveness and Posttraumatic Stress Disorder Symptoms in North Korean refugee.” Master’s thesis. Ewha Woman’s University.
- Ra, Young-Sun, Myoung-Ho Hyun, Sung-Yi Cha, and Sun-Young Yun. 2009. “Relationship between a Childhood Emotional Abuse, Symptoms of Complex Posttraumatic Stress, and Forgiveness.” *Korean Journal of Clinical Psychology* 29 (1): 21-34.
- Sohn, Eui-Jeong. 2010. “The symptoms of stress that follow Complex Post Traumatic Stress Disorder.” Master’s thesis. Kyungpook University.
- Yang, Kye-Ryung. 2008. “The Effects of Psychological Maltreatment and Ego Resiliency on the Complex Post-Traumatic Stress Disorder in Female Victims of Domestic Violence.” Master’s thesis. Kangwon University.
- Yu, Jong-Ja. 2006. “Mental health of North Korean refugees in China: during the protection period.” Master’s thesis. Yonsei University.

Books and Articles in English

- Allen, J. G. 1995. *Coping with trauma: A Guide to self understanding*. Washington, DC: American Psychiatric Press.
- American Psychiatric Association. 1994. *Diagnostic and statistical manual of mental disorders*. 4th ed. Washington, DC: American Psychiatric Association.
- Berliner, L., and B. E. Saunders. 1996. “Treating fear and anxiety in sexually abused children: Results of a controlled 2-year follow-up study.” *Child Maltreatment* 1: 194-309.
- Courtois, C. A. 2004. “Complex trauma, complex reactions: Assessment and treatment.” *Psychotherapy: Theory, Research, Practice, Training* 41: 412-415.
- Fleming, J., P. E. Mullen, B. Sibthorpe, and G. Bammer. 1999. “The long-term impact of childhood sexual abuse in Australian women.” *Child Abuse and Neglect* 23: 145-159.
- Foa, E. B., L. Cashman, L. Jaycox, and K. Perry. 1997. “The validation of a self-report measure of posttraumatic stress disorder: The Posttraumatic

- Diagnostic Scale." *Psychological Assessment* 9: 445-451.
- Ford, J. D., and P. Kidd. 1998. "Early childhood trauma and disorders of extreme stress as predictors of treatment outcome with chronic PTSD." *Journal of Traumatic Stress* 11: 743-761.
- Goenjian, A. K., A. M. Steinberg, L. M. Najarian, L. A. Fairbanks, M. Tashjian, and R. S. Pynoos. 2000. "Prospective study of posttraumatic stress, anxiety, and depressive reactions after earthquake and political violence." *American Journal of Psychiatry* 157: 911-916.
- Hall, Z., M. Mullee, and C. Thompson. 1995. "A clinical and service evaluation of group therapy for women survivors of childhood sexual abuse." In *Research Foundations for Psychotherapy*, eds. M. Aveline and D. Shapiro. New York: Wiley, 263-279.
- Herman, J. 1992. "Complex PTSD: A syndrome in survivors of prolonged and repeated trauma." *Journal of Traumatic Stress* 5: 377-391.
- Horowitz, M., and N. Wilner. 1976. "Stress films, emotion, and cognitive response." *Archives of General Psychiatry* 33: 1339-1344.
- Kessler, R. C., A. Sonnega, E. Bromet, M. Hughes, and C. Nelson. 1995. "Posttraumatic stress disorder in the National Comorbidity Survey." *Archives of General Psychiatry* 52: 1048-1060.
- Kinzie, J. D. 1986. "Severe posttraumatic stress disorder among Cambodian refugees: Symptoms, clinical course, and treatment approaches." In *Disaster stress studies: New methods and findings*, ed. J. H. Shore. Washington, DC: American Psychiatric Press, 123-140.
- Newman, E., D. S. Riggs, and S. Roth. 1997. "Thematic resolution, PTSD, and complex PTSD: The relationship between meaning and trauma-related diagnosis." *Journal of Traumatic Stress* 10: 197-213.
- Pelcovitz, D., B. A. van der Kolk, S. Roth, F. Mandel, S. Kaplan, and P. Resick. 1997. "Development of criteria set and a structured interview for disorder of extreme stress(SIDES)." *Journal of Traumatic Stress* 10: 3-16.
- Quimette, P., G. Saxe, and B. A. van der Kolk. 1996. "The Complex PTSD Interview." In *Measurement of Stress, Trauma, and Adaptation*, ed. H. Stamm. Sidran Press.
- Radloff, L. 1977. "The CES-D scale: A self-report depression scale for research in the general population." *Applied Psychological Measurement* 1: 385-401.
- Resnick, H. S., D. G. Kilpatrick, B. S. Dansky, B. E. Saunders, and C. L. Best. 1993. "Prevalence of civilian trauma and posttraumatic stress disorder in a representative national sample of women." *Journal of Consulting and Clinical*

Psychology 61: 984-991.

- Sack, W. H., J. R. Seeley, and G. N. Clarke. 1997. "Does PTSD transcend cultural barriers? A study from the Khmer Adolescent Refugee Project." *Journal of the American Academy of Child and Adolescent Psychiatry* 36: 49-54.
- Schiraldi, G. 2000. *Posttraumatic stress disorder sourcebook*. Illinois: McGraw-Hill.
- Shalev, A. Y., S. F. Freedman, T. Peri, D. Brandes, T. Sahar, S. P. Orr, and R. K. Pitman. 1998. "Prospective study of posttraumatic stress disorder and depression following trauma." *American Journal of Psychiatry* 155: 630-637.
- Shore, J. H., W. M. Vollmer, and E. L. Tatum. 1989. "Community patterns of post-traumatic stress disorders." *Journal of Nervous and Mental Disease* 177: 681-685.
- Sierles, F. S., J. J. Chen, M. L. Messing, J. K. Besyners, and M. A. Taylor. 1986. "Concurrent psychiatric illness in non-Hispanic outpatients diagnosed as having posttraumatic stress disorder." *Journal of Nervous and Mental Disease* 174: 171-173.
- Spitzer, R., S. Kaplan, and D. Pelcovitz. 1989. "Victimization disorder: A needed addition to DSM-IV." *Proceedings of the 142nd Annual Meeting of the American Psychiatric Association Summary* 142, 234.
- Taylor, S., G. J. G. Asmundson, and R. N. Carleton. 2006. "Simple versus complex PTSD: A cluster analytic investigation." *Journal of Anxiety Disorder* 20: 459-472.
- Terr, L. C. 1992. "Childhood trauma: An outline and overview." In *Annuals progress in child psychiatry and child development*, eds. M. E. Hertzig and E. A. Farber. New York: Brunner/Mazel, 165-186.
- Van der Kolk, B. A. 2005. "Developmental trauma disorder." *Psychiatric Annals* 35: 401-408.
- _____, and C. A. Courtois. 2005. "Editorial comments: Complex developmental trauma." *Journal of Traumatic Stress* 18: 385-388.
- Yehuda, R. 2001. "Biology of posttraumatic stress disorder." *Journal of Clinical Psychology* 62: 41-46.
- Zlotnick, C. 1999. "Antisocial personality disorder, affect dysregulation and childhood abuse among incarcerated women." *Journal of Personality Disorder* 13: 90-95.
- Zucker, M., J. Spinazzola, M. Blaustein, and B. A. van der Kolk. 2006. "Dissociative symptomatology in posttraumatic stress disorder and disorder of extreme stress." *Journal of Trauma & Dissociation* 7: 19-31.