

# Posttraumatic Stress Disorder in Former “Comfort Women”

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## ABSTRACT

**Objective:** This study investigated the mental health of former “comfort women,” who serviced the Japanese Imperial Military during the Second World War.

**Method:** We evaluated 26 former comfort women’s life histories, cognitive functioning, DSM-IV diagnosis of posttraumatic stress disorder (PTSD), depression, paranoid state, anger, and Rorschach test results, and compared the data with those of 24 healthy women.

**Results:** Cognitive functioning was not significantly different between former comfort women and the comparison group. All 26 former comfort women had undergone traumatic experiences such as sexual slavery, and had suffered PTSD symptoms at least once in their lives. Of the 26, 8 (30.8%) were diagnosed as having PTSD, as opposed to none in the comparison group. The women’s PTSD symptoms were characterized by avoidance behavior, intrusive and distressing recollections, and anger. There were no significant differences in depression or paranoid state between the two groups, but former comfort women had impairments in anger control. Former comfort women with PTSD were more depressed. On the Rorschach test, former comfort women revealed characteristic responses related not only to sex and morbidity but also to anger and violence.

**Limitations:** The small number of subjects might not represent all former comfort women. Some data collected by self-report might limit the objectivity of the results.

**Conclusions:** The results suggest that former comfort women are still suffering from traumatic memories, symptoms of PTSD, including avoidant behavior, and anger control impairment, even 60 years after the end of the war.

## INTRODUCTION

Sexual violence not only harms its victims’ immediate physical and mental health but may also cause long-term psychiatric sequelae for the rest of their lives (1). Among various forms of sexual violence, one extreme type which exploits women specifically is sexual slavery during wartime. The Economic and Social Council of the United Nations (UN) (2) defined “slavery” as the status or condition of a person over whom another exercises any or all of the powers attaching to the right of ownership, including sexual access through rape or any other forms of sexual violence. The UN Commission on Human Rights (3) suggested that forced prostitution at “comfort stations,” which the Japanese Military managed during World War II, were an egregious example of sexual slavery. It suggested also that the phrase “comfort women” was not proper, and the term should be “military sexual slavery,” meaning “victims of forced prostitution, carried out by the military, for the military” (3). Former “comfort women” for the Japanese Army during WWII suffered from, not only the trauma of being sexual slaves, but also torture, wounding, diseases, starvation, and other war-related physical and psychological traumas (4-7). The use of sexual slavery and sexual violence as tactics and weapons of war is all-too-common yet often overlooked. Such atrocities demand consistent and committed action on the part of the global community (2). Nevertheless, not only have former comfort women hidden themselves, but the society surrounding them has also declined to uncover this historical war crime. Their shame regarding their past and the social stigma attached to the victims of rape have constituted additional traumas for these women. Consequently, they have lived forgotten lives, being isolated within society for the 60 years since the end of the war.

In 1991, Ms. Kim Hak-Soon of Korea revealed to the public that she was a former comfort woman. Subsequently, the Korean government and many NGO activists in Korea began investigating this concealed problem, collecting these women's histories, and providing them with social welfare assistance (4-7). Since then, other former comfort women in Korea have followed her lead; 151 former comfort women have registered with the Korean government. Nevertheless, the exact number of former comfort women who are alive in Korea remains unknown, as most of them still seem to wish to hide. In addition, international organizations, such as the UN, have included this issue in their reports on wartime sex slavery (2, 3). However, no one has conducted any systemic research on these women's mental health problems or psychiatric sequelae. There have been only a few survey reports, revealing several cases of posttraumatic stress disorder (PTSD) among Chinese (8) and Korean comfort women (9-12).

The number of former comfort women still alive is decreasing, as several former comfort women die of old age and/or diseases every year. Therefore, active and systematic research is urgently needed to identify their medical and psychiatric problems and find proper ways to help them before it is too late. This study investigated the psychiatric sequelae of former Korean comfort women, including PTSD and other related emotional problems, and compared them with age-matched healthy women.

**SUBJECT AND METHODS**

**SUBJECTS**

Of the 151 former comfort women who registered with the government, we could locate 35. However, three of them did not want to expose their pasts, and six were unable to cooperate with the study due to memory issues related to old age. Eventually, 26 women agreed to participate in this study and provided their written informed consent. The comparison group consisted of 24 age- and education-matched healthy women attending a community welfare center for the elderly in Seoul. This research project protocol was approved by the Ethics Committee of the Yonsei University Medical Center, where the work was performed.

**METHODS**

Three psychiatrists (Min, Lee and Kim) and a clinical psychologist (Shim) interviewed the subjects at special care centers for former comfort women or at

Yonsei University Medical Center. We evaluated each participant's cognitive functioning via the Korean version of the Mini-Mental State Examination (K-MMSE) (13) and obtained their demographic data and past life history using a semi-structured interview schedule. To determine the participants' psychiatric diagnoses, we utilized mental examinations and the Korean version of the Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-I) (14). All subjects rated themselves on the Korean version of the Geriatric Depression Scale (GDS) (15), the paranoid state (PS) scale (composed of 22 items from the MMPI) (16), and the Korean version of the State and Trait Anger Expression Inventory (STAXI) (17). The Rorschach test was administered to the subjects by the psychologist.

**STATISTICAL ANALYSIS**

To determine the participants' PTSD symptom frequencies, we used the SCID-I; Table 1 shows this informa-

**Table 1.** Frequency of endorsed items in DSM-IV criteria for posttraumatic disorder in former comfort women

Symptoms	Number of patients N = 26	%
Recurrent and intrusive distressing recollection of the events.	25	96.1
Recurrent distressing dreams of the events	24	92.3
Acting or feeling as if the traumatic events were recurring	8	30.7
Intense psychological distress at exposure to internal or external cues	20	76.9
Physiological reactivity on exposure to internal or external cues	22	84.6
Efforts to avoid thoughts, feelings, or conversations associated with the trauma	26	100
Efforts to avoid activities, places, or people that arouse recollections of the trauma	25	96.1
Inability to recall an important aspect of the trauma	11	42.3
Markedly diminished interest or participation in significant activities	10	38.4
Feeling of detachment or estrangement from others	13	50.0
Restricted range of affect	11	42.3
Sense of foreshortened future	25	96.1
Difficulty falling or staying sleep	25	96.1
Irritability or outburst of anger	24	92.3
Difficulty concentrating	18	69.2
Hypervigilance	20	76.9
Exaggerated startle response	18	69.2

tion. We used T-tests to examine the mean score differences on the MMSE, PS, GDS, and STAXI between former comfort women and the comparison group and also between former comfort women with and without PTSD. We employed Exner's methodology (18) to analyze all the Rorschach test results. To conduct the statistical analysis, we used SPSS version 11.0 for Windows.

## RESULTS

### AGE AND COGNITIVE FUNCTIONING

The ages of the former comfort women ranged from 72 to 87 years, and their mean age, 79.35 years (SD = 3.95), was not significantly different from that of the comparison group (77.04 years, SD = 5.78). The comfort women's mean years of education (3.12 years, SD = 3.82) was not significantly different from that of the comparison group (2.75 years, SD = 3.74). The comfort women's mean MMSE score (mean = 23.0,  $n = 26$ , SD = 3.06) was not significantly different from that of the comparison group (mean = 22.5,  $n = 24$ , SD = 4.06).

### HISTORY OF TRAUMATIC EXPERIENCES

The 26 former comfort women reported that, at ages ranging from 13 to 26 years, they were deceived, forcibly drafted, or kidnapped by Japanese government officers or their representatives and sent to comfort stations in Taiwan, China, Manchuria, or Southeast Asia. The age at the time when they were sent to the stations is as follows: four were 13 years old, one was 14 years old, seven were 16 years old, nine were 17 years old, two were 18 years old, and the remaining three women were ages 19, 22 and 26.

According to the former comfort women, they were extremely scared when they were taken to the Japanese military camp. They were forced to prostitute themselves repeatedly, more than 20 times per day, to Japanese soldiers and officers. At all times, they suffered from fear, disgust, pain, humiliation, and anger. They were paid with Army scrip, which could not be used outside of Army camps. They also reported experiencing physical traumas, including beatings and torture (16 women, 61.6%), confinement (nine women, 34.6%), starvation (nine women, 34.6%), repeated threats (eight women, 30.8%), witnessing scenes of death (people dying, being killed, etc.) (eight women, 30.8%), and venereal disease infections (three women, 11.6%).

After the war, the Army released the women, but each then had to find her own way home. All 26 barely man-

aged to return to Korea, but most found that they could not stay in their hometowns with their families, because of their feelings of shame and guilt. Only three women (11.6%) reported that they had lived with their families at least once after returning to Korea. Furthermore, 16 (61.5%) had once married, but they eventually lost their spouses to divorce or death; eight (30.8%) had given birth; and one had adopted a boy, who left her after he turned 16. Eventually, they all came to live solitary, hidden, poor, and difficult lives, isolated from society. At the time of our study, nine were living independently, 11 were receiving financial support from the government for their care, and six were living at a special care center for former comfort women (*Nanum-ui-jib* meaning "the house of sharing" in Korean).

### PHYSICAL DISORDERS

All the former comfort women reported that they suffered from various physical health issues: 19 (73.1%) reported pains related to joint or spinal disease; 13 (50.0%) reported stomach pain and difficulty with digestion; 13 (50.0%) reported a "pushing-up" feeling in their epigastria, with a hot feeling (typical symptoms of *hwa-byung*, a Korean culture-related syndrome of anger [19]); eight (30.8%) reported nervous system disorders; seven (26.9%) reported respiratory disorders; five (19.2%) reported difficulty in urination; in four (15.4%) reported diabetes; and four (15.4%) reported sequelae of physical injuries.

### MENTAL STATE AT INTERVIEW

Most of the former comfort women were reluctant to talk about themselves. Usually, at the beginning of the interviews, they would smile and thank the interviewers for showing concern for their issues, but they also would generally show some shyness and hesitation. As the interview went on, each woman eventually became enthusiastic, very eager, and frank about telling her story in detail. Many women repeatedly burst into tears whenever talking about the traumatic experiences the Japanese soldiers inflicted on them. Some impulsively expressed hatred and anger, using abusive words, when talking about Japanese politicians who seemed to be trying to minimize the issue of sex slavery.

### POSTTRAUMATIC STRESS DISORDER (PTSD)

According to the SCID-1 evaluation results, eight former comfort women (30.8%) met the criteria for PTSD. However, their histories revealed that all 26 former com-

fort women had had PTSD or partial PTSD at least once in their lives. No one in the comparison group had PTSD.

Table 1 shows the frequencies of the former comfort women's PTSD symptoms (as per the DSM-IV description of PTSD). The most common symptom was "efforts to avoid thoughts, feelings, or conversations associated with the trauma," which all 26 women reported (100%). Next, 96% of the women reported "efforts to avoid activities, places, or people that arouse recollections of the trauma," "recurrent and intrusive distressing recollection of the events," a "sense of (a) foreshortened future," and "difficulty in falling or staying asleep." In addition, more than 92% reported "recurrent distressing dreams of the events" and "irritability or outbursts of anger." More than 70% reported "intense psychological distress at exposure to internal or external cues," "physiologic reactivity upon exposure to internal or external cues," and "hyper-vigilance." However, only 30-40% of these women reported symptoms of "acting or feeling as if the traumatic event (was) recurring," "markedly diminished interest or participation in significant activities," "inability to recall an important aspect of the trauma," and "restricted range of affect."

Those with higher levels of education or other persons whom they could depend on, and those who had married or had a child, reported fewer symptoms. However, these differences were not significant.

**A case vignette: Kim YS, a 77-year-old former comfort woman.** At age 17, a village officer suggested she should go to work at a factory in Japan. She traveled by train and ship for 15 days. When she arrived at the workplace, she realized she was not in Japan but at a military camp in Taiwan. She was forced to live at a "comfort station" with about 15 other Korean girls and a few Chinese women.

Every day, she and the other comfort women had to prostitute themselves. She had to service more than 20 soldiers a day. It was painful and disgusting. When soldiers approached her for sex, they appeared to her as beasts. To Kim, the soldiers seemed to behave like "proud winners riding a horse." Some soldiers would place the barrel of a firearm into her vagina. If a comfort woman refused to submit to the soldiers, she would be confined, beaten, starved, or tortured by soldiers. Eventually, she contracted venereal disease. In addition, she had to watch other girls being beaten or even forced to have abortions. She saw girls die of wounds or diseases. Some tried to escape the camp, but there was

no place for them to hide. When she was "off duty," she would climb a small hill, gaze beyond the ocean horizon toward home, and cry. She remembers an officer who was kind to her and used to accompany her to the hill. (During her interview with one of this study's authors, Kim sang a Japanese song that he had taught her.)

One day, after several bombings, she found that she and the other comfort women had been abandoned by the soldiers. The war had ended. She had to find her own way home. At one port, she was able to take the ship with other Korean laborers who had worked for the Japanese Army. After a voyage of several days, she arrived at Busan, a southern port city in Korea. However, she did not dare go home because she felt so ashamed that her body had become "dirty." She settled in another small city and began earning her living as a peddler. She decided to live alone and not marry. Kim avoided personal relationships with neighbors due to the fear of her past being disclosed. After she opened a small grocery, she adopted a boy, a Korean War orphan who was roaming around in her area. However, when he was 16 years old, he left her.

Since leaving the comfort station, Kim has suffered from pains on her entire body, including her back and joints. She has recently begun suffering from hypertension and diabetes mellitus. Furthermore, in the past she has suffered from insomnia, social anxiety, and depressed mood. She suffered every night from nightmares of being pursued, falling, shells exploding, or being attacked by soldiers. Whenever she saw soldiers in the street or read news regarding Japan or the Japanese, she felt her heart pounding and "rising" anger with a hot flush in her head and upper chest. Physicians and herb doctors used to examine her, but their help was limited because she felt she could not let them know her life history.

In 1991, when Ms. Kim Hak Soon disclosed to the public that she was a former comfort woman, Kim decided to follow her suit. She reported her history to an NGO office, which has been giving her health and living support. Now, every Wednesday, she actively participates with many other volunteer activists in demonstrations on behalf of former comfort women in front of the Japanese Embassy in Seoul.

During our recruitment of study participants, Kim voluntarily visited the Department of Psychiatry, Severance Hospital, Yonsei University in Seoul. During her interview for this study, she thanked the authors for their recognition of the comfort women's hidden psychological pains, including hers, and for their attempt

to help them. Moreover, she revealed a long and painful history, complicated by regret and anger, and reported various symptoms: insomnia, nightmares, avoidance behavior, and anxiety attacks cued by news regarding wars or Japan or the sight of soldiers. She was diagnosed as having PTSD. Ever since, she has received regular psychiatric treatment over the course of four months. Kim has shown gradual improvement.

#### DEPRESSION, PARANOID SYMPTOMS AND ANGER

Former comfort women scored slightly higher on the GDS and PS than the comparison group did, but the differences were not significant (Table 2). On the STAXI, former comfort women scored lower on trait anger and state anger and higher scores on anger suppression and anger expression than the comparison group, but the differences were not significant. However, the score of former comfort women was significantly lower on anger control than that of the comparison group ( $t = -2.38$ ,  $df = 48$ ,  $p < 0.05$ ) (Table 2).

#### FORMER COMFORT WOMEN WITH PTSD AND WITHOUT PTSD

Among the eight women with PTSD and the 18 women without PTSD, there were no significant differences in demographical variables or results on the MMSE, PS, STAXI, and Rorschach test. However, the total GDS score of comfort women with PTSD (mean = 25.13, SD = 3.14) was significantly higher than that of comfort women without PTSD (mean = 20.22, SD = 4.75) ( $t = 3.11$ ,  $df = 24$ ,  $P < 0.05$ ).

**Table 2.** Differences between former comfort women and the healthy comparison group in depression, paranoid symptoms, and anger

	Former comfort women (n = 26) Mean(S.D.)	Comparison group (n = 24) Mean(S.D.)	t	p	df
GDS	21.73(4.84)	20.50(7.59)	.68	.50	48.00
PS	27.69(8.81)	24.83(13.59)	.87	.38	38.51
STAXI					
Anger Trait	24.58(5.55)	24.92(6.76)	-.20	.84	48.00
Anger State	10.73(2.20)	11.88(4.10)	-1.22	.23	34.61
Anger Suppression	19.58(4.78)	17.00(6.04)	1.68	.10	48.00
Anger Expression	14.42(6.03)	13.67(4.97)	.48	.63	48.00
Anger Control	21.58(4.52)	24.17(2.93)	-2.38*	.02	48.00

GDS: Geriatric Depression Scale; PS: paranoid Scale; STAXI: State and Trait Anger Expression Inventory  
\* $p < .05$

#### RORSCHACH TEST

The former comfort women's responses to the Rorschach cards were generally intense, straightforward, and generally related to violence, sex organs, sexual behavior, or injury. The following are a few of their typical responses to certain Rorschach cards.

- I. Japanese are dragging virgin girls violently. Two Japanese bring six Korean women. Men are pulling women's arms; they are bringing the women to satisfy their sexual desires, riding on horses, and wearing military clothes.
- II. The upper part is the head and the lower part is the vagina. The head is injured, too. Why is the nose bleeding? Medicine was used to wash the sex organs.
- III. It looks like two men pulling a woman's vagina. Beasts!
- IV. This is women's secret part, but these legs look like a man's penis, because the belly is facing down, but I don't know. Japanese are beating us. It looks like they are attacking us. If we resist a little bit, we will get bloody noses, because they will beat us. The lower part is a vagina; the upper part is a Japanese soldier. This is a scene of sexual intercourse.
- V. Japanese are attacking us, because we don't follow their orders. So they beat us and scare us. Legs are pulled this much apart and arms are moved this way. Their heads are like those of venomous snakes filled with the poison of anger. It looks like a person is being tortured and treated like a pig. Women are bound to a tree. Their eyes are blinded. Japanese always cut the neck. It looks like they are wetting themselves because they are too scared. Balls are curled upward. They are behaving as a king or famous person. It looks like a protruding belly. They can't breathe. It looks like two men are putting a gun into a woman's vagina.
- VI. It looks like someone peeing. There is a buttock at the bottom. It looks like a man or a woman. This is a woman's vagina, but a little weird. In some way it looks like a man's penis. A Korean's neck is cut with a steel string.
- VII. A vagina is bleeding. They look delighted, and mount on a woman. They look so proud of themselves.
- VIII. Vomiting blood. They put their penis into a woman's mouth. They do whatever they want to do. They dance and feel happy. It looks like they are exhausted and lying down.

**Table 3.** Differences in Rorschach test responses between former comfort women and the comparison group

	Former comfort women (n = 26) Mean (S.D.)	Comparison group (n = 24) Mean (S.D.)	t	p	df
Affective Ratio	.38(.16)	.46(.12)	-1.76	.85	48.00
FC	.22(.59)	.08(.28)	1.14	.26	36.60
CF	.62(.80)	.13(.45)	2.69*	.01	39.78
Space	1.08(1.65)	.21(.41)	2.50*	.01	48.00
Cooperative movement	.42(.58)	.21(.41)	1.51	.13	45.35
Aggressive movement	1.73(2.51)	.04(.20)	3.42**	<.01	25.36
Anatomy	.92(2.08)	.13(.45)	1.91	.06	27.51
Blood	.19(.69)	.00(.00)	1.41	.17	25.00
Sex	1.27(2.31)	.04(.20)	2.70*	.01	25.42
Morbid	1.27(2.07)	.25(.74)	2.35*	.02	31.69
TC/R	.38(.45)	.04(.10)	3.66**	<.01	27.80

IX. This is a woman's vagina. Both sides are legs, but they are not healthy, with many scars on the body. Are these like cancer in the vagina? Women have bumps in their vaginas. A man and a woman are drinking each other's blood.

Table 3 shows the results of using the Exner method (18) to analyze the participants' responses on the Rorschach test. There were no significant differences between former comfort women and the comparison group on the affective ratio or the form-color (FC) responses that reflect emotional control. However, the former comfort women had a significantly higher score on the color-form (CF) response ( $P < 0.05$ ), which reflects impulsive emotions. In addition, the comfort women had a significantly higher score on the space response ( $P < 0.05$ ), which reflects anxiety. There was no significant difference between two groups in cooperative movement content, which reflects perception of interpersonal relationships. However, former comfort women scored significantly higher on aggressive movement content than the comparison group did ( $P < 0.05$ ). Former comfort women recorded significantly higher mean scores than the comparison group on sex response ( $P < 0.05$ ), morbid response ( $P < 0.05$ ), and trauma content index (TC/R) ( $P < 0.01$ ). On the other hand, there were no significant differences between the groups in either anatomy or blood responses.

## DISCUSSION

The history of former comfort women, which has been previously reported or witnessed (3-12), is confirmed by our study results. Former comfort women in this study had been drafted at a young age and traumatized as sex slaves of soldiers as well as experiencing other traumas of war. After the war, they lived difficult lives, being isolated from society and suffering from various psychiatric sequelae, including PTSD and suppressed anger, for more than 60 years.

This study suggests that trauma as a sexual slave in wartime may cause PTSD at any time of life, even 60 years after the traumatic experience. In women who have been sexually assaulted, PTSD usually develops during the acute phase of adjustment, after which symptoms diminish in most victims. However, some victims may manifest chronic PTSD for many years post-assault (20). In these chronic cases, though the severity of the stressor is the primary determinant of acute PTSD, researchers have argued that pre-existing personality factors, resilience (21), and relational capacity (22) are important contributors to the development of chronic PTSD. Accordingly, based on these research findings, we can speculate upon why PTSD in former comfort women has persisted for 60 years after the trauma. First, the primary stressor of sexual slavery was so extreme and egregious it may have overwhelmed the victims' pre-existing personalities and capacity for resilience. Second, the shameful stigmatization of sex crime victims in the context of Korea's traditional culture may have aggravated the trauma. Third, the avoidance symptoms of PTSD, the "effort to avoid thoughts, feelings, conversations, activities, places, or people associated with the trauma," which we found in all former comfort women, might have prevented them from rebuilding social relationships. Previously, their isolated lives have generally been explained as due to their feelings of shame and guilt. However, this study suggests their isolated lives were also due to PTSD-related avoidance behaviors. Finally, one characteristic reason for persistent PTSD in former comfort women may be anger, which was originally a reaction to their victimization by sexual slavery and other forms of violence. However, official non-admittance of the historical facts pertaining to comfort women, by the Japanese people and the Japanese government, has continuously stimulated these women's anger. Similarly, Lagos and Kordon (23) reported that torture survivors' trauma sequelae could

continue when their torturers were declared not guilty. Therefore, psychiatrists and others treating these former comfort women's PTSD should deal with other contributing factors, including the shameful stigmatization of sex crime victims and the victims' limited abilities to create social relationships and their anger, and supporting the victims' resilience.

This study also suggests PTSD's symptom profile might differ according to the nature of the trauma. PTSD symptom profiles of former comfort women were characterized by avoidance, recollection, and anger. The most common symptoms of victims of a single rape are recurrent intrusive recollection (100%), decline in interest (100%), and constricted affect (97%) (24), or re-experience and numbness (25). Most former comfort women in this study were engaged in daily life, showing interest in and affective reaction to social phenomena surrounding them, especially, enthusiastically participating in anti-Japanese activities. Kurayama (8) pointed out that comfort women who were drafted at younger ages later showed PTSD symptoms that were of greater severity. However, this study found no such difference.

There were no significant differences in depression, paranoid symptoms, state anger, anger suppression, or anger expression between former comfort women and the comparison group. This suggests that former comfort women may have almost controlled or hidden their emotional reactions and maintained a calm and mild emotional life, like healthy elderly people. However, we found they had impaired anger control. Given stimulation, their deep-seated anger seemed easily provoked, and, in fact, the projective Rorschach test vividly revealed this. Responses on the Rorschach test were characterized by sex, trauma, impulsiveness, aggressiveness, and morbidity. The responses appeared much more morbid than the responses shown by victims of a single episode of rape (26). In practice, these women often failed to control their anger when they were stimulated. For example, some of them explosively expressed their anger and hatred, with outbursts of crying, when talking about the Japanese government, which was still trying to officially avoid admitting this past crime committed against the comfort women, or about the Japanese Prime Minister, who had visited and worshipped at the Yaskuni Shrine where the enshrined names include those of war criminals.

Another clinical characteristic of former comfort women was sadness. PTSD is frequently co-morbid with depression. We found this frequent co-morbidity in

former comfort women. As an additional characteristic finding of the mental state examination, former comfort women had frequent outbursts of tearing or crying while they talked about how much anger and "*ukwool*" ([uh-gool], a feeling that the environment is unfair or unjust) they felt. PTSD in former comfort women, which was found to be co-morbid with anger, sadness, and feelings of unfairness, may be so-called complex PTSD. Herman (1) has reported complex PTSD or other disorders of extreme stress presented by incest or childhood sexual abuse survivors who showed more severe symptoms. Researchers have hypothesized that the risk factors for this complex PTSD are early age onset, exposure to interpersonal stress, and prolonged duration. In complex PTSD, traumatic experiences have a profound impact on self-regulation, self-definition, interpersonal functioning, and adaptation style. Typical clinical features of complex PTSD include problems with anger modulation (self-destructive and impulsive behavior), dissociative symptoms, somatization, feelings of ineffectiveness, shame, despair or hopelessness, impaired relationships with others, and loss of previously sustaining beliefs. Etiological factors and symptom profiles of complex PTSD appear to partly overlap with the PTSD of former comfort women, as described in this study. In the case of complex PTSD in former comfort women, the disorder correlated to repetitive exposure to trauma for a certain period at young age and included characteristics of avoidance, anger, impaired relationships with others, and shame.

This study showed that anger and feeling of unfairness may complicate PTSD. This clinical profile seems to have elements in common with so-called *hwa-byung* ([huat-byung]) (19, 27). The Korean word *hwa* means "anger" (or "fire"), and *byung* means "disease." *Hwa-byung* is a known Korean culture-related anger syndrome. The basic clinical feature of *hwa-byung* is suppression of reactive anger to unfair social trauma. Generally, patients with *hwa-byung* had to suppress their anger in order not to jeopardize a harmonious interpersonal relationship. However, as traumatic experiences repeat, the continuously-suppressed anger accumulates, and finally *hwa-byung* develops. Symptoms of *hwa-byung* are characterized by suppressed anger, expressed anger, and feelings of unfairness, hatred, and the "hot feeling" (27). In particular, *hwa-byung* is common in women who as the socially weaker gender must suppress their anger in reaction to unfair and violent environments (28). Interestingly, many former comfort women said they have suffered from *hwa-byung*.

PTSD in comfort women is comparable to the PTSD found several decades after victimization in victims of the Nazi Holocaust (29, 30), prisoners of war (31), veterans of wars (32, 33), victims of political torture, and refugees (34). All these findings suggest that PTSD can develop several decades after trauma. However, there has been no systematic research on the similarity or difference between the PTSD of former comfort women and other types of chronic PTSD. While society has openly and officially sought, located, studied, and supported survivors of the Nazi Holocaust, victims of political torture, and veterans of wars, former comfort women have so far remained hidden for a long time, obscured not only by their own choice but by society surrounding them, probably because of stigmatization arising from the sex-relatedness of their ordeal. Accordingly, they have lost opportunities to be located, studied, helped, or treated properly in a timely manner.

This study was limited by the small number of participants and the fact that these participants might not represent all former comfort women. However, former comfort women have admittedly tried to avoid social exposure. Our participants might be more positive and more courageous than typical former comfort women, since they were willing to expose their pasts. Meanwhile, non-participant former comfort women might be more strictly avoiding social relationships and, therefore, might be suffering from more serious PTSD, anger, and depression. Hence, this study's findings may not be less significant than they would have been had all former comfort women participated. Another limitation is that we obtained the data on anger, depression, and paranoid state via self-rating scales. This subjectivity in the responses may have limited the objectivity of our findings. Moreover, we used a rather simple comparison in the statistical analysis. Unfortunately, further research with more participants, objective evaluations, and advanced statistical analysis methods seems extremely unlikely to take place in the future, because the number of former comfort women is rapidly decreasing.

More than half a century has passed since these women returned home from the comfort stations. Furthermore, some survivors have been reported in other countries, including China (8, 9). This study found that former comfort women who had accepted psychiatric treatment had shown some improvement. Regretfully, in Korea, though social support began immediately after their registration as former comfort women, a very long time had passed before these

women actually came out to the public. Several registered former comfort women die every year due to old age and/or disease. Before it is too late, the international community must begin locating hidden former comfort women, officially recognizing their suffering, minimizing their further suffering, and supporting them for a better life from this point forward.

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