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Posttraumatic Stress Disorder (PTSD) and Disorders of Extreme Stress (DESNOS) Symptoms Following Prostitution and Childhood Abuse

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With the participation of 46 prostituted women in Korea, this study investigates the relationship between prostitution experiences, a history of childhood sexual abuse (CSA), and symptoms of posttraumatic stress disorder (PTSD) and disorders of extreme stress not otherwise specified (DESNOS). Prostituted women showed higher levels of PTSD and DESNOS symptoms compared to a control group. Women who had experienced both CSA by a significant other and prostitution showed the highest levels of traumatic stress. However, posttraumatic reexperiencing and avoidance and identity, relational, and affect regulation problems were significant for prostitution experiences even when the effects of CSA were controlled.

Keywords: *disorders of extreme stress not otherwise specified; posttraumatic stress disorder; prostitution*

The psychological consequences in victims of sexual exploitation such as prostitution have not been sufficiently addressed. The fact that many women, children, and men suffer from the effects of involvement in prostitution hardly needs to be stated, yet research on the traumatic stress of involvement in prostitution or reactions to the traumatic stress is still in its infancy. However, research that has been

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conducted to date has highlighted the high rates of negative psychological sequelae following involvement in the sex trade.

The most comprehensive research examining traumatic stress reactions in those involved in prostitution—both in terms of sample and methodology—has been conducted by Melissa Farley and colleagues. In particular, a study investigating posttraumatic stress disorder (PTSD) as well as prostitution-related physical and sexual violence in 475 women, men, and transgendered individuals involved in prostitution in five countries revealed that 67% met diagnostic criteria for PTSD and that the mean PTSD severity in the sample was even higher than that found in treatment-seeking Vietnam veterans in the United States (Farley, Baral, Kiremire, & Sezgin, 1998). An extension of this research, resulting in data from 854 prostituted individuals in nine countries, found that a similar rate of 68% of those interviewed met criteria for PTSD (Farley, Cotton et al., 1998). In both studies, in line with the high rates of PTSD, high rates of physical and sexual violence from involvement in prostitution were also reported.

However, in terms of trauma symptomatology in general, prolonged interpersonal trauma has been associated with more than the core *Diagnostic and Statistical Manual of Mental Disorders* (4th ed., text revision; *DSM-IV-TR*; American Psychiatric Association, 2000). PTSD symptoms of intrusions, avoidance, and hyperarousal; characteristic changes in the areas of self-regulation (e.g., dissociation, substance abuse, self-destructive behaviors, suicide attempts), identity, interpersonal relations, and adaptational styles have also been observed (Briere, 1992; Herman, 1992; Pelcovitz et al., 1997). These additional symptoms in response to a repeated and prolonged interpersonal traumatic stressor have been characterized as a variant of PTSD termed *complex PTSD* (CPTSD), also known as disorders of extreme stress not otherwise specified (DESNOS; Herman, 1992; van der Kolk, 1996). Criteria for CPTSD/DESNOS include alterations in the regulation of affect and impulses, alterations in consciousness such as dissociative experiences, alterations in self-perception/identity, alterations in relationships with others, somatization, and alterations in systems of meaning including hopelessness and despair (Pelcovitz et al., 1997). Symptoms meeting these criteria have been found in survivors of domestic violence, childhood abuse, hostage taking, and prisoners of war (e.g., Briere, 2002; Browne & Finkelhor, 1986; Cole & Putnam, 1992; Herman, 1997; Roth, Newman, Pelcovitz, van der Kolk, & Mandel, 1997; van der Kolk, Roth, Pelcovitz, Sunday, & Spinazzola, 2005).

In line with the characteristics of a prolonged interpersonal trauma, involvement in prostitution is often accompanied by high rates of repeated physical and sexual violence (Farley & Barkan, 1998; Farley, Lynne, & Cotton, 2005), and prostituted women also have high rates of exposure to repeated traumatic experiences prior to their involvement in prostitution (e.g., child abuse; Farley, Baral et al., 1998; Farley & Barkan, 1998; Silbert & Pines, 1981). Therefore, it is likely that those in prostitution may suffer not only from PTSD but also from CPTSD/DESNOS (Herman, 1997).

This is supported by clinician reports that women who are exposed to prolonged interpersonal violence are more likely to report psychological sequelae that are not captured in the *DSM-IV-TR* PTSD diagnostic criteria (van der Kolk et al., 2005). Therefore, the purpose of this study was to investigate not only PTSD symptomatology but also DESNOS symptomatology in a sample of prostituted women in Korea. It was hypothesized that as in previous research on PTSD in prostituted women (Farley, Baral et al., 1998; Farley, Cotton et al., 1998), the current sample would report significant PTSD symptomatology but would also report significant symptoms in line with DESNOS.

However, high rates of childhood abuse have been found in prostituted women (Farley et al., 2005), and childhood abuse is also known to result in traumatic stress (e.g., Cole & Putnam, 1992; Polusny & Follette, 1995). Furthermore, childhood abuse is often likely to meet the definition of a prolonged and repeated traumatic stressor, and symptoms in line with those comprising DESNOS (e.g., self-destructive behaviors, negative self-concept, poor interpersonal relations) are known consequences of childhood abuse (Browne & Finkelhor, 1986). Therefore, this study also asked about childhood abuse in prostituted participants to examine the relationship between prostitution and PTSD and DESNOS symptoms while controlling for the effects of a history of childhood abuse. This is particularly important as recent research has found that early interpersonal traumatization is related to more complex posttraumatic psychopathology than later interpersonal victimization (van der Kolk et al., 2005). As a result, it is possible that DESNOS symptomatology in prostituted women with a history of childhood abuse may mainly be accounted for by childhood abuse as opposed to prostitution. However, based on past research indicative of the high levels of PTSD attributable to prostitution-related trauma, it was hypothesized that when childhood histories were controlled for, prostitution experiences would remain significant in accounting for PTSD and DESNOS symptomatology. Childhood abuse was divided into physical abuse, sexual abuse by a stranger, and sexual abuse by a significant other because of the suggestion that when a perpetrator of childhood sexual abuse (CSA) is close to the victim, it may result in more serious harm than when the perpetrator is a stranger (Kendall-Tackett, Williams, & Finkelhor, 1993). Therefore, we hypothesized that prostituted women who reported CSA by a significant other would endorse an even greater number of PTSD and DESNOS symptoms.

This research is not only the first peer-reviewed research examining DESNOS symptomatology in prostituted women, as well as the first published research on psychological functioning in a Korean sample of prostituted women, but it is also somewhat unique in that participants were all involved in indoor (as opposed to outdoor/street) prostitution. Because of difficulties in conducting research with those in indoor prostitution as a result of challenges in gaining access to this sample (e.g., Farley, Cotton et al., 1998), the vast majority of research on prostitution to date has focused on outdoor prostitution. However, knowledge of indoor prostitution is greatly

needed not only to better understand the dynamics and effects of involvement in indoor prostitution but also to compare the effects of indoor versus outdoor prostitution on those involved.

The current study is also important in terms of its implications for public policy and social programs, in particular those targeted to women exiting prostitution. Although in some countries educational, vocational, and material resources are, albeit very slowly, becoming more available to those involved in prostitution through nonprofit and governmental organizations, psychological resources in the form of professional therapy are rarely available. However, the impact of reduced or impaired psychological functioning on social and occupational functioning, as well as quality of life, is well recognized (e.g., Sareen et al., 2007; Sbordone, 2005). Therefore, understanding and subsequently addressing and treating the psychological harm associated with involvement in prostitution will have important effects on everything from psychological and physical health and well-being to occupational, social, and family functioning.

Method

Participants

Participants were 46 Korean women who had been involved in prostitution and 31 age- and education-matched Korean women with no history of either childhood abuse or involvement in prostitution. The latter served as the control group. The 46 prostituted women had all previously worked in brothels or escort agencies and were residing in shelters where they were receiving rehabilitation services in the form of material support and medical care from supportive organizations specifically for prostituted women. None of these organizations provided psychotherapeutic services. The control group comprised factory laborers and students completing secondary educational courses. As shown in Table 2, the mean age was 26.46 (SD = 5.49) for the prostituted women and 28.03 (SD = 6.74) for the control group. The mean years of education was 10.64 (SD = 2.67) for the prostituted women and 10.90 (SD = 2.12) for the control group. As the control women were age- and education-matched to the prostituted women, there were no significant differences in either age or years of education between the two groups. In terms of ages and time spent in prostitution for the prostituted women, the mean age of entrance into prostitution was 19.33 (SD = 4.23) years, with a range from 12 to 37 years. The mean number of years in prostitution was 6.79 (SD = 3.75), with a range from 1 to 18 years. The mean number of days since leaving prostitution was 573.12 days (SD = 556.05), with a range from 16 to 2,190 days.

Materials

Self-reported history of childhood abuse. A history of childhood abuse was assessed by asking participants a series of three questions. Specifically, CSA by a

significant other was assessed with the question (translated from Korean to English), "Has any one of your acquaintances (parent, relative, etc.) ever forced you to commit unwanted sexual behaviors?" If yes, "How old were you then?" CSA by a stranger was assessed with the question, "Has any stranger ever forced you to commit unwanted sexual behaviors?" If yes, "How old were you then?" Childhood physical abuse was assessed with the question, "Has anyone attacked or abused you physically, such as hitting, or using weapons or fire?" If yes, "How old were you then?" Experiences below the age of 14 were classified as childhood abuse.

Self-reported experiences relating to captivity/coercive control. To assess the experience of a traumatic interpersonal stressor, women were asked about their experiences of fear, helplessness, and horror in response to a list of 17 stressful events relevant to the concept of captivity/coercive control. These included events relating to disruptions in physical autonomy, destroyed attachments and connectedness, economic crises, physical and sexual attacks, and stigmatization, and all 17 items translated into English are listed in Table 1. These items were designed by the authors and were based in part on the concept of captivity delineated by Herman (1997). As individuals in sexually exploitive systems such as prostitution are frequently under coercive physical and/or psychological control, these descriptors of captivity may be relevant to prostitution.

Impact of Events Scale–Korean Version (IES-K). The IES-K (Yi & Eun, 1999) is a self-report instrument designed to assess posttraumatic symptoms in response to a traumatic event. This measure comprises 15 items assessing intrusive reexperiencing (7 items) and avoidance (8 items) based on the theoretical groundwork by Horowitz (1986; Horowitz, Wilner, & Alvarez, 1979). A total score gives an overall measure of posttraumatic symptomatology. This scale has been found to have an internal consistency of .87 (Reexperiencing subscale = .83; Avoidance subscale = .82) and test-retest reliability of .73 (Yi & Eun, 1999). In addition, it has been found to discriminate between those with and without a diagnosis of PTSD (Yi & Eun, 1999).

Symptom Checklist-90-R–Somatization Subscale. In line with one of the criteria for DESNOS being somatization, the 12-item Somatization subscale of the larger 90-item Korean version of the Symptom Checklist-90-R (SCL-90-R; Kim, Kim, & Won, 1984) was used to assess for various somatic symptoms. These include symptoms such as nausea/upset stomach, faintness/dizziness, difficulties catching one's breath, and numbness or tingling in parts of the body. The SCL-90-R has been used extensively in research around the world and has been found to have good psychometric properties (Derogatis & Cleary, 1977a, 1997b; Kim et al., 1984).

Beck Hopelessness Scale–Korean Version (BHS-K). To assess the criterion of DESNOS relating to alterations in systems of meaning such as hopelessness and despair, the BHS-K Version (Shin, Park, Oh, & Kim, 1990) was used. The BHS-K

is a 20-item scale translated from the original English version (Beck, Weissman, Lester, & Trexler, 1974). This scale assesses hopelessness in the form of negative feelings, negative expectations about the future, and loss of motivation. The BHS-K has been found to have an internal consistency of .83 (Lee, 1993).

Dissociative Experiences Scale–Korean Version (DES-K). The DES (Bernstein & Putnam, 1986) is a 28-item scale used with healthy individuals, psychiatric patient groups, and individuals with histories of trauma to assess dissociative experiences by querying disturbances in memory, depersonalization, derealization, absorption, and imaginative involvement. This study used the Korean version (i.e., DES-K) developed by Park et al. (1995) to assess for the criterion of DESNOS relating to alterations in attention and consciousness. Internal consistency for this scale has been found to be .93 in healthy individuals and .94 in psychiatric patients (Park et al., 1995).

Inventory of Altered Self-Capacities–Korean Version (IASC-K). The IASC is a 63-item measure developed by Briere (2000) that assesses relational problems (i.e., interpersonal conflict, idealization-disillusionment, abandonment concerns), identity problems (i.e., lack of introspection; diffusion of one's thoughts, emotions, and views of others; susceptibility to influence), and affect regulation problems (i.e., affect dysregulation, deficits in emotion regulation skills, externalizing behaviors as a means to cope with painful emotions). This measure was used to assess the DESNOS criteria of alterations in self-perception/identity, relational problems, and alterations in the regulation of affect and impulses. This study used the Korean version (i.e., IASC-K) developed by Park, Suh, and Lee (2006), which has an internal consistency of .97 (Park et al., 2006).

Procedure

All participants provided informed consent to participate after being given a detailed explanation of the research. Thereafter, all participants were given a questionnaire package to complete individually, although a psychologist researcher remained with the participant while completing the questionnaire. To ensure that no women in the control group had previously been involved in prostitution, all control participants were asked the question, "Have you ever traded sex for money, gifts, drugs, or survival needs?" (Stark & Hodgson, 2003). For all statistical analyses, a p level of less than .05 was deemed statistically significant.

Results

Childhood Abuse

Fourteen (30.4%) of the prostituted women reported a history of childhood physical abuse. Of these women, 6 (13.0%) also reported CSA. In total, 9 (19.6%) of the

Table 1
Captivity-/Coercive Control–Related Experiences Accompanied by Fear, Hopelessness, and/or Horror

Experiences Followed By Fear, Hopelessness, and Horror	Prostituted Women ($N = 46$)		Control Group ($N = 31$)	
	n	%	*n*	%
1. Experience of serious illness	38	82.6	4	12.9
2. Neglected when physically ill	28	60.9	1	3.2
3. Experience of abortion	31	67.4	4	12.9
4. Separation from one's own child(ren) against one's will	9	19.6	2	6.5
5. Serious economical crisis including homelessness	36	78.3	3	9.7
6. Extortion	30	65.2	1	3.2
7. Kept under surveillance or in captivity	38	82.6	1	3.2
8. Threatened harm against close people or oneself	33	71.7	3	9.7
9. Taken away somewhere against one's will	33	71.7	1	3.2
10. Physical appearance, body weight, and clothing controlled	25	54.3	0	0
11. Daily activities such as eating, sleeping, and using toilets controlled	30	65.2	0	0
12. Treated with medication, alcohol, cigarettes, or drugs by someone who had harmed you	20	43.5	0	0
13. Betrayed by someone close to oneself	31	67.4	5	16.1
14. Experienced imprisonment or committed a crime	16	34.8	0	0
15. Unexpected and uncontrollable sexual, physical attack	32	69.6	2	6.5
16. Harmed by someone who is important for one's livelihood	36	78.3	3	9.7
17. Emotionally abused; shamed, neglected, spoken ill of	36	78.3	1	3.2

prostituted women reported CSA by a stranger, whereas 10 (21.7%) reported CSA by a significant other. Seven prostituted women (15.2%) reported both types of CSA. Five prostituted women (10.9%) said that they had experienced all three types of childhood abuse.

The mean age of onset of reported childhood physical abuse was 8.00 years ($SD = 3.37$), with a range from 2 to 13 years of age. The mean age of reported CSA by a stranger was 11.56 years ($SD = 1.59$), ranging from 9 to 13 years of age. Mean age of reported CSA by a significant other was 10.00 years ($SD = 2.94$), ranging from 5 to 13 years of age.

Captivity/Coercive Control Experiences Accompanied by Fear, Hopelessness, and/or Horror

The numbers of prostituted and control-group women who experienced captivity- or coercive control–related events that were accompanied by fear, hopelessness, and/or horror are listed in Table 1. As expected, higher numbers of prostituted women reported coercive control–related experiences followed by fear, hopelessness, and

Table 2
Comparisons of Demographics and PTSD and DESNOS Symptom Levels Between Prostituted and Nonprostituted Women

	Prostituted Women ($N = 46$)		Control Group ($N = 31$)				
	M	*SD*	*M*	*SD*	*df*	*t*	*p*
Age	26.46	5.49	28.03	6.74	55.48[a]	−1.08	.284
Educational level	10.64	2.67	10.90	2.12	71	−.449	.655
Total posttraumatic symptoms	26.28	10.74	10.37	9.40	75	6.69	< .001
Posttraumatic reexperiencing	12.47	5.81	4.94	4.38	75	6.14	< .001
Posttraumatic avoidance	13.80	5.87	5.44	5.34	75	6.36	< .001
Somatization	19.91	8.02	10.87	6.71	75	5.17	< .001
Hopelessness	7.34	6.00	6.24	4.64	75	.861	.392
Dissociative experiences	24.31	17.81	15.86	13.01	75	2.26	< .001
Identity problems	54.04	14.18	40.06	9.76	74.95[a]	5.12	< .001
Relational problems	73.54	19.72	55.43	12.41	74.72[a]	4.94	< .001
Affect regulation problems	51.65	15.14	37.03	8.94	73.92[a]	5.32	< .001

Note: PTSD = posttraumatic stress disorder; DESNOS = disorders of extreme stress not otherwise specified. Degrees of freedom vary because of missing data.
a. Equal variances not assumed

horror than control women. For example, whereas only 1 woman from the control group endorsed having been kept under surveillance or in captivity, 38 prostituted women endorsed this item. Similarly, whereas no women from the control group endorsed having either their physical appearance or their daily activities controlled, 33 prostituted women endorsed experiencing each type of control.

Demographics, PTSD, and DESNOS Symptoms in Prostituted and Nonprostituted Women

Table 2 presents the mean age, years of education, and PTSD and DESNOS symptom levels of prostituted and control women. As previously noted, since control women were age- and education-matched to prostituted women, there were no significant differences in either age or years of education between the two groups.

Table 3
Differences in PTSD and DESNOS Symptoms in Prostituted Women With and Without a History of Childhood Abuse and Nonprostituted Women

		Type III Sum of Squares	*df*	*F*	*p*	Partial Eta Squared	Observed Power
Posttraumatic reexperiencing	CPA	5.54	1	0.23	.631	.003	.076
	CSA_S	35.20	1	1.48	.227	.021	.225
	CSA_Sig	238.65	1	10.05	.002	.127	.878
	P	455.62	1	19.19	.000	.218	.991
Posttraumatic avoidance	CPA	0.17	1	0.01	.943	.000	.051
	CSA_S	2.52	1	0.08	.783	.001	.059
	CSA_Sig	5.36	1	0.16	.689	.002	.068
	P	760.36	1	22.95	.000	.250	.997
Somatization	CPA	22.20	1	0.40	.528	.006	.096
	CSA_S	237.33	1	4.31	.042	.059	.535
	CSA_Sig	277.12	1	5.03	.028	.068	.600
	P	788.12	1	14.31	.000	.172	.962
Hopelessness	CPA	38.50	1	1.35	.250	.019	.208
	CSA_S	2.06	1	0.07	.790	.001	.058
	CSA_Sig	39.81	1	1.39	.242	.020	.214
	P	0.17	1	0.01	.940	.000	.051
Dissociative experiences	CPA	142.74	1	0.64	.426	.009	.124
	CSA_S	107.49	1	0.48	.489	.007	.105
	CSA_Sig	1,914.12	1	8.61	.005	.111	.825
	P	326.42	1	1.47	.230	.021	.223
Identity problems	CPA	384.94	1	3.03	.086	.042	.404
	CSA_S	17.99	1	0.14	.708	.002	.066
	CSA_Sig	1,468.34	1	11.56	.001	.143	.918
	P	1,364.16	1	10.74	.002	.135	.898
Relational problems	CPA	86.87	1	0.39	.534	.006	.095
	CSA_S	51.73	1	0.23	.631	.003	.076
	CSA_Sig	4,019.13	1	18.07	.000	.208	.987
	P	1,817.63	1	8.17	.006	.106	.805
Affect regulation problems	CPA	6.56	1	0.06	.810	.001	.057
	CSA_S	84.01	1	0.75	.390	.011	.137
	CSA_Sig	1,622.31	1	14.48	.000	.173	.963
	P	871.89	1	7.78	.007	.101	.785

Note: PTSD = posttraumatic stress disorder; DESNOS = disorders of extreme stress not otherwise specified; CPA = childhood physical abuse; CSA_S = childhood sexual abuse by stranger; CSA_Sig = childhood sexual abuse by significant other; P = prostitution.

In contrast, significantly higher PTSD and DESNOS symptom levels were found for all categories of symptoms between prostituted and nonprostituted women, except for self-ratings of hopelessness.

Differences in PTSD and DESNOS Symptoms in Prostituted Women With and Without a History of Childhood Abuse and Nonprostituted Women

Levels of PTSD and DESNOS symptomatology were compared between prostituted women with and without a history of childhood abuse and nonprostituted women. These results are presented in Table 3. Involvement in prostitution was associated with higher levels of PTSD reexperiencing and avoidance, somatization, identity problems, relational problems, and affect regulation problems as compared to women in the control group. These results were independent of any history of childhood abuse. Prostitution, in addition to a history of CSA by a significant other, was associated with higher levels of posttraumatic reexperiencing, somatization, dissociative experiences, identity problems, relational problems, and affect regulation problems. Prostitution in addition to a history of CSA by a stranger was associated only with higher somatization symptoms. Prostitution in addition to a history of childhood physical abuse was not associated with higher levels of any PTSD or DESNOS symptoms.

PTSD and DESNOS Symptoms by Age and Duration in Prostitution and Childhood Abuse

Table 4 presents data on the differences in PTSD and DESNOS symptoms in prostituted women depending on age and duration in prostitution and type of childhood abuse history. Age of entry into prostitution and length of time in, and since leaving, prostitution were unrelated to differences in PTSD and DESNOS symptomatology. Symptom severity of posttraumatic reexperiencing, somatization, dissociative experiences, identity problems, relational problems, and affect regulation problems were all significantly greater in women who had experienced CSA by a significant other. No PTSD or DESNOS symptoms were significantly greater in prostituted women who had experienced either CSA by a stranger or childhood physical abuse than those who had not.

Table 5 presents comparisons of demographics, age and duration in prostitution, and PTSD and DESNOS symptomatology when prostituted women were divided into those who had reported CSA by a significant other and those who had not. Results show that women with a history of CSA by a significant other entered prostitution at a significantly younger age. Women with a history of CSA by a significant other also reported significantly higher levels of posttraumatic reexperiencing, hopelessness, dissociative experiences, identity problems, relational problems, and affect regulation problems.

Table 4
Comparisons of PTSD and DESNOS Symptoms in Prostituted Women by Age and Duration in Prostitution and History of Childhood Abuse

		Type III Sum of Squares	*df*	*F*	*p*	Partial Eta Squared	Observed Power
Posttraumatic reexperiencing	Entrance age	4.21	1	0.14	.712	.004	.065
	Duration (years)	0.08	1	0.00	.959	.000	.050
	Days after leaving	8.72	1	0.29	.596	.009	.081
	CPA	10.84	1	0.36	.555	.011	.089
	CSA_S	36.20	1	1.19	.284	.036	.185
	CSA_Sig	225.40	1	7.41	.010	.188	.752
Posttraumatic avoidance	Entrance age	0.03	1	0.00	.979	.000	.050
	Duration (years)	58.51	1	1.58	.217	.047	.231
	Days after leaving	53.49	1	1.45	.238	.043	.215
	CPA	2.79	1	0.08	.785	.002	.058
	CSA_S	2.93	1	0.08	.780	.002	.059
	CSA_Sig	4.53	1	0.12	.728	.004	.063
Somatization	Entrance age	23.94	1	0.35	.557	.011	.089
	Duration (years)	6.48	1	0.10	.760	.003	.060
	Days after leaving	17.27	1	0.25	.618	.008	.078
	CPA	34.49	1	0.51	.482	.016	.106
	CSA_S	223.48	1	3.28	.079	.093	.420
	CSA_Sig	284.43	1	4.18	.049	.116	.509
Hopelessness	Entrance age	3.53	1	0.09	.763	.003	.060
	Duration (years)	30.42	1	0.80	.378	.024	.140
	Days after leaving	12.83	1	0.34	.566	.010	.087
	CPA	31.28	1	0.82	.371	.025	.142
	CSA_S	2.51	1	0.07	.799	.002	.057
	CSA_Sig	40.04	1	1.05	.313	.032	.169
Dissociative experiences	Entrance age	360.96	1	1.60	.215	.048	.233
	Duration (years)	83.46	1	0.37	.547	.011	.091
	Days after leaving	174.51	1	0.78	.385	.024	.137
	CPA	7.48	1	0.03	.857	.001	.054
	CSA_S	171.68	1	0.76	.389	.023	.135
	CSA_Sig	1,911.01	1	8.49	.006	.210	.807
Identity problems	Entrance age	59.19	1	0.34	.562	.011	.088
	Duration (years)	171.50	1	0.99	.327	.030	.162
	Days after leaving	5.36	1	0.03	.861	.001	.053
	CPA	130.80	1	0.76	.391	.023	.135
	CSA_S	6.98	1	0.04	.842	.001	.054
	CSA_Sig	1,484.54	1	8.59	.006	.212	.811
Relational problems	Entrance age	20.90	1	0.06	.801	.002	.057
	Duration (years)	1.72	1	0.01	.942	.000	.051

(continued)

Table 4 (continued)

		Type III Sum of Squares	*df*	*F*	*p*	Partial Eta Squared	Observed Power
	Days after leaving	19.36	1	0.06	.809	.002	.056
	CPA	107.91	1	0.33	.568	.010	.087
	CSA_S	57.48	1	0.18	.677	.006	.069
	CSA_Sig	3,906.17	1	12.03	.002	.273	.920
Affect regulation problems	Entrance age	3.17	1	0.02	.884	.001	.052
	Duration (years)	272.07	1	1.85	.183	.055	.261
	Days after leaving	0.06	1	0.00	.984	.000	.050
	CPA	4.83	1	0.03	.857	.001	.054
	CSA_S	47.30	1	0.32	.575	.010	.085
	CSA_Sig	1,587.68	1	10.79	.002	.252	.890

Note: PTSD = posttraumatic stress disorder; DESNOS = disorders of extreme stress not otherwise specified; entrance age = entrance age into prostitution; duration (years) = duration of prostitution experience; days after leaving = days after leaving prostitution; CPA = childhood physical abuse; CSA_S = childhood sexual abuse by stranger; CSA_Sig = childhood sexual abuse by significant other.

Prostituted women were then divided into those who reported both types of CSA ($n = 7$), one kind of CSA ($n = 5$), and those who did not report any history of CSA ($n = 39$). Although these analyses are very limited because of the small sample size, results showed that women who reported both types of CSA had significantly more severe posttraumatic reexperiencing symptoms, $t(44) = 2.60$, $p = .013$, hopelessness, $t(44) = 2.76$, $p = .008$, dissociative experiences, $t(44) = 3.58$, $p = .001$, identity problems, $t(44) = 3.08$, $p = .004$, relational problems, $t(44) = 4.12$, $p < .001$, and affect regulation problems $t(44) = 3.78$, $p < .001$. Although not statistically significant, women with both types of CSA appeared to show a trend toward entering prostitution at a somewhat earlier age, $t(43) = -1.94$, $p = .059$, and staying in prostitution for a longer duration, $t(40) = 1.88$, $p = .068$.

Discussion

As hypothesized, the majority of prostituted women reported having experienced events related to captivity and/or coercive control that were followed by feelings of fear, hopelessness, and horror. These included disturbances in physical autonomy, disruptions in attachment, economic constraints, physical and sexual assault, and emotional abuse. In contrast, few of the women in the control group had experienced these types of events. This difference in experiences between prostituted and nonprostituted women is not surprising. A growing literature has repeatedly revealed that physical, sexual, and emotional abuse are common in prostitution, both by pimps

Table 5
Comparisons of Demographics, Age and Duration in Prostitution, and PTSD and DESNOS Symptoms in Prostituted Women With and Without Childhood Sexual Abuse by a Significant Other

	Prostituted Women With CSA_Sig ($N = 10$)		Prostituted Women Without CSA_Sig ($N = 36$)				
	M	*SD*	*M*	*SD*	*df*	*t*	*p*
Educational levels	9.56	2.35	10.94	2.70	40	–1.40	.171
Entrance age into prostitution	16.80	3.65	20.06	4.14	43	–2.25	.030
Duration of prostitution experience (years)	8.00	3.68	6.41	3.75	40	1.18	.246
Posttraumatic reexperiencing	17.20	3.12	11.16	5.72	27.506[a]	4.40	< .001
Posttraumatic avoidance	15.40	4.12	13.36	6.25	44	0.97	.337
Somatization	22.88	7.96	19.08	7.95	44	1.34	.188
Hopelessness	10.70	7.07	6.40	5.42	44	2.07	.044
Dissociative experiences	38.75	20.00	20.30	15.12	44	3.18	.003
Identity problems	67.40	12.38	50.33	12.41	44	3.85	< .001
Relational problems	94.70	18.90	67.66	15.65	44	4.62	< .001
Affect regulation problems	68.60	8.86	46.94	13.03	44	4.93	< .001

Note: PTSD = posttraumatic stress disorder; DESNOS = disorders of extreme stress not otherwise specified; CSA_Sig = Childhood sexual abuse by significant other. Degrees of freedom vary because of missing data.
a. Equal variances not assumed.

and by customers (Farley et al., 2005; Silbert & Pines, 1981), and that the dynamics of control and abuse in prostitution can be similar to that seen in other coercive relationships, such as in intimate partner violence (Giobbe, 1993). In addition, the control group in this study was screened for any history of childhood abuse, thereby eliminating from the control group women who may have been more likely to endorse coercive experiences that occurred as a result of the abuse.

Also as hypothesized, and in line with the main aim of this research and the finding of higher rates of coercive experiences, the results of this study showed that prostituted women as compared to nonprostituted women had higher symptom levels of not only PTSD but also symptoms characteristic of DESNOS. Furthermore, childhood abuse, particularly CSA by a significant other, was associated with even higher symptom levels, although when childhood abuse was controlled for, prostitution remained significantly related to symptom severity.

With respect to differences in PTSD and DESNOS symptomatology between prostituted and nonprostituted women, prostituted women showed higher levels of both PTSD reexperiencing and avoidance symptoms and higher levels of all symptoms relating to the criteria of DESNOS except hopelessness. However, the finding that levels of hopelessness were not significantly different between the two groups

is not overly surprising given that hopelessness is not only a symptom of DESNOS but also frequently seen in numerous other disorders such as depression (Beck, Riskind, Brown, & Steer, 1988) and chronic pain (Hitchcock, Ferrell, & McCaffery, 1994). Therefore, nonprostituted women may have had similar levels of hopelessness because of factors unrelated to DESNOS. Alternatively, the fact that all prostituted women in this study were no longer involved in prostitution and in fact were receiving rehabilitation services from supportive organizations, may have positively influenced hopelessness levels in this group. Although the services from the organizations were restricted to material support or physical care and no specific psychotherapy services were provided, creating a safe environment and social connections among the women may have influenced depressogenic attributional styles concerning life after prostitution in a positive way.

When childhood abuse was taken into account in comparing prostituted and nonprostituted women on PTSD and DESNOS symptom severity, as mentioned above, prostitution remained significantly related to higher symptom levels irrespective of childhood abuse. This was true for all facets of PTSD and DESNOS except for hopelessness and dissociative experiences. Results showed that the significant difference in dissociative experiences between prostituted and nonprostituted women was related to a history of CSA by a significant other in the former group. That dissociative experiences were not related to prostitution alone was surprising given earlier studies that have found high rates of dissociation in prostitutes (e.g., Ross, Farley, & Schwartz, 2003). However, these previous studies did not investigate the role of CSA in accounting for dissociative experiences. The results of the current investigation are in line with previous research showing a strong association between CSA, particularly by a significant other, and DESNOS symptoms (Roth & Newman, 1991; Waldinger, Swett, Frank, & Miller, 1994), including dissociative experiences (Briere, 2006; Chu & Dill, 1990; Cole & Putnam, 1992). In fact, it has been argued that sexual abuse may be a critical risk factor for the development of DESNOS symptoms (Roth et al., 1997). The findings from this study indicate that although sexual abuse is not necessary for the development of many of the criteria of DESNOS, it may be that sexual abuse (particularly sexual abuse by a significant other) is often a critical factor in dissociative symptomatology. The findings further indicate that CSA by a significant other together with involvement in prostitution is related to the highest levels of both PTSD and DESNOS symptomatology—a finding that is not surprising but underscores the possible additive effects of repeated trauma on psychological functioning and the appearance of symptoms (i.e., DESNOS symptoms) not usually seen in conventional PTSD following a single trauma.

The results of this study also showed that women with a history of CSA by a significant other had entered prostitution at a significantly younger age (mean age = 16.80) compared to women without a history of CSA by a significant other (mean age = 20.06). As this study was cross-sectional, no conclusions about the effects of CSA by a significant other on entry into prostitution can be made. Nevertheless, these results

highlight the relationship between CSA and prostitution—a relationship that has been noted in other studies (e.g., Farley et al., 2005; Silbert & Pines, 1981). In fact, Browne and Finkelhor (1986) noted the potential for CSA to be a risk factor of later involvement in prostitution. This is an important area for future research, as understanding the possible link between CSA and future abuse may lead to important developments in the areas of prevention and treatment.

Although hopelessness in this study was not significantly different between prostituted and nonprostituted women, hopelessness was greater in prostituted women with, as compared to without, a history of CSA by a significant other. Thus, hopelessness may be another potential mediator in the relationship between CSA by a significant other and prostitution, possibly leading victims to feel hopeless about having relationships that are not sexually abusive and thereby resulting in further such relationships.

CSA by a significant other was also associated with even higher levels of posttraumatic reexperiencing, relational problems, and affect regulation than was found in prostituted women without a history of childhood abuse. Thus, CSA by a significant other was associated with numerous elevated symptom clusters beyond those associated with prostitution. This again is not surprising given that the conceptualization of DESNOS resulted from observations mainly with individuals with a history of CSA (Roth et al., 1997), which has repeatedly been associated with the symptoms of poor emotion modulation and impulse control, insecurity in relationships, distrust, suspiciousness, lack of intimacy, and isolation (Cole & Putnam, 1992). Similarly, the increase in posttraumatic reexperiencing symptoms is in line with previous research that found survivors of both childhood and adult sexual abuse show more severe symptoms of PTSD than those of adulthood traumatic experiences alone (Nishith, Mechanic, & Resick, 2000).

These results, showing the presence of high levels of both PTSD and DESNOS symptoms in prostituted women, have significant implications for public policy, social programs aimed at helping those in (or those in the process of exiting from) prostitution, and the assessment, prevention, and treatment of psychological trauma in prostituted individuals. In terms of public policy, much debate has revolved around whether indoor prostitution is less harmful, both physically and psychologically, than outdoor street prostitution (Farley, 2004; Lowman, 1992, 2000). Although this study did not compare PTSD and DESNOS symptomatology in women in indoor versus outdoor prostitution and did not examine the effects of prostitution on psychological functioning prospectively, the current results nevertheless suggest that a history of involvement in indoor prostitution can be associated with increased trauma symptomatology. Therefore, the assumption that indoor prostitution is less harmful than outdoor prostitution may not be valid, at least not in terms of psychological harm. However, further research, particularly prospective research, comparing indoor to outdoor prostitution is needed to make more definitive conclusions.

In terms of social programs, the findings from the current research add to the growing literature on the need for not only vocational and material resources for

those either in prostitution or in the process of exiting but also psychological resources to help prostituted individuals with their psychological symptoms. Whether caused by trauma experienced while in prostitution or by trauma caused by non-prostitution-related factors, it is increasingly clear that those in prostitution have high rates of psychological symptoms that are likely to impact not only their physical, mental, occupational, and relationship functioning but also their likelihood of success at exiting from prostitution.

Finally, in terms of the assessment, prevention, and treatment of psychological trauma, the current findings indicate that efforts may need to be directed at more than PTSD. Specifically, assessment and treatment of DESNOS symptomatology should also be conducted. Treatment success may otherwise be compromised by the presence of additional DESNOS symptoms. Furthermore, chronic, untreated psychological difficulties could contribute to (continued) revictimization (Cloitre, Scavalone, & Difede, 1997; Dietrich, 2003).

Although the results from this study show a clear association between involvement in prostitution and both PTSD and DESNOS symptomatology, a number of study limitations need to be taken into account. First, as has been highlighted throughout this article, this study employed a cross-sectional design. Therefore, no conclusions with respect to the role of prostitution or childhood abuse in causing PTSD and DESNOS symptomatology can be made. Second, all data collection in this study was completed through the use of questionnaires as opposed to interviews. As such, it is possible that results from questionnaire responses do not correspond perfectly with symptom levels obtained via interviews designed specifically for assessing symptoms of these two disorders. Furthermore, the questionnaire used to assess captivity/coercive control experiences was limited in the types of trauma it assessed. As prostitution can encompass many different types of interpersonal trauma, future research may benefit from using an expanded and more detailed list of possible traumatic experiences. Third, the small sample size in this study limits the generalizability of the conclusions with respect to other women in prostitution. Finally, history of childhood abuse was measured retrospectively by a single self-report question for each of the three types of childhood abuse assessed in this study, and concerns have been expressed over using retrospective self-report to assess experiences of childhood abuse (Whiffen & MacIntosh, 2005).

Despite these limitations, the results from this research show a clear association between involvement in prostitution and increased PTSD and DESNOS symptoms and, therefore, have important clinical and theoretical implications, as discussed above. Furthermore, this study not only examined the presence of PTSD and DESNOS symptoms in prostituted women, but it did so in a Korean sample of women who had all been involved in indoor, as opposed to outdoor, prostitution. It is hoped that the findings contribute to an understanding of the psychological symptoms found in those with a history of involvement in prostitution and that the findings lead not only to further research in this area but also

to changes in the assessment and treatment of prostituted women with trauma symptomatology.

References

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text revision). Washington, DC: Author.

Beck, A. T., Riskind, J. H., Brown, G., & Steer, R. A. (1988). Levels of hopelessness in DSM-III disorders: A partial test of content specificity in depression. *Cognitive Therapy and Research*, *12*, 459-469.

Beck, A. T., Weissman, A., Lester, D., & Trexler, L. (1974). The measurement of pessimism: The hopelessness scale. *Journal of Consulting and Clinical Psychology*, *42*, 861-865.

Bernstein, E. M., & Putnam, F. W. (1986). Development, reliability, and validity of a dissociation scale. *Journal of Nervous and Mental Disease*, *174*, 727-735.

Briere, J. L. (1992). *Child abuse trauma: Theory and treatment of the lasting effects*. Newbury Park, CA: Sage.

Briere, J. (2000). *Inventory of Altered Self-Capacities (IASC) professional manual*. Odessa, FL: Psychological Assessment Resources.

Briere, J. (2002). Treating adult survivors of severe childhood abuse and neglect: Further development of an integrative model. In J. E. B. Myers, L. Berliner, J. Briere, C. T. Hendrix, T. Reid, & C. Jenny (Eds.), *The APSAC handbook of child maltreatment* (2nd ed., pp. 175-203). Newbury Park, CA: Sage.

Briere, J. (2006). Dissociative symptoms and trauma exposure: Specificity, affect dysregulation, and posttraumatic stress. *Journal of Nervous and Mental Disease*, *194*, 78-82.

Browne, A., & Finkelhor, D. (1986). Impact of child sexual abuse: A review of the research. *Psychological Bulletin*, *99*, 66-77.

Chu, J. A., & Dill, D. L. (1990). Dissociative symptoms in relation to childhood physical and sexual abuse. *American Journal of Psychiatry*, *147*, 887-892.

Cloitre, M., Scavalone, P., & Difede, J. (1997). Posttraumatic stress disorder, self and interpersonal dysfunction among sexually retraumatized women. *Journal of Traumatic Stress*, *10*, 437-452.

Cole, P. M., & Putnam, F. W. (1992). Effect of incest on self and social functioning: A developmental psychopathology perspective. *Journal of Consulting and Clinical Psychology*, *60*, 174-184.

Derogatis, L. R., & Cleary, P. A. (1977a). Confirmation of the dimensional structure of the SCL-90: A study in construct validation. *Journal of Clinical Psychology*, *33*, 981-989.

Derogatis, L. R., & Cleary, P. A. (1977b). Factorial invariance across gender for the primary symptom dimensions of the SCL-90-R. *British Journal of Social and Clinical Psychology*, *16*, 347-356.

Dietrich, A. (2003). *Posttraumatic stress disorder and associated features as predictors of revictimization and perpetration with samples of adults abused in childhood*. Unpublished doctoral dissertation, University of British Columbia.

Farley, M. (2004). Bad for the body, bad for the heart: Prostitution harms women even if legalized or decriminalized. *Violence Against Women*, *10*, 1087-1125.

Farley, M., Baral, I., Kiremire, M., & Sezgin, U. (1998). Prostitution in five countries: Violence and posttraumatic stress disorder. *Feminism & Psychology*, *8*, 405-426.

Farley, M., & Barkan, H. (1998). Prostitution, violence, and posttraumatic stress disorder. *Women and Health*, *27*, 37-48.

Farley, M., Cotton, A., Lynne, J., Zumbeck, S., Spiwak, F., Reyes, M., et al. (1998). Prostitution and trafficking in nine countries: An update on violence and posttraumatic stress disorder. In M. Farley (Ed.), *Prostitution, trafficking, and traumatic stress* (pp. 33-74). Binghamton, NY: Haworth.

Farley, M., Lynne, J., & Cotton, A. J. (2005). Prostitution in Vancouver: Violence and the colonization of First Nations Women. *Transcultural Psychiatry*, *42*, 242-271.

Giobbe, E. (1993). An analysis of individual, institutional and cultural pimping. *Michigan Journal of Gender and Law*, *1*, 33-57.

Herman, J. L. (1992). Complex PTSD: A syndrome in survivors of prolonged and repeated trauma. *Journal of Traumatic Stress*, *5*, 377-391.

Herman, J. L. (1997). *Trauma and recovery: The aftermath of violence from domestic abuse to political terror*. New York: Basic Books.

Hitchcock, L. S., Ferrell, B. R., & McCaffery, M. (1994). The experience of chronic nonmalignant pain. *Journal of Pain and Symptom Management*, *9*, 312-318.

Horowitz, M. J. (1986). *Stress response syndromes* (2nd ed.). New York: Jason Aronson.

Horowitz, M., Wilner, N., & Alvarez, W. (1979). Impact of Events Scale: A measure of subjective stress. *Psychosomatic Medicine*, *42*, 209-218.

Kendall-Tackett, K. A., Williams, L. M., & Finkelhor, D. (1993). Impact of sexual abuse on children: A review and synthesis of recent empirical studies. *Psychological Bulletin*, *113*, 164-180.

Kim, K. I., Kim, J. H., & Won, H. T. (1984). *Korean version of Symptom Checklist-90-Revised (SCL-90-R) professional manual*. Seoul, South Korea: ChoongAng Aptitude Publishing.

Lee, Y. (1993). *The relations between attributional style, life events, event attribution, hopelessness, and depression: A covariance structural modeling approach.* Unpublished doctoral dissertation, Seoul National University.

Lowman, J. (1992). Street prostitution control: Some Canadian reflections on the Finsbury Park experience. *British Journal of Criminology*, *32*, 1-17.

Lowman, J. (2000). Violence and the outlaw status of (street) prostitution in Canada. *Violence Against Women*, *6*, 987-1011.

Nishith, P., Mechanic, M. B., & Resick, P. A. (2000). Prior interpersonal trauma: The contribution to current PTSD symptoms in female rape victims. *Journal of Abnormal Psychology*, *109*, 20-25.

Park, J. M., Choi, B. M., Kim, M. J., Han, H. M., You, S. Y., Kim, S. H., et al. (1995). Standardization of Dissociative Experiences Scale-Korean version. *Korean Journal of Psychopathology*, *4*, 105-125.

Park, J. M., Suh, S. K., & Lee, H. J. (2006). Emotion dysregulation in young adults with borderline personality disorder features. *Korean Journal of Clinical Psychology*, *26*, 717-730.

Pelcovitz, D., van der Kolk, B. A., Roth, S., Mandel, E. S., Kaplan, S., & Resick, P. (1997). Development of a criteria set and a structured interview for disorders of extreme stress (SIDES). *Journal of Traumatic Stress*, *10*, 3-16.

Polusny, M. A., & Follette, V. M. (1995). Long-term correlates of child sexual abuse: Theory and review of the empirical literature. *Applied & Preventive Psychology*, *4*, 143-166.

Ross, C. A., Farley, M., & Schwartz, H. L. (2003). Dissociation among women in prostitution. In M. Farley (Ed.), *Prostitution, trafficking, and traumatic stress* (pp. 199-212). Binghamton, NY: Haworth.

Roth, S., & Newman, E. (1991). The process of coping with trauma. *Journal of Traumatic Stress*, *4*, 279-299.

Roth, S., Newman, E., Pelcovitz, D., van der Kolk, B., & Mandel, F. (1997). Complex PTSD in victims exposed to sexual and physical abuse. *Journal of Traumatic Stress*, *10*, 539-555.

Sareen, J., Cox, B. J., Stein, M. B., Afifi, T., Fleet, C., & Asmundson, G. J. G. (2007). Physical and mental comorbidity, disability, and suicidal behavior associated with posttraumatic stress disorder in a large community sample. *Psychosomatic Medicine*, *69*, 242-248.

Sbordone, R. J. (2005). Disability following posttraumatic stress disorder. In I. Z. Schultz & R. J. Gatchel (Eds.), *Handbook of complex occupational disability claims: Early risk identification, intervention, and prevention* (pp. 343-369). New York: Springer.

Shin, M., Park, K., Oh, K., & Kim, J. (1990). A study of the suicidal tendency in high school students: Structural analysis of depression-hopelessness-suicidality. *Korean Journal of Clinical Psychology*, *9*, 1-19.

Silbert, M. H., & Pines, A. M. (1981). Sexual child abuse as an antecedent to prostitution. *Child Abuse and Neglect*, *5*, 407-411.

Stark, C., & Hodgson, C. (2003). Sister oppressions: A comparison of wife battering and prostitution. In M. Farley (Ed.), *Prostitution, trafficking, and traumatic stress* (pp. 17-32). Binghamton, NY: Haworth.

van der Kolk, B. A. (1996). The complexity of adaptation to trauma: Self regulation, stimulus discrimination, and characterological development. In B. A. van der Kolk, A. C. McFarlane, & L. Weisaeth (Eds.), *Traumatic stress: The effect of overwhelming experience on mind, body, and society* (pp. 182-213). New York: Guilford.

van der Kolk, B. A., Roth, S., Pelcovitz, D., Sunday, S., & Spinazzola, J. (2005). Disorders of extreme stress: The empirical foundation of a complex adaptation to trauma. *Journal of Traumatic Stress*, *18*, 389-399.

Waldinger, R. J., Swett, C., Frank, A., & Miller, K. (1994). Levels of dissociation and histories of reported abuse among women outpatients. *Journal of Nervous and Mental Disease*, *182*, 625-630.

Whiffen, V. E., & MacIntosh, H. B. (2005). Mediators of the link between childhood sexual abuse and emotional distress: A critical review. *Trauma, Violence, & Abuse*, *6*, 24-39.

Yi, S. M., & Eun, H. J. (1999). A study of reliability and validity on the Korean version of the Impact of Event Scale. *Journal of the Korean Neuropsychiatric Association*, *38*, 501-513.

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