The Relationship of Trauma to Mental Disorders Among Trafficked and Sexually Exploited Girls and Women

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Objectives. We explored the association between traumatic events and mental health among girls and women trafficked for sexual exploitation.

Methods. We used subscales of the Brief Symptom Inventory and Harvard Trauma Questionnaire to interview 204 trafficked girls and women in 7 post-trafficking service settings. Multivariate logistic regression models based on interview data were fitted for depression, anxiety, and posttraumatic stress disorder (PTSD) separately and adjusted for pretrafficking abuse to determine impact of trafficking-related trauma exposures.

Results. Injuries and sexual violence during trafficking were associated with higher levels of PTSD, depression, and anxiety. Sexual violence was associated with higher levels of PTSD (adjusted odds ratio [AOR]=5.6; 95% confidence interval [CI]=1.3, 25.4). More time in trafficking was associated with higher levels of depression and anxiety (AOR=2.2; 95% CI=1.1, 4.5). More time since trafficking was associated with lower levels of depression and anxiety but not of PTSD.

Conclusions. Our findings inform the emerging field of mental health care for trafficked persons by highlighting the importance of assessing severity and duration of trafficking-related abuses and need for adequate recovery time. Therapies for anxiety, PTSD, and mood disorders in low-resource settings should be evaluated. (*Am J Public Health.* 2010;100:2442–2449. doi:10.2105/AJPH.2009.173229)

Trafficking in persons is a human rights violation that occurs around the world. Human trafficking involves the recruitment and movement of individuals—generally by force, coercion, or deception—for the purposes of criminal exploitation or abuse.[1] Statistics on trafficking are notoriously difficult to obtain, although the International Labor Organization has estimated that approximately 12.3 million people are in situations of forced or bonded labor, half of whom are believed to be women and girls.[2]

Although men, women, and children are trafficked and exploited in such economic sectors as construction, farming, fishing, textiles, and mining, the trafficking of women and girls for forced prostitution is among the most well-recognized forms of trafficking. Because of the often extreme sexual, physical, and psychological abuses associated with this form of gender-based violence, women and girls who are trafficked and sexually exploited through forced sex work or in other circumstances such as domestic servitude, are a population of particular concern for mental health specialists.[3,4] Researchers and advocates continue to call for urgently needed psychological support services for trafficked persons—and for sexually abused women and girls in particular[5]—but there is little research-based information about the mental health needs of this population.

Some trafficked girls and women do not suffer extraordinary levels of abuse; nevertheless, assault, coercion, threats of harm to themselves and their families, and severely restricted freedom are common.[4,6] Indeed, many of the menacing tactics used to control trafficked girls and women are readily comparable with the characteristics of abuse described in the literature on torture.[7] Like torture victims, girls and women who are in a trafficking situation have little ability to predict or manage events that affect their health and safety. Many are unable, for example, to determine when they work or sleep, what they eat, how many and which clients they accept, or whether they protect themselves by condom use, and a significant number are subjected to sudden physical punishment. "Unpredictability" and "uncontrollability" are theorized to be predictive of more intense or prolonged psychological reactions to abuse.[8]

The association between such experiences and an increased risk of posttraumatic stress disorder (PTSD) and depression has been identified in other situations of trauma,[9,10] such as interpersonal violence,[11] and co-occurrence of these symptoms is also frequently found.[12,13] Women trafficked for sexual exploitation have also commonly experienced violence prior to being trafficked, which may have contributed to their vulnerability to being trafficked and may put them at greater risk of mental disorders later.

There is currently only a small body of published research on the health consequences of any form of human trafficking, and there is an extremely limited body of research on the mental health consequences of trafficking. Most trafficking-related health studies have focused on sexually transmitted infections among women trafficked for sexual exploitation, particularly HIV in Asia.[14,15] A study on mental health that was carried out with women in Nepal who were trafficked for sex work and various forms of labor (n=164) found that sexually exploited women reported higher levels of anxiety, depression, and PTSD than did women exploited for other purposes.[16] An earlier study that explored the mental health of migrant sex workers awaiting deportation in Israel (n=47) reported that 79% had depression symptoms and 17% had symptoms of PTSD.[17] A small study in Greece found that women who were victims of trafficking (n=11) had a higher risk of developing PTSD than did other abused women.[18]

Our earlier findings on women receiving posttrafficking services in Europe (n=197) highlighted women's exposure to multiple forms of abuse and the high symptom levels of PTSD, depression, and anxiety among survey participants, but we did not examine the links between their symptoms and risk factors.[4] In the current study, we sought to identify associations between girls' and women's experiences

prior to and during the period when they were trafficked and symptoms of common mental disorders.

Given the absence of evidence on common mental disorders in the posttrafficking care setting, we decided a priori to measure anxiety, depression, and PTSD separately. Specifically, given our earlier developmental work,[4] we wanted to test whether posttrafficking mental health symptoms could be explained by trafficking-related exposures to violence, independent of experiences of violence before trafficking. We also wanted to explore the extent to which any of the trafficking-related exposures were associated with anxiety, depression, or PTSD. This is the first study to test such associations among a cohort of girls and women entering posttrafficking assistance centers and to consider the implications for policies and services that respond to the needs of this vulnerable and often stigmatized group.[4]

METHODS

From January 2004 through June 2005, we conducted face-to-face interviews with women and adolescent girls (aged 15–45 years) who had been trafficked and sexually exploited and were currently accessing posttrafficking services provided by a nongovernmental or international organization. Interviews were conducted in Belgium, Bulgaria, the Czech Republic, Italy, Moldova, Ukraine, and the United Kingdom. Four of the study sites were locations where organizations provided posttrafficking services in destination or transit countries (Belgium, the Czech Republic, Italy, and the United Kingdom). At these 4 sites, participants were most commonly referred to posttrafficking care by law enforcement, legal services, or any of a variety of nongovernmental organizations. The other 3 study sites were support centers in participants' countries of origin (Bulgaria, Ukraine, and Moldova). At these 3 sites, participants were primarily referred to posttrafficking services by groups in destination settings as part of a return-and-reintegration process. More rarely, some participants self-referred to a posttrafficking organization.

Posttrafficking services provide care to women following a trafficking experience. This care generally includes an assessment of posttrafficking needs (e.g., acute medical or mental health needs) and the provision of assistance in accessing a range of support, including social work, counseling, health care, and legal and immigration advice. Specific approaches to posttrafficking care varied among study sites.

Because of the numerous ethical and safety concerns associated with interviewing trafficked persons, we contacted and interviewed only those girls and women who had already entered a service setting; no one was interviewed while still in a trafficking situation.[19] Given the unpredictable and fluctuating number of clients entering posttrafficking services, restrictions on research time, and limitations on resources, we opted to extend consecutive invitations to participate to every eligible girl or woman who entered a study-site service setting between January 2004 and June 2005. Girls and women were eligible to participate if they had been sexually exploited while in a trafficking situation and if a trained support worker deemed them emotionally capable of engaging in an interview.

A total of 220 girls and women were eligible and were invited to participate. Seven of the 220 declined, and 9 interviews were excluded either because the respondents were trafficked for other purposes (i.e., panhandling, petty theft), interviews were terminated early, or interviews were incomplete. A total of 204 girls and women were included in this analysis, the majority of whom were interviewed in Ukraine and Moldova. Trained counselors obtained written consent from each participant and carried out face-to-face interviews to ensure that any participant requiring follow-up had access to medical care, that all participants were observed for distress, and that participants experiencing distress received appropriate follow-up care.[19] The multicountry design was adopted to reflect the global nature of trafficking and to improve the representation of trafficked women's and girls' experiences within Europe.

Translation and Data Collection

The study questionnaire was developed in collaboration with the posttrafficking service providers and was translated from English into Italian, Russian, Ukrainian, Bulgarian, Czech, Polish, and Lithuanian. Professional translators were used, and mental health professionals who were fluent in the target languages checked the resulting questionnaires and adjusted them for cultural equivalency. Each participant was asked about abuses prior to being trafficked (including experiences of physical and sexual violence), the duration and circumstances of her trafficking experience (including risks, violence, and freedoms), and physical and mental health symptoms within the 2 weeks prior to the interview.

Measures

We chose to use screening instruments that were relatively easy to translate and had been validated and used among diverse populations in low- and middle-income countries (or that had a closely related version that had been validated and used in that way). To measure mental health symptoms, we used 2 instruments: (1) the depression and anxiety subscales of the Brief Symptom Inventory[20] (BSI; a short, validated alternative to its parent instrument, the SCL-90-R[20,21]), which is closely related to another widely used tool, the Hopkins Symptom Checklist,[22,23] and (2) the posttraumatic symptom subscale from the Harvard Trauma Questionnaire (HTQ).[24] Both instruments have been used among diverse populations and in studies of other marginalized groups.[25,26]

Brief Symptom Inventory. The BSI depression and anxiety symptom subscales comprise 6 items each. Participants were asked how much the experiences described in each item had distressed or disturbed them in the prior week, with responses coded on a 5-point scale ranging from "not at all" (zero) to "extremely" (4). The overall raw score is calculated by summing each item score and dividing the sum by the total number of questions answered. All raw scores range from zero to 4. Depression was measured by the following items: (1) no interest in things, (2) hopelessness about the future, (3) worthlessness feelings, (4) loneliness, (5) very sad, and (6) suicidal thoughts. Anxiety was measured by the following items: (1) fearful, (2) tense or keyed up, (3) terror/panic spells, (4) restlessness, (5) scared suddenly without reason, and (6) nervousness or shakiness inside.[20]

The BSI provides 3 populations against which to standardize: psychiatric outpatients,

psychiatric inpatients, and nonpatients. We selected the psychiatric outpatient population as the referent group because (1) the psychological symptoms reported among trafficked women have been found to be present at levels well above those found among a "general" population,[27] and (2) participants in the current study had received or were receiving various physical or psychological health interventions from the assistance centers, suggesting a similarity to a "patient" population. We used a raw score cutpoint of 1.87 or higher to define high levels of depression symptoms, and we used a raw score cutpoint of 1.71 or higher to define high levels of anxiety symptoms. These cutpoints are equal to or greater than the 50th percentile of scores for a referent group of female psychiatric outpatients.[4,20]

Harvard Trauma Questionnaire. We used the PTSD subscale of the HTQ to assess participants presenting with symptoms of PTSD. The HTQ includes 16 items that are based on the *Diagnostic and Statistical Manual of Mental Disorders, Third Edition, Revised, and the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition.*[28] A mean score of 2.0 or higher was considered indicative of probable PTSD symptoms, in accordance with guidelines presented in the HTQ user manual.[29]

Exposures to Pretrafficking and Trafficking-Related Trauma

To select the exposures tested in the analysis, we used conceptual models established during our previous work among trafficked women.[6] Risk exposures comprised pretrafficking trauma and trafficking-related trauma. Questions about pretrafficking trauma sought information on: (1) sexual abuse that occurred when the participant was younger than 15 years or sexual violence (forced sex) that occurred when the participant was aged 15 years or older but before being trafficked, and (2) physical violence that occurred at any age before the participant was trafficked. Participants were also asked if they had experienced any of the following types of abuse, which are commonly associated with trafficking situations: (1) sexual violence (forced or coerced sex), (2) physical violence (being hit, kicked, or physically hurt), (3) physical violence with a weapon (being assaulted with a weapon), (4) threats of harm against the participant, (5) threats of harm against the participant's family or loved ones, (6) restricted freedom of movement and activity (how free the participant felt to do what she wanted or go where she wanted), and (7) severe injury during trafficking.

Statistical Analysis

We used basic descriptive techniques and calculated odds ratios (ORs) to describe the frequency and distribution of all exposures and their individual relationships to the 3 mental health outcomes of interest. All plausible exposures chosen for inclusion were checked for logistic regression assumptions.[30] Because of the small sample size, all exposures were coded into dichotomous form. Variables considered for inclusion were those described above as pretrafficking and trafficking-related exposures.

The mental health outcome variables were divided into dichotomous variables (negative/positive) on the basis of the cutpoints described above. We used multiple logistic regression analysis to develop the hypothesis model and explore which pretrafficking, trafficking, and duration exposures were most significantly associated with high levels of depression, high levels of anxiety, or possible PTSD symptoms. To create reduced and parsimonious models, we created backward stepwise logistic regression models to calculate ORs and 95% confidence intervals (CIs) for the association between each individual mental health outcome and exposures and to adjust for potential confounders, including exposure to pretrafficking violence (physical violence at any age [yes or no] and sexual violence at any age [yes or no]). Exposures were included in the model if the covariate showed an association ($P<.2$) and contributed to the overall fit of the model ($P<.05$). To confirm the final model fit, we checked model discrimination using the Akaike Information Criterion,[31] in which covariates are removed until the model with the lowest Akaike value is retained.

We used Stata/IC version 10.1 (StataCorp LP, College Station, TX) to conduct data analyses.[32]

RESULTS

The 204 girls and women in this study originally came from 12 different countries, 9 in eastern Europe and 3 in west Africa and the Caribbean.[4] The greatest proportion of participants originated from Moldova and Ukraine (Table 1), reflecting a higher client intake at these 2 sites rather than the geographical distribution of trafficked girls and women.

Participants reported high levels of physical and sexual violence both prior to and during the trafficking experience. During the trafficking period, more than 80% of participants had been subjected to sexual violence, threats of harm to themselves, and persistently restricted freedom. Fifteen percent had experienced

TABLE 1—Characteristics of Trafficked and Sexually Exploited Girls and Women (n = 204): Posttrafficking Care Sites in 7 European Countries, 2004–2005

Characteristics	No. (%)
Countries of origin	
Moldova	71 (34.8)
Ukraine	52 (25.5)
Other European[a]	59 (28.9)
West African, Caribbean[b]	13 (6.4)
No data	9 (4.4)
Interview countries	
Belgium	3 (1.5)
Bulgaria	20 (9.8)
Czech Republic	5 (2.5)
Italy	26 (12.7)
Moldova	74 (36.3)
Ukraine	50 (24.5)
United Kingdom	26 (12.7)
Age, y, at interview	
15–17	24 (11.8)
18–20	44 (21.6)
21–25	86 (42.2)
26–30	34 (16.7)
31–45	14 (6.9)
No data	2 (1.0)
Marital status before trafficking	
Single	147 (72.1)
Married/living as married	23 (11.3)
Separated/divorced	32 (15.7)
Widowed	1 (0.5)
No data	1 (0.5)

[a]Bulgaria, Czech Republic, Kyrgyzstan, Lithuania, Romania, Russian Federation, and Slovakia. "European" was defined as a member state of the Organization for Security and Co-operation in Europe.
[b]Cameroon, Nigeria, and Jamaica.

child sexual abuse, and 25% had experienced sexual violence in adulthood prior to being trafficked. Pretrafficking violence and abuse were not significantly correlated with trafficking-related exposures to trauma ($P>.05$).

We found good internal consistency with the mental health scales we used. The Cronbach α reliability coefficient[33] of internal-consistency reliability was estimated to be 0.89 for the BSI depression subscale, 0.90 for the BSI anxiety subscale, and 0.94 for the HTQ PTSD subscale.

Table 2 shows that 80% of participants scored above the cutpoint for at least 1 of the disorders measured. Among these participants, 57% were comorbid for all 3 mental health outcomes. No participants with high levels of both depression and anxiety scored below the cutpoint for PTSD.

Fifty-five percent of participants met our criteria for high levels of depression symptoms, 48% met our criteria for high levels of anxiety symptoms, and 77% had possible PTSD. As shown in Table 3, many, but not all, of the trafficking-related exposures were more commonly reported among those participants with mental health symptoms. Reported injuries during trafficking were significantly associated with all 3 mental health outcomes. Sexual violence during trafficking was associated with PTSD, and physical violence (being hit or kicked) during trafficking was positively associated with anxiety symptoms (Table 3). Only 2 trafficking exposures were associated with comorbidity of all 3 mental health outcomes: sexual violence and injuries during trafficking (data not shown).

Several trafficking-related trauma exposures were more common in certain mental health symptom categories but did not show a statistically significant association, such as exposure to physical violence, threats against the participant, restricted freedoms, and at least 6 months spent in the trafficking situation (Table 3).

Logistic regression models indicate that participants who had been in the trafficking situation for at least 6 months had approximately 2 times the odds of having higher levels of depression and anxiety symptoms compared with those who had spent less time in trafficking (after taking account of other trafficking-related exposures and pretrafficking abuse; Table 4). Those participants who had left the trafficking situation at least 3 months before their interviews were at lower risk of depression (adjusted OR [AOR]=0.40; 95% CI=0.2, 0.8) and anxiety (AOR=0.39; 95% CI=0.2, 0.8) than were those who had left the trafficking situation more recently. Restricted freedom during trafficking was associated with increased odds of anxiety. Sexual violence during trafficking was associated with increased risk of PTSD.

TABLE 2—Prevalence and Overlap of High Levels of Mental Health Symptoms Among Trafficked and Sexually Exploited Girls and Women (n=204): Posttrafficking Care Sites in 7 European Countries, 2004–2005

Mental Health Symptoms	No (%)
Prevalence of symptoms	
Depression	112 (54.9)
Anxiety	98 (48.0)
PTSD	157 (77.0)
Overlap of symptoms	
Depression only	2 (1.3)
Anxiety only	1 (0.6)
PTSD only	41 (25.6)
Depression + anxiety	0 (0.0)
Depression + PTSD	19 (11.9)
Anxiety + PTSD	6 (3.8)
Depression + anxiety + PTSD	91 (56.9)

Note. PTSD = posttraumatic stress disorder. Participants were found to have high levels of mental health symptoms on the basis of their responses to the Brief Symptom Inventory (BSI) subscales for depression and anxiety and to the Harvard Trauma Questionnaire (HTQ) for PTSD. Cutpoints for determining high levels of each symptom were as follows: depression BSI score ≥ 1.87; anxiety BSI score ≥ 1.71; PTSD HTQ score ≥ 2.0. The 7 posttrafficking care sites were located in Belgium, Bulgaria, the Czech Republic, Italy, Moldova, Ukraine, and the United Kingdom.

DISCUSSION

Findings from this study provide important new information for the emerging field of posttrafficking mental health care. To date, the development of policies and service approaches has relied primarily on qualitative reports and case examples without the contribution of more robust research on symptom patterns. Our findings begin to fill this significant evidence gap. As one of the first studies on the mental health of trafficked girls and women, our research has a number of limitations. First, despite the diversity of those who participated in our study, we cannot be certain of the extent to which the findings might be representative of a more general population of trafficked girls and women, especially those who do not access services. There are currently no data on the larger population of trafficked persons. In addition, we were not able to conduct full diagnostic assessments of specific mental disorders and instead relied on screening instruments that have been validated among populations similarly exposed to chronic abuse or traumatic events.[25,26,34]

The sample size was constrained by unpredictable levels of client intake and the great amount of resources required to carry out multisite studies of this type. This constraint in turn limited our ability to examine the distributions of trafficking-related risk factors, mental health symptoms, and potential clustering. Although the study instruments were translated and adapted to reflect cultural and linguistic differences, the tools may not have captured the full cultural diversity of symptoms experienced by this cohort.[35] Instead, our findings demonstrate common symptom patterns and associations. The high prevalence of comorbidity suggests the need for further examination through modeling of risks for comorbid conditions. Despite these limitations, we believe that our study offers valuable information to inform service provision and to act as a basis for much-needed intervention research.

This analysis reiterates disturbing findings on the extremely high level of violence experienced by this group, both during and prior to trafficking, and our analysis highlights the extent of psychological morbidity—which, for many girls and women, represented normal reaction to extraordinary stress. PTSD levels found among this population (77%) were, for example, slightly higher than were levels identified in a meta-analysis of associations between intimate partner violence and PTSD (63%)[36] and in studies of persons fleeing war or mass violence (38%–65%).[37] This higher level of PTSD suggests the need for future research to test whether intervention approaches for girls and women subjected to partner violence or war trauma might be beneficial for trafficked girls and women.[38]

TABLE 3—Associations Between Mental Health Outcomes and Exposures to Trauma Before and During Trafficking Among Trafficked and Sexually Exploited Girls and Women (n = 204): Posttrafficking Care Sites in 7 European Countries, 2004–2005

		Participants With High Levels of Mental Health Symptoms					
		Depression		Anxiety		PTSD	
	Total, No. (%)	%	OR (95% CI)	%	OR (95% CI)	%	OR (95% CI)
Trafficking-related violence							
Sexual violence							
No	15 (7.4)	33.3	1.0	26.7	1.0	46.7	1.0
Yes	187 (92.6)	57.5	2.7 (0.9, 8.3)	50.5	2.8 (0.9, 9.2)	80.7	4.8* (1.6, 14.4)
Total	202 (100)						
Physical violence (hit or kicked)							
No	45 (22.3)	45.5	1.0	34.1	1.0	70.5	1.0
Yes	157 (77.7)	58.6	1.7 (0.9, 3.3)	52.9	2.2 (1.1, 4.4)*	80.3	1.7 (0.8, 3.6)
Total	202 (100)						
Physical violence (weapon used; threatened with weapon)							
No	137 (69.2)	55.9	1.0	47.1	1.0	77.9	1.0
Yes	61 (30.8)	55.7	1.0 (0.5, 1.9)	52.5	1.3 (0.7, 2.3)	78.7	1.1 (0.5, 2.2)
Total	198 (100)						
Threats against participant							
No	16 (8.0)	60.0	1.0	33.3	1.0	60.0	1.0
Yes	185 (92.0)	55.7	0.8 (0.3, 2.4)	50.3	2.0 (0.7, 6.1)	79.5	2.5 (0.8, 7.6)
Total	201 (100)						
Threats against participant's family or loved ones							
No	124 (62.3)	59.4	1.0	50.4	1.0	76.4	1.0
Yes	75 (37.7)	49.3	0.7 (0.4, 1.2)	45.3	0.8 (0.4, 1.4)	81.3	1.3 (0.6, 2.6)
Total	199 (100)						
Restricted freedom							
None	39 (19.7)	48.7	1.0	38.5	1.0	76.9	1.0
Always	159 (80.3)	58.9	1.5 (0.7, 3.1)	52.5	1.8 (0.9, 3.6)	79.1	1.1 (0.5, 2.6)
Total	198 (100)						
Serious injury							
No	83 (41.3)	45.8	1.0	37.4	1.0	68.7	1.0
Yes	118 (58.7)	63.3	2.1* (1.2, 3.7)	57.3	2.3* (1.3, 4.1)	85.5	2.7* (1.3, 5.4)
Total	201 (100)						
Duration in and out of trafficking							
Time in trafficking							
<6 mo	107 (56.9)	53.3	1.0	45.7	1.0	77.1	1.0
≥6 mo	81 (43.1)	63.0	1.5 (0.8, 2.7)	56.8	1.5 (0.8, 2.7)	80.3	1.2 (0.6, 2.4)
Total	188 (100)						

Continued

The association between positive symptom levels and injuries, sexual violence, and physical violence corresponds with literature highlighting the association between mental disorders and penetrative sexual violence, life-threatening violence, and injury.[39,40] However, in our study, such effects were reduced after adjustment for other trafficking exposures, partly because of the close correlation among the major trafficking exposures of physical and sexual violence, threats, and restricted freedom.

After we adjusted for violence prior to the trafficking period, sexual violence during trafficking and time participants had spent in the trafficking situation still had independent effects on participants' symptoms. Girls and women who are in trafficking circumstances for longer periods may be exposed to a greater number of abusive episodes and more sustained feelings of entrapment, alienation, loss of control, humiliation, and hopelessness, which all have been associated with mental health disorders.[41–43] This key finding underscores the role of the trafficking exposures themselves in increasing the risk of poor mental health and suggests that girls and women exposed to longer periods of trafficking may need greater time for posttrafficking care.

The abuse that participants experienced prior to the trafficking situation (physical and sexual) appeared to have had a smaller effect on their mental health than did the trafficking-related violence. This difference may be because of a temporal effect; our study took place at an early stage in participants' posttrafficking care, when the proximal effects of trafficking-related exposures were probably dominant. With a longer follow-up, the distal effects of exposures such as a history of violence may increase the risk of chronic mental health symptoms.[44] Practitioners should keep in mind the effect that prior abuse can have on response to treatment and follow-up.

Our research also demonstrates the common comorbidity between PTSD, depression, and anxiety among trafficked girls and women. PTSD can be found alone, but it is commonly mixed with clinical depression, in which case the individual is likely to experience more distress and disability,[45] and the outcome for recovery is likely to be worse.[46] Our results showed that length of time since trafficking had ended was associated with

TABLE 3—*Continued*

Time out of trafficking							
<3 mo	125 (61.6)	61.3	1.0	54.8	1.0	80.7	1.0
≥3 mo	78 (38.4)	47.4	0.6 (0.3, 1.0)	39.5	0.5 (0.3, 1.0)	75.0	0.7 (0.4, 1.5)
Total	203 (100)						
Pretrafficking-related violence							
Physical violence before trafficking							
No	96 (48.0)	58.3	1.0	50.0	1.0	76.0	1.0
Yes	104 (52.0)	54.4	0.8 (0.5, 1.5)	48.5	0.9 (0.5, 1.6)	80.6	1.2 (0.6, 2.5)
Total	200 (100)						
Sexual violence before trafficking							
No	132 (67.0)	58.3	1.0	52.3	1.0	80.3	1.0
Yes	65 (33.0)	53.9	0.8 (0.5, 1.5)	43.1	0.7 (0.4, 1.3)	77.0	0.8 (0.4, 1.7)
Total	197 (100)						

Note. PTSD = posttraumatic stress disorder; OR = odds ratio; CI = confidence interval. Participants were determined to have high levels of mental health symptoms on the basis of their responses to the Brief Symptom Inventory (BSI) subscales for depression and anxiety and to the Harvard Trauma Questionnaire (HTQ) for PTSD. Cutpoints for determining high levels of each symptom were as follows: depression BSI score ≥ 1.87; anxiety BSI score ≥ 1.71; PTSD HTQ score ≥ 2.0. The 7 posttrafficking care sites were located in Belgium, Bulgaria, the Czech Republic, Italy, Moldova, Ukraine, and the United Kingdom.
*$P < .05$.

TABLE 4—Regression Analysis of the Influence of Pretrafficking Trauma, Trafficking Trauma, and Duration Exposures on Mental Health Symptoms Among Trafficked and Sexually Exploited Girls and Women (n = 204): Posttrafficking Care Sites in 7 European Countries, 2004–2005

Variables	Participants With High Levels of Mental Health Symptoms		
	Depression, AOR (95% CI)	Anxiety, AOR (95% CI)	PTSD, AOR (95% CI)
Sexual violence	NA	3.35 (0.62, 18.16)	5.63* (1.25, 25.42)
Physical violence (hit or kicked)	NA	NA	NA
Physical violence (weapon used; threatened with weapon)	NA	NA	NA
Threats against participant	NA	NA	2.95* (0.80, 10.87)
Threats against participant's family or loved ones	0.60 (0.29, 1.18)	NA	NA
Restricted freedom of movement	1.90 (0.84, 4.33)	2.33* (1.01, 5.38)	NA
Serious injury	1.69 (0.85, 3.39)	1.70 (0.90, 3.25)	1.80* (0.84, 4.10)
≥6 mo spent in trafficking situation	2.23* (1.10, 4.53)	2.22* (1.11, 4.46)	NA
≥3 mo since escaping trafficking situation	0.40* (0.20, 0.80)	0.39* (0.20, 0.80)	NA

Note. AOR = adjusted odds ratio; CI = confidence interval; PTSD = posttraumatic stress disorder; NA = not applicable. Multivariate analysis was conducted for all trafficking-related violence listed in the table and was controlled for pretrafficking physical and sexual violence. Only factors having a positive effect on the model fit *P* value ($P < .2$) and overall goodness of fit ($P < .05$) were included. Participants were determined to have high levels of mental health symptoms on the basis of their responses to the Brief Symptom Inventory (BSI) subscales for depression and anxiety and to the Harvard Trauma Questionnaire (HTQ) for PTSD. Cutpoints for determining high levels of each symptom were as follows: depression BSI score ≥ 1.87; anxiety BSI score ≥ 1.71; PTSD HTQ score ≥ 2.0. The 7 posttrafficking care sites were located in Belgium, Bulgaria, the Czech Republic, Italy, Moldova, Ukraine, and the United Kingdom.
*$P < .05$.

reduced risk of anxiety and depression but not with any reduction in risk of PTSD symptoms.

Following a sex-trafficking experience, women and girls often face a myriad of decisions and stressors, including possible participation in a criminal proceeding, immigration and asylum procedures, stigma associated with sex work, return to families who may be unaware of their experiences—or who may be aware of their experience and consequently unwelcoming—and, not least, the same concerns about poverty and employment that caused them to leave home in the first place. Numerous trafficking survivors will handle these challenges well, but many survivors will struggle with symptom levels that impair their ability to integrate into their new settings or reintegrate into their former situations. Factors such as lack of social support and additional life stress have been shown to influence symptom severity.[44] Some women and girls may require formal psychiatric care, but many will not.

Currently, numerous organizations around the world, particularly in low- and middle-income settings, provide care to trafficked persons; yet uncertainty persists regarding the best ways to address their mental health needs. Mental health practitioners should move quickly to develop and test interventions that can be used by nonmedical staff and laypeople.[47] A new handbook titled *Caring for Trafficked Persons: Guidance for Health Care Providers*, written by a group of experts in the field of human trafficking, includes recommendations on safe gender- and age-appropriate mental health care for this population.[48,49]

Trafficking in persons has been firmly declared to be a human rights violation of international proportions.[50] Numerous countries around the world have ratified the UN Convention Against Trafficking in Persons and have signed regional agreements on trafficking that require psychological assistance for this extremely vulnerable population.[51,52] To meet their international obligations, countries will have to begin to mandate and sponsor responses to individuals' mental health needs. In this effort, the mental health community can take the lead by developing and testing formal and informal intervention strategies that help women and girls manage the aftermath of a trafficking experience. ■

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Contributors

C. Zimmerman conceptualized and coordinated the study under supervision by C. Watts. M. Hossain and M. Light led the analysis. M. Hossain, C. Zimmerman, and M. Abas wrote the article. All authors participated in editing the article.

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