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Use of Mindfulness to Treat Mental Health Symptoms of Individuals Subjected to Human Sex Trafficking and Prostitution

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CERTIFICATE OF APPROVAL

Clinical Research Project

This is to certify that the Clinical Research Project of

Amanda Leigh McCaw

has been approved by the
CRP Committee on April 17, 2019
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Abstract

Human sex trafficking and prostitution is a global phenomenon that has been occurring for centuries. Millions of people are subjected to the cruelties that occur within sex trafficking and prostitution. The distinction between sex trafficking and prostitution is minute. Large economic profits serve as an incentive to sustain the sex work industry, despite the harm it causes to the people that are employed as sex workers. Numerous mental health problems can arise for individuals subjected to sex trafficking and prostitution including posttraumatic stress disorder, depression, dissociation, terror, anxiety, guilt, anger, and substance abuse (Dalla, 2002; Farley, Baral, Kiremire, & Sezgin, 1998; Farley et al., 2003; Raymond, Hughes, & Gomez, 2001; Ross, Anderson, Heber, & Norton, 1990; Vanwesenbeeck, 1994). Survivors of sex trafficking and prostitution have limited to non-existent treatments to assist them. The present paper explores the nature of sex trafficking and prostitution, reviews the literature of the risk factors related to sex trafficking and prostitution, and the mental health consequences resulting from trafficking and prostitution. This paper postulates the potential utility of mindfulness-based treatments to aid individuals who have been subjected to sex trafficking and prostitution. A review of the literature on mindfulness is discussed and its applicability to survivors of sex trafficking and prostitution.

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CHAPTER I

According to the International Labour Organization (2012), of the 20.9 million people estimated to be in forced labor, 4.5 million of these individuals are subjected to forced sexual exploitation. The International Labour Organization Convention of 1930 (No. 29), Article 2.1 defined forced labour as "all work or service which is exacted from any person under the menace of any penalty and for which the said person has not offered himself voluntarily" (para. 2). Forced labor is when an individual is coerced or deceived into a job, which leaves them trapped in the job and unable to leave (International Labour Organization, 2012). Sexual exploitation is "any actual or attempted abuse of position of vulnerability, differential power or trust, for sexual purposes, including, but not limited to, profiting monetarily, socially, politically from the sexual exploitation of another" (United Nations, 2017, p. 6). Worldwide, estimations of the profit made from forced labor and human trafficking is $150 billion (International Labor Organization, 2012). Article 3 of the "Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children," supplementing the United Nations Convention against Transnational Organized Crime defines human trafficking as:

> The recruitment, transportation, transfer, harbouring or receipt of persons, by means of the threat or use of force or other forms of coercion, of abduction, of fraud, of deception, of the abuse of power or of a position of vulnerability or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the purposes of exploitation. Exploitation shall include, at a minimum, the exploitation of the prostitution of others or other forms of sexual exploitation, forced labour or services, slavery or practices similar to slavery, servitude or the removal of organs. (United Nations Office on Drugs and Crime, 2004, p. 42)

The National Human Trafficking Resource Center (2016) annual statistics from January 1, 2015 to December 31, 2015 found 74.6% of the cases reported were related to the sex trafficking category. Sex trafficking is a form of human trafficking (Center for Disease Control and Prevention, 2018). The Trafficking Victims Protection Act of 2000 defines sex trafficking as "the recruitment, harboring, transportation, provision, or obtaining of a person for the purpose of a commercial sex act" (para. 3). Sex trafficking "involves the use of force, fraud, or coercion to make an adult engage in commercial sex acts, or if a minor, to cause them to commit commercial sex acts" (Center for Disease Control and Prevention, 2018, para. 1). To be considered sex trafficking:

> It must have at least one of the elements within each of the three criteria of process, means, and goal. If one condition from each criterion is met, the result is trafficking. For adults, victim consent is irrelevant if one of the means is employed. For children, consent is irrelevant with or without the means category. Process: Recruitment, transportation, transferring, harboring, or receiving. Means: Threat, coercion, abduction, fraud, deceit, deception, or abuse of power. Goal: Prostitution, pornography, violence/sexual exploitation, or involuntary sexual servitude. (Basile, Smith, Breiding, Black, & Mahendra, 2014, p. 16)

"Sex traffickers use violence, threats, lies, debt bondage, and other forms of coercion to compel adults and children to engage in commercial sex acts against their will" (Polaris, 2018, para. 1). Calls from Florida accounted for 7.7% of the total calls to the National Human Trafficking Resource Center (2016), preceded only by the states of California and Texas. In 2016, the National Center for Missing and Exploited Children (2017) proposed that one in six of the 18,500 runaway children reported were victims of human sex trafficking.

Sex Trafficking and Prostitution

Historically, women have been sold into prostitution for centuries (Barry, 1979). There is a belief that prostitution is a viable job option (Farley, 2006). Entrance into the realm of sex work not only involves the subjugation of one's body, but also the loss of identity (Farley et al., 2003). The process by which individuals are prepared for working is called the "seasoning" or "turning out" process. The seasoning process requires the individual to change their name, appearance, and behaviors (Farley, 2003).

The relationship between sex trafficking and prostitution is often misunderstood, denied, or hidden (Farley, 2003, 2004, 2006). The 1949 United Nations Convention for the Suppression of the Traffic in Persons and the Exploitation of the Prostitution of Others noted, "prostitution and the accompanying evil of the traffic in persons for the purpose of prostitution are incompatible with the dignity and worth of the human person and endanger the welfare of the individual, the family and the community" (para. 1). The convention described the trafficking of persons for the purposes of prostitution, making the difference between the two terms inconsequential. Farley (2004, 2006) proposed that prostitution and trafficking are synonymous. Additionally, the Co-Executive Director of the Coalition Against Trafficking in Women has argued sex trafficking is akin to globalized prostitution and prostitution is domestic trafficking (Leidholdt, 2003). Initially, language was utilized to normalize the sex industry (Farley, 2003, 2006). Farley (2006) stated, "words contribute to the myth of prostitution's inevitability and to the belief that johns' sexual predation is a logical consequence of "boys being boys" (p. 123). People who purchase individuals in prostitution are referred to as "interested parties" or "third parties" and the individuals who sell the prostitutes services are called "boyfriends" or "managers" (Farley, 2006). The above terms are differentiated and socially acceptable as compared to terms previously used to describe the buyer, the "tricks" or "john," and the sellers,

"pimps" (Farley, 2006). Due to these nuances in language, it may prove difficult to discern the relationship between prostitution and sex trafficking. Indeed, they are by all regards the same, for one cannot exist without the other (Farley, 2006; Leidholdt, 2003). Many would say sex trafficking is not voluntary, whereas prostitution is a choice (Raymond, 2004; Sullivan & Jeffreys, 2001). However, with closer inspection the choice likely becomes nonexistent (Farley, 2006; Sullivan & Jeffreys, 2001).

Viewed from an economical perspective, the demand for services often drives the sex trafficking industry (Raymond, 2004; Sullivan & Jeffreys, 2001). There are not enough people in prostitution to adequately provide for the demand from the buyers (Raymond, 2004). Consequently, individuals are trafficked into prostitution to meet the demands of the buyers (Sullivan & Jeffreys, 2001). Mass economic gains from the sex industry help preserve and perpetuate trafficking and prostitution (Farley, 2003, 2004, 2006; Farley et al., 2003; Jeffreys, 1999; Poulin 2003; Raymond, 2004; Sullivan & Jeffreys, 2001). Supporters of prostitution attempt to hide the relationship between sex trafficking and prostitution due to profits gained from the sex industry (Farley 2003, 2004, 2006; Jeffreys, 1999; Poulin, 2003; Raymond, 2004; Sullivan & Jeffreys, 2001). The hidden nature of prostitution and trafficking is described by Farley (2003) as the invisibility of the sex industry. The invisibility of prostitution combined with the normalization of the sex industry helps promote, fuel, and sustain the sex industry (Farley, 2004, 2006; Farley et al., 2003; Raymond, 2004). Turning the blind eye may become the means of preserving the belief that we, as a society, are still good people. However, repression and denial are not likely to make the problem disappear. Little thought is given to the effects that this work can have on the individual.

Mental health consequences. A variety of mental health concerns can arise for individuals who have experienced sex trafficking or prostitution. These mental health concerns

include posttraumatic stress disorder, complex posttraumatic stress disorder, depressive disorders, anxiety disorders, dissociative disorders, somatic disorders, suicide attempts, substance abuse disorders, and personality changes (Dalla, 2002; Farley, 2006; Farley et al., 2003; Jeffreys, 1999; Raymond, 2004; Ross, Farley, & Schwartz, 2003; Sadruddin, Walter, & Hidalgo, 2005; Sullivan & Jeffreys, 2001). According to van der Kolk (2014), dissociation is a key piece of trauma, and other researchers have reported that dissociation is often utilized by individuals in trafficking and prostitution as a means to survive (Farley, 2003). Common somatic complaints include headaches, numbness, and disconnectedness from the body (Farley, 2004). Survivors may also experience compartmentalization of their body or separation from parts of their body (Farley, 2006). Further consequences may include difficulties trusting others, modulating anger, managing stress, and navigating sexual intimacy, as well as Stockholm syndrome, which is a paradoxical occurrence wherein the victim forms an emotional bond or attachment with their captor (Farley, 2006; Graham, Rawlings, & Rigsby, 1994; Jeffreys, 2001; Sadruddin et al., 2005). Individuals with Stockholm Syndrome may even feel gratitude towards their captor for simply allowing them to live (Graham et al., 1994). Mental health symptoms are exacerbated when there are multiple perpetrators and a higher degree of perceived uncontrollability (Farley, 2006; Sadruddin et al., 2005).

Treatment. Specific treatment for individuals who have been subjected to human trafficking and prostitution are limited to non-existent. Utilization of mindfulness techniques may pose a beneficial treatment method to specifically treat individuals who have been subjected to human sex trafficking and prostitution. Mindfulness techniques are pivotal in treating trauma and dissociative disorders by assisting the client to be present and in the moment (van der Kolk, 2014). Mindfulness techniques have been found to be helpful when recalling traumas to prevent potential flashbacks (van der Kolk, 2014).

Purpose of CRP – Literature Review

Due to the number of people who are subjected to sex trafficking and prostitution, viable treatments are needed for clinicians treating survivors. This paper will address the following central research question: Could mindfulness interventions be effective treatment(s) for individuals who have been subjected to prostitution, sex trafficking, or both and who are experiencing various mental health symptoms?

Significance of the study. The significance of the study is to provide support for a potential treatment to clinicians treating individuals who have been subjected to sex trafficking and prostitution.

Nature of the literature review. A review of the prevalence of mental health disorders in individuals who have experienced trafficking, prostitution, or both will be conducted. A review of the literature on utilizing mindfulness techniques as a form of treatment for the various mental health disorders that arise for individuals who have been trafficked or subjected to prostitution will be completed. The possible utility of using mindfulness techniques to treat mental health symptoms experienced by individuals who have been trafficked or subjected to prostitution will be discussed.

Inclusion and exclusion. Inclusion to the literature review includes studies and literature related to individuals who have been sex trafficked or prostituted as well as literature related to treatment of their common mental health concerns. Out of this group of individuals, the associated mental health disorders and the risk factors that may have increased their susceptibility to sex work are discussed. Due to the limited amount of research available regarding individuals who have been trafficked, all studies available will be assessed and reviewed. Relevant weaknesses of all studies will be discussed including small sample sizes, lack

of peer review, lack of validated or multimethod assessment, correlational studies or surveys, and studies without a control or comparison group.

CHAPTER II

Defining Prostitution

Prostitution is defined as a transaction occurring between individuals in which one person purchases sexual acts from another, in exchange for compensation, typically money (Leidholdt, 2003). A person that purchases sexual services from a prostitute are called interested parties or third parties (Farley, 2006). However, to prostitutes these individuals are often called johns or tricks (Farley, 2003). The pleasure experienced by the prostitute while engaging in sex work is not the focus. The focus is on giving pleasure, fulfilling customer desires and demands, and being fully submissive to the john (Farley, 2003). The individual selling the prostitute is the pimp or trafficker, but they are also called managers or boyfriends (Farley 2003, 2006; Shared Hope International, 2019). Prostitution is characterized by a dominance/submissive relationship between the pimp, the john, and the prostitute (Sadruddin et al., 2005).

Individuals are often punished by the pimp regardless of their behavior (Farley, 2006). The pimp may also alternate between extreme forms of brutality to a more compassionate and nurturing approach (Farley, 2006; Sadruddin et al., 2005). As a result of these extremes in treatment, the prostitutes often do not know the reaction they will receive from the pimp, reinforcing the environment of terror that has been created for them. In addition, this terror assists the pimp in gaining full domination over the prostitute (Farley, 2006; Sadruddin et al., 2005).

As a result of their work, prostitutes are often in dangerous environments, which includes working on the streets, as well as in hotels, strip clubs, brothels, massage parlors, or in the john's home among a variety of other settings (Farley, 2006). Outdoor prostitution is akin to street prostitution whereas indoor prostitution occurs within the confines of a building or room such as a massage parlor, strip club, or filming pornography (Farley, 2004; Hoigard & Finstad, 1986).

Street prostitution has been viewed by society as the lowest and most dangerous form of prostitution. However, research has demonstrated street prostitution may be safer when compared to indoor forms of prostitution (Farley, 2004, 2006). Street prostitution gives the individual the choice of turning away a john who may appear too intoxicated or dangerous (Farley, 2006; Raymond, 2004). Indoor prostitution often requires the individual to service the john regardless of what is being asked because these acts are performed behind closed doors and the pimp has been paid, so the prostitute is left at the mercy of the john, with no one to help (Farley, 2006). According to Prostitution Research and Education (2008), only 2% of people in prostitution are in it for a short period of time, make a lot of money, and service few men.

Defining Sex Trafficking

Sex trafficking is "when an adult engages in a commercial sex act, such as prostitution, as the result of force, threats of force, fraud, coercion or any combination of such means" (U.S. Department of State, 2016, para. 3). To be considered sex trafficking:

> It must have at least one of the elements within each of the three criteria of process, means, and goal. If one condition from each criterion is met, the result is trafficking. For adults, victim consent is irrelevant if one of the means is employed. For children, consent is irrelevant with or without the means category. Process: Recruitment, transportation, transferring, harboring, or receiving. Means: Threat, coercion, abduction, fraud, deceit, deception, or abuse of power. Goal: Prostitution, pornography, violence/sexual exploitation, or involuntary sexual servitude. (Basile et al., 2014, p. 16).

Therefore, any person under 18-years-old is considered a victim of sex trafficking regardless of any apparent voluntary consent to prostitution. Additionally, any person who is subjected to one of the means elements above, such as threat or coercion, is a victim of sex trafficking even if she or he seemingly consented to prostitute. To be considered sex trafficking the individual does not

necessarily have to be transported or moved across borders (End Slavery Now, 2019). Individuals may become lured into sex trafficking through false promises made by traffickers/pimps such as a job, protection, love, or a home, which falls within the means element in the above definition (End Slavery Now, 2019; Shared Hope International, 2019). Traffickers/pimps find victims for sex trafficking through social media, local neighborhoods, clubs or bars, the internet, and schools (Shared Hope International, 2019). Sex trafficking can occur in a variety of different settings including but not limited to escort service agencies, strip clubs, massage parlors, at hotels and motels, truck stops, residential brothels, on the street, or through online ads (Polaris, 2018).

Developmental Contributions and Risk Factors for Prostitution and Sex Trafficking

Childhood sexual abuse. A history of childhood sexual abuse (CSA) is often the norm among prostitutes (Dalla, 2000; Farley, 2003; Farley et al., 2003; Leidholdt, 2003). CSA is a training arena for many prostitutes (Farley, 2003). As a result of the abuse experienced by individuals in childhood, they tend to resort to the belief that the use of their body is the only skill they possess (Farley, 2006). Children subjected to CSA are often bribed and coerced into performing sexual acts by the adult in exchange for food, shelter, and material possessions (Farley et al., 2003; Leidholdt, 2003). The subsequent feelings of shame that may arise are harnessed as a weapon by the perpetrator in order to keep the child silent.

A study was conducted by Farley, Baral, Kiremire, and Sezgin (1998) to explore the violence and traumatic stress experienced by people from five countries who had been prostituted. Brief structured interviews were conducted with 475 people in prostitution. Interviewees who confirmed they were working as prostitutes completed a 23-item questionnaire (created by the authors) that asked about physical and sexual assault occurring within prostitution and throughout their lifetime, the use of or making of pornography while in

prostitution, problems with drugs or alcohol, history of homelessness, if respondents wanted to leave prostitution and what would be needed to leave, and any physical health problems. Participants also completed the PCL (PCL; Weathers, Litz, Herman, Huska, & Keane, 1993). PTSD symptoms were measured using the procedure established by Weathers et al. (1993) whereby an overall PTSD symptom severity score was calculated. Scores of 3 or higher on any item of the PCL were considered a symptom of PTSD. Interviews took place in San Francisco, CA, USA; two unspecified cities in Thailand; Lusaka, Zambia; Capetown and Johannesburg, South Africa; and Istanbul, Turkey. Respondents (n = 130) in San Francisco were recruited on the street after verbally confirming that they were prostituting (Farley et al., 1998). Respondents in Thailand (n = 110) were interviewed on the street, at a beauty parlor, and at an agency in northern Thailand that offered job training and support. Respondents in Johannesburg and Capetown (n = 68) were interviewed on the street, at a drop-in center, and in brothels. In Lusaka, Zambia 117 current and former prostitutes were interviewed at TASINTHA, a nongovernmental organization offering food and vocational training to prostituted women. In Istanbul, Turkey 50 prostituted women were interviewed at the hospital they were brought to by police for the purpose of venereal disease control. The sample included women, men, and transgendered people. Results found an average of 58% of participants reported a history of childhood sexual abuse, with an average of four perpetrators. The range of reported childhood sexual abuse varied from 34% in Turkey to 84% in Zambia (Farley et al., 1998). Specific results regarding participants PCL scores will be discussed in a later section of this chapter. Limitations of the study include convenience sampling and response bias due to use of unvalidated measures.

A study conducted by Farley et al. (2003) explored the violence and traumatic stress experienced by people from nine countries who had been prostituted. The sample was composed of 854 individuals from nine countries. Of note, the sample for the present study was combined

with the study mentioned above but added in data from four additional countries. Countries were selected for the sample due to their continuous documentation of women in prostitution. Countries included in the sample were Canada, Colombia, Germany, Mexico, the United States, Thailand, Zambia, Turkey, and South Africa. Data was collected from specific cities within each of these countries including Vancouver, Canada; Bogota, Columbia; San Francisco, U.S.A.; Capetown and Johannesburg, South Africa; Mexico City and Puebla, Mexico; Hamburg, Germany; Lusaka, Zambia; two cities in Thailand (not specified); and Istanbul, Turkey. Participation in the study was voluntary. No incentives for participation were reported.

Participants in Canada were recruited from 100 women interviewed by the researchers who were prostituting in the vicinity of Vancouver's downtown eastside (Farley et al., 2003). The 123 women in Mexico City and Puebla were interviewed and had been prostituting on the street, or in a brothel, massage parlor, or strip club. The 54 women interviewed in Hamburg, Germany were from a drop-in shelter for drug addicted women, referred by peers, and from an advertisement in a local newspaper. Regarding their country of origin, 82% of the women in the Hamburg sample were German and 11% were trafficked from Thailand or the former Soviet Union. The 130 participants in San Francisco were recruited from the streets and verbally confirmed they were prostituting. In Thailand the researchers obtained several of the 110 participants from the streets, some from a beauty parlor, and the remaining from an agency in northern Thailand that offered job training. The 68 participants from Johannesburg and Capetown, South Africa were from brothels, a drop-in center for prostitutes, and from the street. The 117 current and former prostitutes from Lusaka, Zambia were interviewed at TASINTHA, which is a non-governmental organization that offers vocational training, food, and community resources for prostituted women. In Istanbul, Turkey the 50 women in prostitution were interviewed at a hospital where they had been brought in by police for STD control. Although

prostitution is legal in Turkey, the researchers were not permitted to interview the women working in the brothels. The 96 women and children interviewed in Bogota, Colombia came from an agency that offered services to them.

Regarding gender composition of the study, in six of the nine countries the researchers only interviewed women and children (Farley et al., 2003). In South Africa, researchers interviewed 10 men and one transgendered person. In Thailand, 28 transgendered people were interviewed. In the United States, 15 transgendered people and 18 men were interviewed. The mean age across the nine countries was 28-years-old. The mean age of entry into prostitution was 19-years-old, with an average of 9 years spent in prostitution. Researchers found that 47% of participants were younger than 18 years upon entering prostitution. Measures utilized in the study included the Prostitution Questionnaire (created by the authors), the PTSD Checklist (PCL; Weathers et al., 1993), and a Chronic Health Problem Questionnaire (created by the authors). The Chronic Health Problem Questionnaire was only administered in two of the nine countries, Canada and the United States. The Prostitution Questionnaire assessed for lifetime history of sexual and physical violence, and the use of, or making of, pornography while in prostitution. The questionnaire inquired whether the respondent would like to leave prostitution and what would be needed in order to leave. The participants were asked about homelessness, history of physical health problems, and their substance use history. Respondents were asked three questions regarding rape including, “have you been raped,” “who raped you,” and “how many times have you been raped since you were in prostitution” (Farley et al., 2003, p. 41). The Chronic Health Problem Questionnaire contained items developed from previous responses to open-ended questions regarding health problems of women in prostitution.

Interviewees who indicated they were prostituting in Canada, Columbia, Mexico, the United States, and South Africa were asked to complete the Prostitution Questionnaire and the

PTSD Checklist (Farley et al., 2003). As noted above, the Chronic Health Problem Questionnaire was only completed by participants in the United States and Canada (Farley et al., 2003). Interviews were conducted in the street, strip clubs, massage parlors, and brothels. Interviewees from Turkey and Germany were interviewed in medical clinics. In Zambia and Thailand, the majority of respondents were interviewed in various agencies that offered services to women in prostitution. The questionnaires were administered in several languages including German, Spanish, Thai, English, and Turkish. Interviewers translated questionnaires as needed in Zambia, though it was noted that many participants spoke some English. Researchers either directly administered the questionnaires or supervised the administration of the questionnaires. Questions were read to participants who could not read (Farley et al., 2003). Results across the nine countries found that 59% of interviewees had a history of childhood physical abuse by a caregiver to the point of injury and 63% reported histories of childhood sexual abuse, with an average of four perpetrators (Farley et al., 2003). Specific results from the PTSD Checklist will be discussed in a subsequent section of this chapter. The use of measures created by the authors may impact the overall results of the study due to the lack of standardization, reliability, and validity studies on other samples. Further limitations include convenience sampling and the lack of a comparison group.

Ross, Farley, and Schwartz (2003) summarized a study of 37 women previously in prostitution in the United States. Participants had been out of prostitution for at least 1.5 years. Respondents completed the Dissociative Experiences Scale (DES; Bernstein & Putnam, 1986) and a clinical interview that inquired about their experiences in prostitution and childhood trauma. The mean current age of the respondents was 38.9 years. Results revealed that 87% of the participants had a history of childhood sexual abuse (Ross et al., 2003). Limitations of the

studies include limited information about recruitment of participants and incentives, limited demographic information, and limited evaluation of co-occurring disorders.

A study conducted by Dalla (2000) examined patterns of similarities and differences amongst women engaged in streetwalking prostitution including history of sexual abuse and running away, age of entry into prostitution, length of time in prostitution, places where participants prostituted, history of physical abuse while in prostitution, and substance use. The study was conducted in a Midwestern city with 43 women ranging in age from 19 to 56-years-old (M = 33.37). Within the sample, 20 of the women identified as Caucasian, 18 women identified as Black, and five women identified as Native American. A majority of the participants (n = 40) were no longer involved in prostitution. Many of the participants (n = 26) were recruited through an intervention program designed to help women leave prostitution. The rest of the participants were recruited by word of mouth (n = 3) or based on their status as being currently incarcerated (n = 14). Participants were compensated $20. In-depth semi-structured personal interviews were conducted with the participants. The data from the interviews was analyzed using Phenomenological Descriptive Methodology (Colaizzi, 1978). The Phenomenological Descriptive Methodology entails reading through all the protocols within the study, extracting significant statements or phrases made by participants that were outlined in the research questions, forming meaning for each phrase or statement, clustering the identified meanings into themes, developing an exhaustive description of the identified research question(s) including all identified themes, condensing the description into a fundamental structure statement that is short and concise and captures the essence of the research question(s), and finally returning to several participants in the study to ask if the fundamental structure statement captures their experience (Colaizzi, 1978; Morrow, Rodriguez, & King, 2015). Results of the study revealed that 63% (n = 27) of participants reported a history of being sexually molested in

their formative years (Dalla, 2000). Participants most often identified the perpetrators as their fathers, brothers, stepfathers, uncles, or family friends. One participant identified her brother as being her pimp. Results indicated that on average the sexual abuse lasted 4.9 years. However, six women reported being sexually abused for 10 years or more (Dalla, 2000). Limitations of the study include a nonrandom sample, a high proportion of participants no longer being involved in prostitution, and lack of peer review.

A study conducted by Silbert and Pines (1982) explored the forms of abuse to which prostitutes on the street were subjected, including abuse prior to their entry into prostitution. The sample included 200 current and former juvenile and adult street prostitutes from the San Francisco Bay area. The mean age of participants was 22-years-old. Within the sample, 69% of participants identified as White, 18% as Black, 11% as Hispanic, 2% as American Indian, and 1% as Asian. The Sexual Assault Experiences Questionnaire was created for the purposes of the study, which asked participants about their background information, history of sexual assault, history of juvenile sexual exploitation, and plans for the future. Background information included demographic variables, home background including abuse and parental involvement in crime, social support among family and friends, and age of entrance and reasons for entering prostitution. The sexual assault section contained questions related to both job-related and non-job-related sexual assaults. The juvenile sexual exploitation questions explored age of exploitation and how the incident occurred, the relationship to the assailant, a description of the assault, and the impact of the sexual assault. The plans for the future section asked for recommendations for ideal programs for prostitutes and their future plans. Results of the study found that 60% of the sample had been sexually abused as a juvenile, by an average of two people. Results indicated 67% of the women were sexually abused by a father figure. Other perpetrators included a family friend, acquaintance, or neighbor (31%); brothers (28%); uncles

(17%); or other relatives (15%). Only 10% were sexually molested by strangers. The authors noted that the sum total of the responses to this and most of the questions totaled more than 100% because of multiple responses. Force, either physical or emotional, was used in 82% of the cases. An average of four acts of force were reported for each case of juvenile sexual abuse (Silbert & Pines, 1982). Limitations of the study include the use of a nonrandom sample, convenience sampling, and lack of a comparison group.

A study conducted by Farley and Barkan (1998) assessed the history of violence and prevalence of PTSD among individuals working as prostitutes in San Francisco. Respondents came from several areas around San Francisco where street prostitution occurs. Respondents were approached and asked whether they were in prostitution. Upon their affirmation they were asked to fill out two questionnaires. Researchers approached 136 people total and were refused by 4%. Of the 130 respondents, 75% were women, 13% were men, and 12% were transgendered. The mean age was 30.9 years (SD = 9.0). Measures utilized in the study included a 23-item questionnaire (created by the authors) that asked about respondents' history of physical and sexual violence and what was needed to leave prostitution as well as the PTSD Checklist (PCL; Weathers et al., 1993). Researchers categorized types of lifetime violence as childhood sexual assault, childhood physical abuse, rape in prostitution, and other non-rape physical assault in prostitution. Results revealed 57% of participants were sexually assaulted as a child and 49% indicated being physically assaulted as a child. Limitations of the study include the use of convenience sampling, response bias due to unvalidated measures, lack of a comparison or control group, and not being peer reviewed.

A study by Ross, Anderson, Heber, and Norton (1990) examined the frequency of childhood abuse and dissociation among patients diagnosed with multiple personality disorder, prostitutes, and exotic dancers. The sample included 20 prostitutes, 20 exotic dancers, and 20

individuals diagnosed with multiple personality disorder. The prostitutes were interviewed either at a drop-in center that provided services to prostitutes or on the street. Exotic dancers were interviewed at two local hotels either before or after their performances. The authors of the study did not specify where the participants diagnosed with multiple personality disorder were recruited from or where they were assessed. The first 20 subjects that consented for each group were included in the study. All the subjects of the study were women except one individual who was diagnosed with multiple personality disorder. The mean age of the multiple personality disorder group was 32-years-old (*SD* = 7.7), the mean age of the prostitute group was 24.5 years (*SD* = 5.3), and the mean age of the exotic dancer group was 22.9 years (*SD* = 2.2). Further demographic information was not provided. Researchers administered the Dissociative Disorders Interview Schedule (DDIS; Ross, Heber, Norton, Anderson, Anderson, & Barchet, 1989) to assess for somatization disorder, major depressive episode, borderline personality disorder, and dissociative disorders. Researchers also administered the Dissociative Experiences Scale (DES; Bernstein & Putnam, 1986) to screen for dissociative disorders. Diagnostic criteria were based on *DSM III-R.* Results revealed 80% (*n* = 16) of the participants diagnosed with multiple personality disorder, 65 % of the exotic dancers (*n* = 13), and 55% of the prostitutes (*n* = 11) had a history of childhood sexual abuse. The overall small sample size is a limitation of the present study and the lack of peer review. Additionally, it is unclear whether the exotic dancers were also engaging in prostitution.

A study exploring the relation between traumatic events and mental health among girls and women that had been trafficked for sexual exploitation was conducted by Hossain, Zimmerman, Abas, Light, and Watts (2010). Face-to-face interviews were conducted with women and adolescent girls who had been trafficked and sexually exploited and were involved with posttrafficking services provided by a nongovernmental or international organization.

Participants of the study ranged in age from 15- to 45-years-old. The sample consisted of 204 girls and women. The 204 girls and women originally came from 12 different countries, nine in eastern Europe and three in West Africa and the Caribbean. The researchers developed a questionnaire for the study that asked about abuse prior to being trafficked, the duration and circumstances of her trafficking experience, and the physical and mental health symptoms experienced 2 weeks prior to the interview. Measures administered include the depression and anxiety subscales of the Brief Symptom Inventory (BSI; Derogatis, 1993) as well as the posttraumatic symptom subscale from the Harvard Trauma Questionnaire (HTQ; Mollica, Caspi-Yavin, & Lavelle, 1991). Results indicated that 15% of the women and girls experienced childhood sexual abuse. However, it should be noted that pre-trafficking violence and abuse was not significantly correlated with trafficking-related exposures to trauma in this sample (Hossain et al., 2010). A limitation of the study is the difficulty generalizing results to the general population of trafficked girls and women, specifically those individuals who do not have access to services. Of note, the rate of reported childhood sexual abuse in this sample is lower compared to the other studies discussed in this chapter. The lower rate of reported childhood sexual abuse for the present study may be related to the sample for the present study exclusively containing individuals who have been trafficked. However, the lower rate may also be related to cultural differences in reporting sensitive information, lack of knowledge about what defines sexual abuse, or being sold as a young child and therefore not knowing anything other than the abuse, thus not reporting it.

The experience of numerous potentially traumatic events (PTEs) interrupts normal childhood development (van der Kolk, 2005). Often perpetrators of abuse are known to the child beforehand, thus the development of trust is often distorted in childhood and ripples throughout adulthood (van der Kolk, 2005). Consequently, these children often never develop the ability to

effectively regulate their affective expression, a core feature of complex posttraumatic stress disorder (van der Kolk, 2005). Aside from CSA, individuals at risk for entering into prostitution are those who have a family history of other forms of abuse such as physical abuse, neglect, psychological abuse, and emotional abuse (Farley, 2003, 2004, 2006; Jeffreys, 1999; Leidholdt, 2003; Poulin, 2003; Silbert & Pines, 1982). Vulnerable populations susceptible to sex trafficking include runaway and homeless youth, individuals with histories of sexual assault, domestic violence, social discrimination, or who have experienced war (Polaris, 2018). Furthermore, indigenous populations and people who live in poverty are at an increased risk for being trafficked (End Slavery Now, 2019).

Racial and ethnic background. Prostitutes are purchased based on their appearances including skin color, race, and gender (Farley, 2003). As a result of the expansion of the sex industry, johns often enjoy a selection, and have a tendency to choose individuals who are considered exotic as compared to their own (the john's) culture (Farley et al., 2003; Jeffreys, 1999; Poulin, 2003; Raymond, 2004). Many individuals who tend to be trafficked into prostitution are people of Asian descent (i.e., Thailand, Vietnam, Cambodia, the Philippines, China, and Burma), individuals from Latin American countries, including Brazil and Columbia, individuals from West Africa, and former countries of the Soviet Union (Raymond, Hughes, & Gomez, 2001; Tzvetkova, 2002). Prostitution thrives in cultures of gender inequality and poverty and in third world countries and prior socialist countries (Dalla, 2000; Doezema, 2001; Leidholdt, 2003; Poulin, 2003; Sullivan & Jeffreys, 2001). Aboriginal girls constitute 40% of young prostitutes in the main red-light district in Taiwan (Barry, 1995). Both minorities and indigenous populations are susceptible to recruitment into prostitution (Dalla, 2000; Farley, 2004; Farley et al., 2003; Jeffreys, 1999; Poulin, 2003; Raymond, 2004; Silbert & Pines, 1982; Sullivan & Jeffreys, 2001). Poverty, sex inequality, racism and colonialism, tourism, and

economic development that disrupts traditional ways of living were noted to be root causes of prostitution (Farley et al., 2003). Research has demonstrated that, contrary to the marginalized individuals working in prostitution, the johns tend to be "average" people, in marriages or long-term partnerships, with legal jobs, and they come from all age ranges and social classes (Farley, 2006; Raymond, 2004).

Turning Out and Seasoning

Turning out and seasoning are two terms that are used to describe the process of newly recruited prostitutes and people being trafficked and the subsequent psychological breaking of these individuals (Farley 2003, 2006). Turning out is the overarching term used for a person who recently was forced into prostitution (Shared Hope International, 2019). Seasoning involves the psychological breaking and manipulation of these individuals through gang rape, intimidation, beatings, deprivation of food or sleep, isolation from social support, and threats or holding the victim's children hostage (Shared Hope International, 2019). The seasoning process involves the mental brainwashing of the individual to make them submissive and dependent on the pimp for survival (Farley, 2006; Leidholdt, 2003). Seasoning is essential because individuals must be ready to comply with any demands made by the john (Farley 2003, 2004; Jeffreys, 1999; Leidholdt, 2003). Sexual services provided to the john often entail sexual acts including being urinated and defected on, being burned with cigarettes, cutting the prostitutes' genitals and other body parts, restraining them to a bed, and being whipped (Raymond, 2004). Through the seasoning process, the individual's identity is replaced with a new one (Farley, 2006; Leidholdt, 2003). The individuals receive a new name and a makeover to sexualize their identity, and they are taught by their captors, the pimps, to view themselves as outlaws of society (Farley, 2006; Leidholdt, 2003). The brainwashing used increasingly isolates them from friends and family,

who otherwise would be a protective factor against prostitution, and helps establish emotional dependency of prostitutes on their pimps (Leidholdt, 2003; Sadruddin et al., 2005).

Violence is another integral part involved in seasoning. Violence is used to break the individual's will and instill a belief of worthlessness and social invisibility (Farley, 2003). Rapes, beatings, sexual humiliation, threats of violence or death against family members, and deportation are all part of seasoning (Farley, 2003, 2006; Jeffreys, 1999; Leidholdt, 2003). The goal of seasoning is to erase an individual's old sense of self and to establish the dominant/submissive relationship (Leidholdt, 2003; Sadruddin et al., 2005). The seasoning process in and of itself prompts a form of dissociation within the individual (Ross et al., 2003; van der Kolk, 2014).

Mental Health Consequences

The lives of prostitutes and sex trafficking victims are characterized by a myriad of negative interacting consequences. Supporters of prostitution promote the ideology of the glamorous prostitute, such as Julia Roberts in *Pretty Woman* (Dalla, 2000). Unfortunately, like many Hollywood movies, this portrayal is just a story and is not representative of real life. Individuals in prostitution often internalize the negative stereotypes placed on them by society (Farley et al., 2003). Often, upon entry into prostitution, individuals experience a sense of self-loathing, shame, contamination, and intense fear (Farley 2003, 2004, 2006; Farley et al., 2003; Jeffreys, 1999). Prostitution keeps the experiences of childhood sexual abuse alive and ever present in the individuals mind, making it increasingly difficult for them to heal their past trauma (Leidholdt, 2003).

Traumatic experiences are not stored as one integrated experience, rather they are stored as pieces in various parts of the brain (van der Kolk, 2014). Recall of traumatic memories are necessary for the survivor to be able to integrate their experiences, rather than having fragments

of the memories stored (van der Kolk, 2014). Mental health symptoms are exacerbated when there are multiple perpetrators and a higher degree of perceived uncontrollability (Farley, 2006; Sadruddin et al., 2005). In a review of the literature, numerous mental health consequences were experienced by individuals subjected to prostitution and sex trafficking.

Posttraumatic stress disorder. As discussed above, Hossain et al. (2010) conducted a study exploring the relation between traumatic events and mental health among girls and women that had been trafficked for sexual exploitation. Researchers created a questionnaire for the study, which asked about abuse prior to being trafficked, the duration and circumstances of her trafficking experience, and the physical and mental health symptoms experienced 2 weeks prior to the interview. Mental health symptoms were assessed using the depression and anxiety subscales of the Brief Symptom Inventory (BSI; Derogatis, 1993) and the posttraumatic symptom subscale from the Harvard Trauma Questionnaire (HTQ; Mollica et al., 1991). While being trafficked, 80% of the sample were subjected to sexual violence, threats of harm, and restricted freedom. Results revealed that 77% of participants had a potential diagnosis of PTSD based on the result on the HTQ. Sexual violence was found to be associated with PTSD. Furthermore, 48% of participants met criteria for high levels of anxiety symptoms (Hossain et al., 2010). A limitation of the study is the use of screening instruments as opposed to a full diagnostic assessment for specific mental health disorders.

As described above, a study by Farley et al. (2003) observed the violence and traumatic stress experienced by people from nine countries who had been prostituted. Results revealed that across the nine countries represented, 68% of the sample met diagnostic criteria for PTSD on the PCL. A score of 3 or greater on any PCL item was considered to a be a symptom of PTSD (Weathers et al., 1993). A cutoff of 50 on the PCL is suggested for a diagnosis of PTSD, with a possible maximum score of 85 (Weathers et al., 1993). The mean PCL score in the sample was

53.5 (*SD* = 16.2; Farley et al., 2003). Results found PTSD severity to be significantly positively correlated with the number of types of lifetime violence experienced ($r = .33$, $p = .001$). While in prostitution, 57% of interviewees had been raped and 59% of those raped had been raped more than five times. Furthermore, 73% of respondents reported being physically assaulted, 64% were threatened with a weapon, and 75% of participants indicated current or past homelessness. Lifetime violence was assessed across four types of violence including childhood sexual abuse, childhood physical abuse, physical assault in prostitution, and rape in prostitution. Interviewees were asked to report how many of these types of violence they had experienced, ranging from none to all four types. The average across all nine countries found 25% of respondents experienced all four types of violence, 26% experienced three types, 20% experienced two types, 16% experienced one type, and 13% experienced none of those types of violence. The researchers reported that the participants responses suggest that pornography was fundamental piece of prostitution. Results reveal 49% of respondents had been made to make pornography and 47% of respondents were upset by attempts to make them do something that other people had seen in pornography. Differences in PTSD associated with gender and gender identity was assessed. In the United States, no statistically significant differences were found among women, men, and transgendered prostitutes and PTSD. In Thailand, no statistically significant differences were found between women and transgendered prostitutes. No statistically significant differences were found between male and female prostitutes in South Africa (Farley et al., 2003). Therefore, in the study, gender and gender identity did not impact rates of PTSD. A limitation of the study is the lack of multimethod assessment to assess for PTSD.

In an earlier study, Farley et al. (1998) explored the violence and traumatic stress experienced by people from five countries who had been prostituted. Results averaged across countries found that 67% of participants met criteria for PTSD on the PCL. Additionally, 81% of

respondents reported being physically threatened in prostitution, 73% had been physically assaulted while in prostitution, 68% had been threatened with a weapon, and 62% had been raped since their entrance into prostitution. Of the respondents who reported being raped, 46% had been raped more than five times. In addition to the previously discussed limitations of convenience sampling and use of unvalidated measures, the study also lacked a comparison group and multimethod assessment of PTSD.

As described above, Farley and Barkan (1998) conducted a study that assessed the history of violence and prevalence of PTSD among individuals working as prostitutes in San Francisco. Results found that 68% of the sample met diagnostic criteria for PTSD on the PCL and 76% met criteria for partial PTSD. Results revealed 88% of participants reported one or more symptoms of intrusive reexperiencing of trauma, 79% reported three or more symptoms of numbing and avoidance, and 74% reported two or more physiological hyperarousal symptoms. Data from two questionnaires, the PCL and the 23-item questionnaire created by the authors, was analyzed with descriptive statistics and percentages were calculated for each item. Correlation coefficients were used to analyze the strengths of association between pairs of measurements. Standard parametric and non-parametric tests were used to determine the statistical significance of the associations between measurements. PTSD severity was significantly related to childhood physical abuse, occurrence of rape in adult prostitution, being pressured into pornography, and the number of times raped in adult prostitution. The severity of PTSD was significantly associated with the total number of types of lifetime violence ($r = .21$, $p = .02$), childhood physical abuse ($t = 2.77$, $p = .004$), rape in adult prostitution (Student's $t = 2.77$, $p = .01$), and the total times of rape in prostitution (Kruskal-Wallace chi square = 13.51, $p = .01$). While working as adults in prostitution, 84% of respondents reported current or past homelessness, 83% had been threatened

with a weapon, 82% had been physically assaulted, and 68% had been raped while working as a prostitute (Farley & Barkan, 1998).

A study was conducted in the Netherlands to investigate the problems experienced by prostitutes and ex-prostitutes (Vanwesenbeeck, 1994). The sample was composed of 60 women total, and 23 of the women were ex-prostitutes. Recruitment occurred through intermediaries and snowballing. Snowball sampling is when a participant in the study identifies other potential participants for the study. Participants were compensated with 100 guilders, which is approximately $56. The mean age of the participants was 32.2 years (*SD* = 8.5) with an average period of prostitution experience of 6.7 years (*SD* = 6.5). The majority of the participants were born in the Netherlands (*n* = 54), with four participants being born in other Western European countries and two born in non-Western European countries. Further racial and ethnic information was not available. Face-to-face interviews containing a combination of open and limited choice questions were utilized. The interviews focused on demographic information, work history, physical complaints, drug use, psychosocial and emotional problems including conditions and relationships, experience with violence and abuse, general coping responses, and informal and formal support. Well-being was assessed using a list of problems and complaints that was constructed by the researchers. Five subscales of the well-being were constructed using factor analysis. The subscales included three on psychosocial and emotional problems and two on physical complaints. Results revealed 90% of the women experienced nervousness in frequencies ranging from *sometimes* to *very often*. Similarly, 80% experienced aggression, 77% distrust, 76% guilt, 69% anxiousness, and 65% problems with a double life. Furthermore, 64% experienced loneliness, 59% reported feeling out of control, 57% endorsed problems with intimacy, 52% reported nightmares, 52% reported shame, 51% had concentration problems, and 24% had agoraphobia (Vanwesenbeeck, 1994). All of these symptoms can be indicative of posttraumatic

stress disorder and thus suggested the likelihood of a high proportion of individuals with PTSD symptoms in this sample. A limitation of the study is that despite the use of factor analysis to generate well-being subscales, the list of problems and complaints respondents reported on was constructed by the researchers with no specified methodology on how they came up with the list. Another limitation is the use of convenience sampling and lack of a comparison group.

Dissociation. Dissociation tends to be a common coping mechanism for people who have experienced trauma (van der Kolk, 2014). Other researchers have reported that dissociation is often utilized by individuals in trafficking and prostitution as a means to survive (Farley, 2003). Ross et al. (2003) summarized three studies on dissociation among women in prostitution. In the first study, 33 women primarily engaged in street prostitution in Vancouver, Canada were given an unstructured interview and the Dissociative Experiences Scale (DES; Bernstein & Putnam, 1986). The average age of the respondents was 35.2 years (SD = 7.8). No other demographic information was provided. The respondents obtained an average DES score of 32.6, which falls in the range of dissociative disorder not otherwise specified. Lifetime sexual abuse was reported by 97% of respondents, most of it occurring while engaged in prostitution. An average of 16.2 episodes of sexual victimization occurred prior to respondents' entry into prostitution. In the second study in Istanbul, Turkey, 50 women in prostitution and 50 non-prostituting women completed the DES, the Dissociative Disorders Interview Schedule (DDIS; Ross et al., 1989), and were asked supplemental questions regarding their trauma history. No other demographic information was provided. The women in prostitution were interviewed at a legal brothel in Istanbul. The study used *DSM-IV* for diagnostic purposes. Results of the DES and DDIS from the respondents in prostitution found that they experienced a range of dissociative disorders including dissociative amnesia (20%), depersonalization disorder (18%), dissociative identity disorder (18%), dissociative disorder not otherwise specified (12%), and dissociative fugue (4%).

Respondents in prostitution obtained an average DES score of 19.5 compared to a score of 8.2 for respondents not in prostitution. Results of dissociative disorders among respondents not in prostitution were not reported. However, the authors noted that rates of dissociative disorders and trauma were higher for respondents in prostitution. A third study of 37 women previously in prostitution was conducted in the United States and is described in detail above (Ross et al., 2003). Results found that 97% had been physically assaulted while engaged in prostitution, 92% had been raped in prostitution, and 73% had been forced to make pornography while in prostitution. Abnormal levels of dissociation were found in 22% of the women, who obtained a DES score of 30 or higher, and 16% of respondents obtained a score of 50 or higher, which suggests a diagnosis of dissociative identity disorder (Ross et al., 2003). Limitations of the studies include limited information about recruitment of participants and incentives, limited demographic information, and lack of evaluation of co-occurring disorders.

A study conducted by Freed (2003) explored the psychosocial and cultural aspects of brothel prostitution in Cambodia. Freed collected data on two trips to Cambodia where 12 in-depth interviews of current and former prostitutes were conducted. Six of the women and adolescent girls interviewed had been living in brothels in Phnom Penh. The other six women and adolescent girls were living at the International Catholic Migration Commission's (ICMC) New Life for Young Women project in Battambang after being rescued from brothels a year prior. The adolescent girls residing at ICMC were interviewed again upon the researcher's second trip. However, only one of the subjects living in the brothel areas was found during the second visit. Nevertheless, this individual was interviewed several times. The ages of the women and adolescent girls interviewed ranged from 14 to 23-years-old, with a mean age of 17.5 years. The interviewees had been working in brothels from as little as 3 weeks up to 1 year. The mean length of time spent working in the brothels was 5.5 months. A qualitative methodology was

utilized to gather information from the subjects. They were asked about various demographics, including their province of origin, age, education, socioeconomic status, and family constellation; childhood history and the quality of their familial relationships; their account of their entry into prostitution; and a description of the living conditions in the brothels. The participants were also asked about the various psychological impacts of prostitution, with specific inquiries into depression, fear and anxiety, shame, trauma, and somatic concerns. The interviews lasted between 45 and 90 minutes and were conducted in Cambodian by the author with the help of two female interpreters. The interviews were audio taped and case notes were prepared by the author and subsequently reviewed several times to identify common themes and psychological issues related to the brothel prostitution experience. Depression, inability to sleep, nightmares, hopelessness, poor appetite, high level of fear and anxiety, and despair were reported by many of the subjects. The author noted that many of the women and adolescent girls had used dissociation as a survival tool. Additionally, posttraumatic symptoms, disconnection from self and others, and feelings of helplessness and terror were reported by the participants (Freed, 2003). Limitations of the study include very small sample size, lack of standardized measures to assess psychological symptoms, and probable filtering of experiences by the women and adolescent girls still in captivity within the brothel. The author noted that the brothels utilized in the present study were those that had good working relationships with the NGOs (Freed, 2003).

A study conducted by Ross et al. (1990) assessed the frequency of childhood abuse and dissociation among patients diagnosed with multiple personality disorder, prostitutes, and exotic dancers. Results revealed 95% (n = 19) of the patients diagnosed with multiple personality disorder met criteria for multiple personality disorder, 65% (n = 13) for psychogenic amnesia, 65% (n = 13) for depersonalization disorder, 49% (n = 9.8) met criteria for secondary features of multiple personality disorder, 33% (n = 6.6) for Schneiderian symptoms, and 25% (n = 5) for

psychogenic fugue. Schneiderian symptoms or first-rank symptoms include auditory hallucinations or delusions, specifically thought insertion, thought broadcasting, thought withdrawal, somatic passivity, the belief one's emotions are not their own, and a belief that one's impulses or actions are controlled by an outside force (Rosen, Grossman, Harrow, Bonner-Jackson, & Faull, 2011). Results revealed one participant from the prostitutes group met criteria for a diagnosis of multiple personality disorder, 35% (n = 7) of the prostitutes met criteria for psychogenic amnesia, 15% (n = 3) for depersonalization disorder, 13.5% (n = 2.7) with secondary features of multiple personality disorder, and 17% (n = 3.4) for Schneiderian symptoms. Results from the exotic dancers group found 35% (n = 7) met diagnostic criteria for multiple personality disorder, 25% (n = 5) for psychogenic amnesia, 20% (n = 4) for depersonalization disorder, 19.5% (n = 3.9) for secondary features of multiple personality disorder, and 12.5% (n = 2.5) for Schneiderian symptoms. No participants in the prostitution or exotic dancers group met criteria for psychogenic fugue (Ross et al., 1990). In addition to previously discussed limitations related to sample size and lack of peer review, further limitations include a lack of validation interviews for prostitutes who scored in the clinical range of dissociative disorders.

Depression. A study conducted by Raymond, Hughes, and Gomez (2001) investigated the international and domestic trafficking of women in the United States. Researchers interviewed 40 women who had been either recruited or trafficked into the sex industry. Interviewees were asked about their backgrounds prior to working in the sex industry, the methods of recruitment, any movement that occurred while in the sex industry, initiation into activities and roles carried out while working, methods of control while in the sex industry, and coping mechanisms utilized. Questionnaires (created by the authors) were administered to each group of interviewees based on the topics to which the group would likely have knowledge or

experience about. Open and close-ended questions composed the questionnaire. Responses were analyzed using descriptive summaries for both open and close-ended questions. Target sampling was utilized wherein individuals who were likely to have knowledge of the sex industry or trafficking were interviewed. Of the 40 women sampled, 15 entered the U.S. as adults and are referred to as international women in the study and 25 women were legal residents and are referred to as U.S. women. Participants from the United States were selected from five domestic regions including Metro San Francisco, Metro New York, Northern Midwest, the Northeast, and the Southeast. These areas were selected due to their large sex industries and variety of immigrants, which allowed for geographical comparisons. Within the U.S., three different regional partners were utilized to assist in contacting women who were currently or previously in the sex industry in the United States. These included SAGE in San Francisco, Breaking Free in Minneapolis/St. Paul, and Center for Battered Women's Legal Services at Sanctuary for Families in New York City. Additionally, researchers from the Institute of Sociology at the Russian Academy of Sciences in St. Petersburg, Russia assisted in locating Russian women who had been sexually exploited and trafficked into the United States. Results indicated that 85% of the international women (n = 11) and 86% of U.S. Women (n = 19) reported depression/sadness. Suicidal thoughts were experienced by 31% (n = 4) of the international women and 64% (n = 14) of the U.S. women. Attempts to hurt or kill themselves was reported by one international woman and 63% (n = 12) of U.S. women. An inability to feel was reported by 38% (n = 5) of international women and 27% (n = 6) of U.S. women. Hopelessness was reported by 54% (n = 7) of international women and 41% (n = 9) of U.S. women. Difficulty sleeping was reported by 31% (n = 4) of international women and 32% (n = 7) U.S. women. Self-blame and/or guilt was found in 46% (n = 6) of international women and 36% (n = 8) of domestic women. Anger and/or rage was reported in 31% (n = 4) of international women and 64% (n = 14) of U.S. women. Loss

of appetite was reported in 31% (n = 4) of international women and 32% (n = 7) of U.S. women (Raymond et al., 2001). Overall a large number of symptoms were reported by the women in this study. The use of target sampling may impact the overall generalizability of the study results. Additionally, the lack of standardized assessment measures for the purpose of assessing or diagnosing mental health concerns is a flaw of the study.

A study conducted by Raymond et al. (2002) interviewed women in the sex industry who had been trafficked for the purpose of sexual exploitation in five countries including Indonesia, the Philippines, the United States, Venezuela, and Thailand. Researchers set out to gather information on trafficked women, specifically related to the health effects of sex trafficking. Women trafficked within and across five countries were interviewed by researchers using a structured questionnaire (created by the authors), which utilized open and close-ended questions. The five countries were selected for the study to represent the various world regions of North American, Latin America, and Asia as well as to make comparisons among the countries. The questionnaire (created by the authors) inquired about the background of the trafficked women; their recruitment, movement, and initiation into the sex industry; information about the traffickers, pimps, customers, and recruiters; violence against women; health impacts due to trafficking; and respondents' opinions and recommendations for change. Researchers noted they also used the elite model of interviewing, which assumes the interviewee is the expert, with more knowledge about the area of study than the researchers. Therefore, the respondents were able to introduce and relay information that they felt was important to the interviewer. The data analysis quantified information into categories including violence against women, the emotional consequences they experienced, and the physical injuries sustained. Sampling was conducted using a purposive non-random method due to the difficulties in access and lack of information about trafficked women with whom to compare the random sampling data. Researchers also used

the snow-ball sampling method, where women who were interviewed provided additional contacts within their network. The 25 Indonesian women's ethnic background were Malay, Dayak, and Chinese. Within the sample of the 49 Filipino women, 40 of them had been internationally trafficked to Japan, Korea, Nigeria, Cyprus, Holland, Hong Kong, and Malaysia; four of the women had been trafficked locally; one women had been involved in local prostitution; and four other women had been mail-order brides. Of the 10 women and children respondents from Thailand, five of them had been trafficked to Japan, Singapore, and Australia and five were trafficked within Thailand. Of the 41 women in prostitution who were interviewed in Venezuela, 18 originated from Columbia, 11 from the Dominican Republic, two from Ecuador, one from Cuba, and nine from Venezuela. Of the women interviewed in the United States, 18 were from Russia and the NIS (Newly Independent State) countries and 13 were U.S. born women. At the time of interviewing, the 25 Indonesian women were between ages 14 to 29 years. The 49 Filipino women were 16 to 20-years-old when they were trafficked. Within the United States, women entered prostitution between ages 13 to 28 years. Age of entry for women interviewed in Thailand and Venezuela was not included. Results found 78% of the total sample experienced depression and sadness, 65% guilt or self-blame, 64% anger and rage, and 59% difficulty sleeping (Raymond et al., 2002). Limitations of the study include lack of diagnostic assessment measures, convenience sampling, and use of structured interview created by authors that has unknown reliability and validity.

Results from the study conducted by Vanwesenbeeck (1994) that explored the problems prostitutes and ex-prostitutes face found that 80% of the participants experienced depression and 37% had suicide thoughts or attempts. Similarly, results from a study conducted by Ross et al. (1990) that observed the impact of childhood sexual abuse and dissociation indicated 60% (n = 12) of the prostitutes in the study met criteria for a major depressive episode. A later study

summarized by Ross et al. (2003) found that 50% of the Turkish women in the study met criteria for depression.

Other mental health problems. A study by Kramer (2003) was conducted to evaluate women's emotional experience while performing prostitution, their feelings about themselves, and the extent to which they use substances to manage their emotions while turning tricks. The sample was composed of 119 women, with 64% of these women participating in a voluntary support group for prostitutes, 25% were women incarcerated for minor offenses, and 11% were from escort prostitution. The sample was composed of white European American (59%), African American (18%), Latina American (15%), and Native American (3%) women. The women ranged in age from 18- to 56-years-old (M = 33, SD = 8.0). The average age of entry into prostitution was 23-years-old (SD = 7.7) and the length of time in prostitution ranged from 1 month to 42 years, with an average of 8.7 years. A survey was developed by the researcher for the purpose of the study. The survey items were acquired from a review of prostitution literature as well as information obtained from 15 pilot interviews. The pilot interviews were with women working in street and in escort prostitution. Social service providers, healthcare professionals, and law enforcement personnel contributed to the survey development. Afterwards, 17 questionnaires were piloted, which when combined contained 103 total items. Demographic information was gathered such as age, ethnicity, age of entry into prostitution, length of time in prostitution, and types of prostitution engaged in. Items on the survey asked the women about substance and alcohol use, rationale for using substances, use of substances for coping, and any change in feelings towards themselves since entering prostitution. The author noted that percentages used in the study were calculated based on the number of respondents per item, rather than the total number of study participants. Consequently, the percentages can be misleading and more difficult to generalize to the population as a whole. Results revealed that

77% of respondents felt their self-esteem decreased after entering prostitution and 73% of respondents pushed away their true emotions to turn tricks. After categorizing responses as positive and negative for mental health, 90% of the responses were negative. Results indicated that 14% of respondents experienced feelings of sadness and distress while turning tricks, 14% felt undesirable or unattractive, 13% experienced anger or resentment, 11% felt detached or disconnected, 8% experienced fear, 6% experienced anxiety, 6% felt shame or guilt, 4% felt pain, 3% experienced degradation or humiliation, and 3% reported nausea. The remaining 9% were other negative emotions such as feeling disgust, disturbed, doubting, and victimized as a result of substance abuse. Overall, 94% of respondents indicated that they would leave prostitution for a different job with similar pay (Kramer, 2003). Limitations of the study include convenience sampling. This type of sampling can impact the generalizability of the study and likely underestimates the mental health symptoms of people engaged in prostitution due to the difficulty reaching the population, especially those individuals who are controlled by a pimp or other agency such as an escort agency or brothel. In addition, 16% of the responses to questions regarding emotions while turning a trick were not categorized as either positive or negative due to the ambiguous response provided. Finally, the study lacked valid and reliable measures of mental health symptoms.

In another study exploring violence and traumatic stress experienced by prostituted individuals, 17% of respondents reported severe emotional problems including suicidality, depression, flashbacks of child abuse, anxiety and extreme tension, extremely low self-esteem, mood swings, and terror regarding relationships with pimps (Farley et al., 2003). Researchers noted that they did not specifically query any of the mental health symptoms reported to gain further information. Results from Ross et al. (1990) found that 35% (n = 7) of the prostitutes met criteria for borderline personality disorder, and a subsequent study described above by Ross et al.

(2003) found that 8% of participants met criteria for borderline personality disorder. All of these studies would have benefitted from valid and reliable assessment measures and multidimensional assessments to clarify diagnostic symptoms and disorders.

Individuals who have been sex trafficked or prostituted tend to experience somatic complaints including headaches, numbness, and disconnectedness from the body (Farley, 2004). Compartmentalization of body parts may also be experienced by survivors as well as difficulties modulating anger, managing stress, and trusting others (Farley, 2006; Jeffreys, 2001). Furthermore, individuals who have been trafficked or prostituted will likely have issues with sexual intimacy and may experience Stockholm syndrome (Farley, 2006; Jeffreys, 2001; Sadruddin et al., 2005).

Substance abuse. Contrary to popular belief, individuals are often not addicted to any substances prior to their entry into prostitution (Dalla, 2000). A study by Dalla (2002) of streetwalking prostitution specifically explored current patterns of substance use, the social context of streetwalking, and exposure to violence and victimization. Using data collected from the Dalla (2000) study, Dalla (2002) focused on results related to substance abuse. The sample, which was previously described in detail, was composed of 43 current and former street walking prostitutes. In-depth semi-structured interviews were conducted with the participants by the chief investigator of the study. Questions were predetermined and the interviews were recorded and later transcribed verbatim. The data from the interviews was analyzed using Phenomenological Descriptive Methodology (Colaizzi, 1978). Regarding drug abuse history, 76% of respondents reported using recreational drugs on a regular basis following their entry into prostitution. Crack cocaine was noted as a drug of choice, but heroine, alcohol, and marijuana were also used regularly. Results found that 95% (n = 41) had been addicted to drugs. The study indicated that the length of sobriety tended to parallel the period of time since the last act of prostitution.

Within the sample, 37% (n = 16) of the women reported engaging in prostitution to support an established drug habit and 19% (n = 8) indicated drug abuse and prostitution occurred simultaneously (Dalla, 2002). Limitations of the study include convenience sampling, lack of diagnostic measures, and small sample size.

A study by Kramer (2003) evaluated women's emotional experience while performing in prostitution, their feelings about themselves, and the extent to which they used substances to manage their emotions while turning tricks. Results from the study revealed that 70% of respondents used various substances to emotionally detach while turning tricks. Specifically, 59% of respondents used drugs and 28% used alcohol to numb themselves while turning tricks. Furthermore, 54% of respondents had to be high to turn a trick and 44% used substances to cope with fears associated with turning tricks (Kramer, 2003). Similar results from Raymond et al. (2001) indicated 87% (n = 13) of internationally trafficked women and 92% (n = 24) of domestically trafficked U.S. women reported using either drugs or alcohol to cope with the violence and exploitation they experienced in the sex industry. Results from the study conducted by Farley et al. (2003) that explored the violence and traumatic stress experienced by people from nine countries who had been prostituted found that 48% of respondents reported drug use and 52% reported alcohol use. A previous study by Farley et al. (1998) that explored the violence and traumatic stress experienced by people from five countries who had been prostituted revealed 52% of participants reported issues with alcohol addiction and 45% reported problems with drug addiction. Results from the study conducted by Ross et al. (1990) that examined the frequency of childhood abuse and dissociation among patients diagnosed with multiple personality disorder, prostitutes, and exotic dancers found 80% (n = 16) of the women in the prostitution group met criteria for a substance abuse disorder. In the Vancouver study summarized by Ross et al. (2003), 97% of participants engaged in street prostitution reported

alcohol or drug dependence. Additionally, in the Istanbul, Turkey study summarized by Ross et al. (2003), 46% of the individuals involved in prostitution abused alcohol and 20% abused substances. Thus, despite a lack of standardized assessment of substance abuse, it appears that substance abuse is a pervasive problem for those engaged in prostitution and sex trafficking.

Methods of coping. Due to the extensive psychological trauma experienced, individuals often utilize various methods to cope and psychologically distance themselves from the experiences of prostitution (Farley, 2003, 2004, 2006; van der Kolk, 2014). These methods include use of drugs and alcohol to numb and distance, dissociation, and thinking of something else during the sexual encounters (Dalla, 2002; Farley et al., 1998, 2003; Kramer, 2003; Jeffreys, 1999; Ross et al., 1990, 2003). Terror is a key tool used by pimps to control the prostitute, who is often viewed as the pimp's property (Sadruddin et al., 2005). Repeated and extreme forms of trauma can lead to changes in the brain, likely accompanied by behavioral consequences (Sadruddin et al., 2005). Changes in the brain are related to a recalibrated alarm system, elevated activity of stress hormones, and adjustments to the filtering system separating relevant from irrelevant (van der Kolk, 2014). These difficulties and symptoms often follow survivors even after their departure from the industry, thus leading to potential diagnoses of substance abuse disorder, dissociative disorder, or somatic and conversion disorders (Farley, 2003, 2006; Jeffreys, 1999; Raymond, 2004; Sadruddin et al., 2005; Sullivan & Jeffreys, 2001; van der Kolk, 2014).

Prostitution requires individuals to continuously cope with sexual harassment, as well as physical and verbal abuse from johns and pimps (Jeffreys, 1999). Violence is often inflicted by the john and rape is a common experience (Raymond, 2004). Compared to non-sex workers, rape tends to be even more traumatizing to prostitutes, who are raped frequently; they are often raped repeatedly and multiple times in the span of one night (Leidholdt, 2003). Experiences of violence

and rape place an individual at an increased likelihood of developing psychological symptoms, such as PTSD (Black et al., 2011).

According to Herman (1992), the repeated experiences of potentially traumatic events (PTEs) build upon one another and contribute to the potential developmental of complex posttraumatic stress disorder (CPTSD). Potentially traumatic events include exposure to sexual violence, actual or threatened death, and serious injury (American Psychiatric Association, 2013). Complex trauma relates to the experience of chronic and multiple PTEs, which typically occur within the interpersonal domain (van der Kolk, 2005). Individuals with histories of childhood maltreatment are at an increased risk for developing complex posttraumatic stress disorder (CPTSD) due to pre-existing disruptions in developing affect regulation (Farley, 2004; Herman, 1992). Altered perceptions of the self, shifts within interpersonal relationships, and changed belief systems regarding the world also characterize CPTSD (Farley et al., 2003).

All of the above components of CPTSD occur in combination with classic PTSD symptomology including avoidance responses, hypervigilance, and intrusive experiences (Cloitre et al., 2013). Given the turning out period and probable history of CSA and other childhood maltreatment combined with a high likelihood of rape as well as other violent interpersonal interactions, it is not hard to see the linkage of these experiences in prostitution and trafficking to the development of CPTSD.

Cognitive Alterations Following Trauma

The normal sequence of the self-defense system in response to a threat is as follows: the threat alerts and arouses the sympathetic nervous system, which prompts a release of adrenalin in the body, placing the individual in an alert state, and focusing attention on the immediate situation (Herman, 1992). The individual experiences feelings of fear and anger. The alterations in the mind and body in response to a threat prepare a person to either fight the threat or to flee

from the threat. A traumatic reaction will occur when the person is unable to act and/or their actions have no impact on their present situation. As a result, the self-defense system becomes overwhelmed and disorganized likely prompting changes in neuroanatomy (Herman, 1992). Long term changes at the neuroanatomical level have a significant effect on cognitive abilities (Sadruddin et al., 2005).

According to Yehuda (1998), victims of human trafficking and severe trauma have shown a tendency to overuse the right hemisphere of the brain while inhibiting the left frontal cortical areas of the brain. Overactivation of the limbic system also characterizes individuals who have experienced severe trauma. In addition, trauma is associated with decreases in hippocampal volume. Dysregulation is observed among neurotransmitters and within the neurohormonal systems including the hypothalamic pituitary axis, and serotonin, catecholamine, and opioid systems in individuals who have developed PTSD (van der Kolk, 1996). The dysregulation is correlated with higher levels of emotional reactivity, inability to manage stress, memory and concentration problems, difficulty putting events into proper context, and difficulties distinguishing between threatening and nonthreatening situations (van der Kolk, 1996).

Trauma, particularly involving severe, multiple, or long-lasting experiences, tends to leave the individual unable to leave survival mode (van der Kolk, 2014). Large amounts of stress hormones continue to be secreted, keeping the individual in a state of fight/flight/freeze, which may manifest as agitation and panic. Trauma has a tendency to disrupt the system of self-protection due to the fragmentation of the memory regarding the experiences (Herman, 1992). Symptoms of trauma tend to become disconnected from the source of their origination (Herman, 1992). Therefore, individuals tend to go on living as if the trauma was still occurring (van der Kolk, 2014). As Herman (1992) discusses, traumatic events challenge beliefs regarding human relationships. Traumatic events disrupt the individuals' notions of attachment, their sense of self,

and their ability to meaningfully relate to others (Herman, 1992). Even if the individual is lucky enough to escape the industry of sex work, they are highly susceptible to becoming involved in damaging interpersonal relations such as domestic violence, likely due to the fragmentation of self-protection as well as because this form of violent treatment is all they know from their life experiences, thus believing this form of interaction is normal (Farley et al., 2003; Leidholdt, 2003).

CHAPTER III

Modes of Treatment for Trauma and PTSD

van der Kolk (2014) identified three ways to assist trauma survivors: by talking, utilizing a top-down method of treatment; taking medication; and experiencing feelings that contradict those gathered from a trauma, utilizing bottom-up method. Talking provides the individual a means for reconnecting with others and a way to self-reflect and become aware of their own internal processes (van der Kolk, 2014). Through the establishment of a supportive relationship, the individual is able to process their memories associated with the trauma, working towards a reconciliation of the event, and to make meaning of the experience (van der Kolk, 2014). Medication can impact the responsiveness of the individual's alarm reactions or assist in reorganizing information coming into the brain (van der Kolk, 2014). Regaining a sense of self-mastery can be achieved through experiencing various bodily sensations and experiences that are contrary to the feelings experienced during the trauma. These contradictory feelings change the traumatic feelings, thus reducing these sensations and the subsequent association with the trauma (van der Kolk, 2014).

The stage model is the accepted form of therapy to treat individuals with CPTSD (Courtois, 2004). Each stage builds upon the gains of the prior stage, while allowing the individual to progress at their own pace (Herman, 1992). According to Herman (1992), the three stages for recovery are establishing safety, reconstructing the trauma story, and reconnecting the survivor with their community. Goals of treatment for the survivors include assisting them to reconnect their fragmented memories and emotions to rewrite history, and to make new meaning of their history and present symptoms (Herman, 1992).

Mindfulness Practices and Trauma Treatment

Mindfulness is a form of meditation and is the practice of cultivating moment-to-moment awareness without judgment of one's thoughts (Kabat-Zinn, 2005; Siegel, 2007). Meditation has been defined as "a family of self-regulation practices that focus on training attention and awareness in order to bring mental processes under greater voluntary control and thereby foster general mental well-being and development and/or specific capacities such as calm, clarity, and concentration" (Walsh & Shapiro, 2006, p. 228).

Mindfulness and meditation practices have been associated with emotional regulation, overall well-being, and behavioral flexibility (Brown & Ryen, 2003). Increasing self-awareness through awareness of the body allows the traumatized person to be in touch with their inner world (van der Kolk, 2014). Openness to the inner experience is crucial to obtain change (van der Kolk, 2014). To begin mindfulness meditation, the individual focuses on their sensational experiences, attending to the subtle changes and sensations experienced with alterations to breathing, shifts in thinking, or movement of the body (van der Kolk, 2014).

Mindfulness practices inhibits the sympathetic nervous system, decreasing the chance of triggering a fight-or-flight reaction (van der Kolk, 2014). To safely revisit the past trauma, the individual must be able to both observe and tolerate their physical reactions to avoid potential retraumatization and other traumatic reactions. Mindfulness practices help an individual to become aware of fluctuations in feelings and perception, which increases the person's ability to exert control over them. The individual then compares the experience of present moment awareness to that of the trauma, which has a timelessness feel. Perceptions shift when the traumatized person notices their feelings, disrupting the automatic nature of the reaction and presenting the individual with other options (van der Kolk, 2014).

A core feature of trauma is the disrupted ability to regulate emotions (van der Kolk, 2014). van der Kolk (2014) postulates that traumatized people are frequently afraid of feeling, specifically their own emotions. Due to this fear of emotions, the body freezes and the mind is shut (van der Kolk, 2014). Traumatic memories persist due to their lack of integration, which leaves the emotional brain to continue to generate feelings of helplessness and fear (van der Kolk, 2014). Mindfulness meditation helps identify and regulate these emotions.

Treatment of Symptoms Observed in Victims of Prostitution and Sex Trafficking

As discussed above, numerous mental health symptoms may present in individuals that have experienced sex trafficking or prostitution. Mental health disorders and symptoms can include posttraumatic stress disorder, depression, substance abuse, suicidal thoughts and attempts, dissociation, anxiety, and borderline personality disorder (Dalla, 2000; Farley & Barkan, 1998; Farley et al., 1998, 2003; Freed, 2003; Kramer, 2003; Raymond et al., 2001, 2002; Ross et al., 1990, 2003; Vanwesenbeeck, 1994). Additional mental health concerns include hopelessness, an inability to experience emotions, difficulty sleeping, self-blame and guilt, anger or rage, terror, low self-esteem, disconnection from self and others, and loss of appetite (Dalla, 2000; Farley & Barkan, 1998; Farley et al., 1998, 2003; Freed, 2003; Kramer, 2003; Raymond et al., 2001, 2002; Ross et al., 1990, 2003; Vanwesenbeeck, 1994).

Relationship between mindfulness components and PTSD symptoms. A study exploring the relationship between self-reported mindfulness facets and posttraumatic stress symptoms (PTS) was conducted with 157 students at an urban commuter university (Kalill, Treanor, & Roemer, 2013). Participants in the study were recruited through e-mail advertisements and flyers. Participants were compensated for participation in the study by obtaining course credit for their participation or by receiving 5 dollars. Ages ranged from 18 to 64-years-old with a mean of 26 years. Mindfulness facets measured included observing

emotions, describing emotions, acting with awareness, non-judging of inner experience, and non-reactivity to inner experience. Participants completed an online survey, which included demographic variables and several measures including the Traumatic Events Assessment (TEA, unpublished), the Posttraumatic Stress Disorder Checklist - Civilian version (PCL-C; Weather et al., 1993), the Five Facet Mindfulness Questionnaire (FFMQ; Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006), and the negative affect scale of the Positive and Negative Affect Scale - Trait version (PANAS; Watson, Clark, & Tellegen, 1988). The TEA is a shortened version of the Traumatic Events Questionnaire (TEQ; Vrana & Lauterbach, 1994). The TEA contains 10 potentially traumatic events (PTEs) that are consistent with the PTEs in Criterion A1 in the *Diagnostic and Statistical Manual of Mental Disorders Fourth Edition* (*DSM-IV-TR*; American Psychiatric Association, 2000). The authors summed the total score of the TEA for participants in order to calculate the number of trauma types variable. Prior to completing the PCL-C, participants were given the list of PTEs from the TEA and asked to identify the PTE that affected them the most. Participants were also asked if they experienced either fear, horror, or helplessness during the PTE they identified as well as how old they were at the time the event occurred. Participants were instructed to complete the PCL-C in reference to the index event identified. A "years elapsed since trauma" variable was created by the authors, which was calculated by subtracting the participants' age at the time of their index event from their current age. Participant scores on the PCL-C ranged from 17 to 74 with a mean of 38, and 50% of the sample scored over 34, indicating a majority of the participants experienced clinically significant posttraumatic stress symptoms. The FFMQ is a 39-item assessment that evaluates five facets of mindfulness including observing emotions, describing emotions, acting with awareness, non-judging of inner experience, and non-reactivity to inner experience. High scores of the FFMQ are associated with greater mindfulness. The researchers ran four hierarchical regressions to examine

the contributions of mindfulness to PTS symptom total score and to each of the three PTS symptom clusters. PTS symptom clusters are PCL - re-experiencing, PCL - avoidance, and PCL - hyperarousal. Mindfulness facets, as measured by the FFMQ, made a significant contribution to PTS total score and the PTS subscale re-experiencing and hyperarousal. Results of the study found that lower hyperarousal scores on the PCL-C were associated with the ability to describe emotional experiences as measured by the FFMQ. Results also indicated non-reactivity to inner experiences, measured by the FFMQ, was associated with lower PTSD symptoms, lower hyperarousal scores, and lower re-experiencing, which were measured by the PCL-C. The describing subscale of the FFMQ was significantly associated with PTS hyperarousal symptoms. The PANAS assessment contains 20 items, which asks the participant to rate positive and negative affective experiences. As noted above, the authors only used the negative affect scale, which describes various feelings including anger, fear, nervousness, and guilt. Despite the fact that all mindfulness facets except observe were significantly correlated with posttraumatic avoidance symptoms, they were not significantly associated with PTS avoidance symptoms when age, years since trauma, number of trauma types, and negative affect were included (Kalill et al., 2013). Thus, mindfulness appears to be an effective tool to decrease the severity of posttraumatic stress symptoms. Limitations of the study include the use of retrospective self-report data, lack of clinical assessment of PTSD diagnostic status, potential presence of other Axis I disorders that could impact results, and the use of a college sample, which may not be applicable to clinical samples.

A study conducted by Thompson and Waltz (2010) investigated the relationship between experiential avoidance and PTSD avoidance symptoms and examined whether mindfulness added any predictive power. The sample was composed of 378 introductory psychology students who ranged in age from 18 to 51-years-old (M = 19.56, SD = 3.44). Participants in the study

volunteered to participate to receive experimental class credit. To measure mindfulness skills, the Five Facet Mindfulness Questionnaire (FFMQ; Baer et al., 2006) was distributed to participants. In addition, participants completed the Acceptance and Action Questionnaire to measure experiential avoidance and psychological flexibility (AAQ; Hayes et al., 2004), the White Bear Suppression Inventory to assess thought suppression (WBSI; Wegner & Zanakos, 1994), the Coping in Stressful Situations to measure coping strategies (CISS; Endler & Parker, 1994), the Toronto Alexithymia Scale-20 to measure alexithymia (TAS-20; Bagby, Parker, & Taylor, 1994a, 1994b), and the Posttraumatic Stress Diagnostic Scale to assess PTSD symptoms (PDS; Foa, Cashman, Jaycox, & Perry, 1997). Within the sample, 44 participants (11.6% of the total sample) met PDS criteria for a diagnosis of PTSD. Furthermore, 147 participants (39.3% of the sample) reported a trauma that met *DSM-IV-TR* criterion A for a PTSD diagnosis but did not meet PDS PTSD criteria. However, due to the small number of participants meeting PDS PTSD criteria, the authors combined these individuals with the subsample of participants reporting a criterion A trauma who did not meet PDS PTSD criteria. The combined sample of individuals with PDS PTSD and those meeting criterion A without PDS PTSD criteria was labeled the posttraumatic stress symptoms sample (PSS; n =191) by the authors. Researchers conducted hierarchical multiple regression analyses to measure the degree that mindfulness measures predicted PTSD avoidance symptom severity that surpassed experiential avoidance measured in the PSS sample. Of note, TAS-20 Factor 2 (describe feelings) subscale and the FFMQ describe subscale were bivariately correlated, which violated the assumption of multicollinearity. Therefore, TAS-20 Factor 2 was not included in the regression analysis. Results across all individual measures of experiential avoidance accounted for a significant amount of variance in PDS PTSD avoidance symptom severity: AAQ [$F(1, 88) = 25.24$, $p < .01$], WBSI [$F(1, 185) = 40.45$, $p < .01$], TAS-20 Factor 1 (identify feelings) [$F(1, 188) = 56.58$, $p < .01$], and CISS

emotion oriented coping subscale [$F(1, 175) = 31.81$, $p < .01$]. The mindfulness skill of nonjudgment accounted for a significant portion of the variance in PTSD avoidance symptom severity: AAQ [F *Change*$(4, 184) = 4.26$, $p < .01$], WBSI [F *Change*$(4, 181) = 3.16$, $p = .02$], TAS-20 Factor 1 [F *Change*$(2, 184) = 2.50$, $p = .04$], and CISS emotion oriented coping [F *Change*$(4, 171) = 2.93$, $p = .02$]. Thus, mindfulness, specifically nonjudgment, predicted further variance with respect to PTSD avoidance symptom severity (Thompson & Waltz, 2010). Limitations of the study include the use of convenience sampling and the use of a nonclinical sample, which may not be applicable to clinical populations.

Mindfulness based interventions for individuals diagnosed with PTSD. In a study of veterans with a high prevalence of PTSD, researchers observed mental health and quality of life before and after participation in a mindfulness program (Kearney, McDermott, Malte, Martinez, & Simpson, 2012). The study took place at a large urban VA Hospital. Participants were either self-referred to mindfulness-based stress reduction (MBSR) or referred by a health care provider at the VA. Participants were not provided any monetary compensation for participation. The study took place over 17 months and consisted of 92 total participants. Of the 92 participants, 70 were male and 22 were female. The mean age of participants was 51 years ($SD = 10.6$). In order to be included in the study, the participants agreed to complete research measures as well as participate in the MBSR course. Written questionnaires were administered to participants to gather demographic information. Several measures were administered to participants including the PCL-C (Weathers et al., 1993) to measure PTSD symptoms, the Patient Health Questionnaire-9 (PHQ-9; Kroenke, Spitzer, & Williams, 2001) to measure depression, and the Behavioral Activation for Depression Scale (BADS; Kanter, Mulick, Busch, Berlin, & Martell, 2007; Kanter, Rusch, Busch, & Sedivy, 2009) to measure participants' willingness to engage in activities to meet a goal despite their aversions. The Short Form-8 (SF-8; Ware, Kosinski,

Dewey, & Gandek, 2001) was administered to measure health-related quality of life and overall health status. The mental (SF-8-MCS) and physical (SF-8-PCS) component summary scores of the SF-8 were calculated (Kearey et al., 2012). The SF-8-MCS includes mental domains such as social functioning, mental health, and role limitations due to emotional problems (Ware et al., 2001). The SF-8-PCS includes physical domains including bodily pain, physical functioning, general health, and role limitations due to physical problems (Ware et al., 2001). Greater quality of life is associated with higher scores on the SF-8-MCS and SF-8-PCS (Ware et al., 2001). The Acceptance and Action Questionnaire (AAQ; Hayes et al., 2004) was administered to measure participants experiential avoidance, which consists of avoidance of thoughts, feelings, other private events, as well as the various circumstances that prompt them. Lastly, the Five Facet Mindfulness Questionnaire (FFMQ; Baer et al., 2008) was administered to measure mindfulness skills including observation of internal experience, acting with awareness, nonreactivity to internal experience, nonjudgment of experience, and describing internal experience. A baseline assessment was initially performed, and participants subsequently participated in an 8-week MBSR course. The MBSR class met once a week for 2.5 hours and were assigned daily homework, practicing either meditation or yoga. During the sixth and seventh week of the course the participants met for a 7-hour mindfulness retreat. Follow-up assessments occurred immediately after treatment (i.e., 2 months) as well as four months after course completion (i.e., 6-month follow-up). Participants still received all of their usual psychiatric and psychological care during the study. Within the MBSR course, participants were taught exercises including body scan, sitting meditation, and gentle yoga. At baseline, 74% of participants were positive for PTSD on the PCL. After treatment completion (2 months), medium effect sizes were observed between baseline and scores on the PCL, the PHQ-9, the BADS, and the AAQ. A medium to large effect size was found on the SF-8-MCS, the SF-8-PCS, and the FFMQ. At the 6-month

follow-up, medium effect sizes were observed between baselines scores and scores on the PCL, the BADS, and the AAQ. A medium to large effect size was found at 6-month follow-up scores on the PHQ-9, the SF-8-MCS, and the FFMQ. Results of the study found that 47.7% of the sample had clinically significant improvement in PTSD symptoms at the 6-month follow-up. Significant correlations were observed between change in FFMQ and the PCL, PHQ, BADS, AAQ, and SF-8-MCS at the 2- and 6-month follow-up (Kearney et al., 2012). Thus, MBSR appears to be an effective treatment for veterans in increasing overall mental health as evidenced by decreases in PTSD, depression, experiential avoidance, behavioral activation, and physical and mental-related quality of life, which was sustained at the 6-month follow-up period. Limitations of the study include the lack of a control group, lack of a randomized trial, use of solely self-report measures, and lack of information regarding participant compliance with MBSR homework practice.

A study of survivors of childhood sexual abuse (CSA) was conducted to assess the feasibility of using mindfulness-based stress reduction (MBSR) to treat depressive symptoms as well as symptoms of PTSD and anxiety (Kimbrough, Magyari, Langenberg, Chesney, & Berman, 2010). Participants were recruited by various advertisements in the Baltimore newspapers and radio as well as informational flyers that were circulated in CSA survivor networks, CSA advocacy groups, community health fairs, and the state chapter for registered social workers. The sample included 27 participants. The sample was 89% female with a mean age of 45 years. Participants attended an 8-week MBSR course following completion of baseline measures. Weekly classes ran between 2.5 and 3 hours and participants attended one 5-hour silent retreat. Additionally, participants were asked to complete homework daily for 20 to 30 minutes per day for six days a week. Following the end of the 8-week course, participants were invited to attend three MBSR refresher courses over the span of 4 months. A final assessment

occurred 24 weeks after baseline measures were initially taken (i.e., 4 months postintervention). While participating in the present study, participants remained in treatment with their regular therapist and continued to take any prescribed medication. Measures utilized in the present study included the Beck Depression Inventory, Second Edition (BDI-II; Beck, Steer, & Brown, 1996) to measure depressive symptoms, the PTSD checklist (PCL; Weathers et al., 1993) to measure PTSD symptomology, the Brief Symptom Inventory (BSI; Derogatis & Melisaratos, 1983) to measure anxiety, and the Mindfulness Attention Awareness Scale (MAAS; Brown & Ryan, 2003) to measure the state of mindfulness. Practice logs were utilized by participants to record the total number of minutes of five different at home mindfulness practices including sitting meditation, walking meditation, the body scan, gentle yoga, and informal practices. Outcome measures of PTSD, depression, anxiety, and mindfulness were taken at baseline, 4 weeks, 8 weeks, and 24 weeks. Following the 8-week MBSR course, results found a 65% reduction in depressive symptoms, a 47% reduction in anxiety, and a 31% reduction in PTSD symptoms. At 8 weeks, mindfulness scores increased 33% from the samples baseline MAAS score. At the 24-week follow-up, reductions in depressive symptoms, anxiety, and PTSD symptoms remained significantly reduced as compared to baseline measures. Additionally, at 24 weeks, mindfulness scores remained statistically significant when compared to baseline MAAS scores. Large effect sizes were observed on all outcome measures at 8 weeks and 24 weeks (Kimbrough et al., 2010). Thus, MBSR appears to be effective in significantly reducing symptoms of PTSD, depression, and anxiety while concurrently increasing mindfulness, which were sustained at the 24-week follow-up period. Limitations of the study include the lack of a randomized control group and the small sample size. In addition, participants were in concurrent psychotherapy while participating in the present study, which may have improved symptom reduction.

In a study of combat veterans, researchers observed the acceptability and effectiveness of a brief group mindfulness-based cognitive therapy (MBCT) intervention to treat combat-related PTSD (King et al., 2013). Participants were recruited from the Ann Arbor VA Health Care System's PTSD outpatient clinic. The sample consisted of 37 total participants. However, only 28 completed the study. Participants were assigned to either the treatment group who received mindfulness based cognitive therapy (MBCT) that had been adapted for combat-related PTSD or treatment as usual (TAU). Participants in the MBCT group received psychoeducation regarding PTSD, discussed participants' symptoms of PTSD, and were encouraged to utilize a 3-minute breathing space formal mindfulness exercise. In addition, participants were urged to engage in informal mindfulness activities when stressful situations arose throughout the week. A total of eight weekly 8-hour group sessions were offered, which taught skills in mindfulness and provided in-class practices. Participants were also assigned daily homework (ranging from 25 to 40 minutes) to practice mindfulness techniques learned. Participants in both treatment conditions were administered the clinician-administered interview (CAPS-I; Blake et al., 1995) at pre- and posttreatment, which assessed posttraumatic stress disorder. Additionally, the MBCT group completed the PTSD diagnostic scale (PDS; Foa et al., 1997) and the posttraumatic cognitions inventory (PTCI; Foa, Ehlers, Clark, Tolin, & Orsillo, 1999). The PTCI measures negative posttraumatic cognitions including self-blame, negative (incompetent) self, and negative (dangerous) world (Foa et al., 1999). The researchers did not specify why the PDS and PTCI were only given to the MBCT group. Results found a significant reduction in total CAPS score for the MBCT treatment group (pre versus post MBCT $t(19) = 4.8$, $p < 0.001$, effect size Hedges $g = 0.54$), with an 11 point decrease in total CAPS scores. No significant reduction was observed in the TAU group ($t(16) = 0.2$, $p = 0.83$, $g = -0.04$). Comparisons between treatment groups using an RM-ANOVA found significant Condition x Time interaction ($F[1, 34] = 11.4$, $p =$

0.002) in total CAPS scores and between condition posttherapy CAPS scores (Hedges $g = 0.67$). A significant improvement in PTSD symptoms was observed in participants who completed MBCT (effect size $g = 0.67$) based on pre- and post- CAPS total score. Specifically, a significant reduction in the CAPS-avoidant subscale was noted. Conversely, participants who completed TAU did not show reduced CAPS total score ($t(12) = 0.5$, $p = 0.622$) or CAPS subscale scores. Comparisons of total CAPS scores and the CAPS-avoidant subscale found a significant Condition x Time interaction between treatment completers. A significantly greater proportion of participants in the MBCT group completers (11 of 15, 73%) experienced clinically meaningful improvements in PTSD symptoms (10 point reduction on total CAPS scale) as compared to the TAU completers (4 of 13, 33%), $\chi^2 = 4.2$, Fischer's exact $P = < 0.05$. Average time per week spent engaged in mindfulness practice was correlated with decreases in PTSD intrusive symptoms in MBCT completers ($r(15) = 0.53$, $p = 0.03$). Furthermore, PTSD symptoms as measured by the PDS significantly decreased after completing MBCT, specifically on the PDS numbing subscale. Significant improvements were also observed on negative cognitions as measured by the PTCI (King et al., 2013). Overall, clinically significant decreases in PTSD symptoms were observed in the MBCT group participants, which provides support for brief group MBCT as a treatment for PTSD. Limitations include the use of convenience sampling and the lack of random assignment to treatment conditions. An additional follow-up would be beneficial to measure the effectiveness of brief group MBCT on PTSD over time.

A study conducted by Niles et al. (2012) examined the use of mindfulness and psychoeducation through a telehealth mode of treatment to treat posttraumatic stress disorder (PTSD) symptoms in a group of veterans with combat-related PTSD. Participants for the study were recruited through flyers that were posted in the Veterans Administration (VA) Boston Healthcare System, via clinician referrals, and using an electronic participant recruitment

database. A total of 33 male veterans were randomly assigned to either a mindfulness telehealth treatment or a psychoeducation telehealth treatment. Participants ranged in age from 23 to 66-years-old (M = 52.0, SD = 13.0) and met full diagnostic criteria for PTSD, which was measured by the Clinician-Administered PTSD Scale (CAPS; Blake et al., 1990). Participants were also administered the Addiction Severity Index (McLellan, Luborsky, Woody, & O'Brien, 1980). Participants who screened positive on the Addiction Severity Index were subsequently administered the substance abuse module of the Structured Clinical Interview for the *Diagnostic and Statistical Manual for Mental Disorders Fourth Edition (DSM-IV)* Axis I Disorders (SCID-SA; First, Spitzer, Gibbon, & Williams, 2002). Following administration of the SCID-SA, four participants meeting criteria for substance dependence were excluded from the present study. Within the sample, 76% (n = 25) identified as White, not Hispanic; 15% (n = 5) as Black, not Hispanic; 6% (n = 2) as White, Hispanic; and 3% (n = 1) as other. Of note, during the course of the present study participants were not required to discontinue existing treatment with other mental health providers. A total of 8 weekly group sessions were offered. The first 2 sessions were delivered in-person to develop and establish rapport and provide course material and lasted 45 minutes. The six remaining sessions were delivered over the telephone and lasted approximately 20 minutes. Participants were assessed at pretreatment, posttreatment, and at a 6-week follow-up. Participants received $40 after completing pre- and posttreatment assessments and $30 for the 6-week follow-up. During treatment, six participants dropped out, four from the mindfulness treatment and two from the psychoeducation treatment. Prior to the follow-up assessment, one participant dropped out from the mindfulness treatment and two dropped out from the psychoeducation treatment. Participants were administered the CAPS to assess PTSD, the PTSD Checklist – Military Version (PCL-M; Weathers, Litz, Herman, Huska, & Keane, 1993) to measure PTSD symptoms, and the Participant Satisfaction Questionnaire (PSQ; created

by authors) to assess participants' level of satisfaction with the interventions. Telehealth treatment was 8 weeks with two sessions occurring in person and the additional 6 sessions occurring over the phone. Participants were provided with a handbook during the first treatment session that was specific to their assigned treatment condition. Participants assigned to the mindfulness treatment received a mindfulness handbook, which was developed collaboratively with the codirector of Professional Training at the Center for Mindfulness in Medicine, Health Care, and Society at the University of Massachusetts Medical School. The handbook educated participants on mindfulness topics including the definition of mindfulness, "noticing sensations, noticing thoughts and emotions, beginner's mind, choice, patience, and continuing to practice" (Niles et al., 2012, p. 4). Participants were also led through two experiential exercises during the first two sessions and were provided with a portable CD player and CDs that contained 5- to 15-minute guided mindfulness exercises to practice between sessions. Participants in the mindfulness treatment were also asked to track their mindfulness practices each week. Participants in the psychoeducation treatment were provided with a PTSD education handbook that was based on an introductory psychoeducation group developed at the National Center for PTSD. The psychoeducation handbook contained information about PTSD, how PTSD may affect their lives, self-care and safety, the effects of trauma, coping and healing, moving forward, change, relationships and trauma, and trust. No specific coping techniques were taught, however suggestions for positive coping were provided. Pre-treatment scores found higher PTSD symptoms in the psychoeducation group despite random assignment. Results comparing CAPS scores and PCL-M scores from pre- to post-treatment found a significant decrease in the mean scores on both measures in the mindfulness group with a large effect size. No significant differences were observed in CAPS or PCL-M scores from pre- to post-treatment in the psychoeducation group. At the 6-week follow-up, the mindfulness groups mean PCL-M scores

revealed a return to baseline scores. No significant differences were observed in the psychoeducation group. Results from a *t*-test for the mindfulness group showed a significant decrease in PCL-M scores from pre- to post-treatment, but a significant increase from post-treatment to follow-up. However, there were no significant differences between pre-treatment and follow-up (Niles et al., 2012). Thus, participation in brief mindfulness interventions appear to temporarily decrease symptoms of PTSD. Limitations of the study include the small sample size and risk of type one error due to several repeated-measures ANOVAs. Additionally, three participants in the mindfulness group had medication changes while undergoing the present study, with one of the three having clinically significant improvement in symptoms.

In a study of 76 trauma-exposed adults, researchers explored the relationship between mindful attention and awareness and psychopathology (Bernstein, Tanay, & Vujanovic, 2011). Participants were initially a part of a larger study in which they had reported experiencing at least one traumatic life event. The subsample for the mindfulness study was composed of 35 women with a mean age of 30-years-old (*SD* = 12.5). Within the subsample, 93.4% identified as White, 2.6% identified as African American, 1.3% identified as Hispanic/Latino, and 2.6% identified as Other. Participants had been recruited through advertisements and were compensated $10 for completing the first session of the study and $25 for completing the second session. Measures utilized in the study included the Structured Clinical Interview for *DSM-IV* Axis I Disorders nonpatient version (SCID-I/NP; First, Spitzer, Gibbon, & Williams, 1995) for diagnostic assessment, the Mindful Attention Awareness Scale (MAAS; Brown & Ryan, 2003) to measure levels of attention and awareness to present moment events and experiences, the Posttraumatic Diagnostic Scale (PDS; Foa et al., 1997) to measure posttraumatic stress symptoms, and the Mood and Anxiety Symptom Questionnaire (MASQ; Watson et al., 1995) to measure affective symptoms. The researchers found significant associations between mindful attention and

awareness and posttraumatic stress symptom severity, psychiatric multimorbidity, categorical psychiatric diagnostic status, anxious arousal symptoms, and anhedonic depressive symptoms. Total score on the MAAS was negatively related to posttraumatic stress symptom severity, levels of psychiatric multimorbidity, levels of anxious arousal symptoms, and levels of anhedonic depression symptoms (Bernstein et al., 2011). Overall, mindful attention and awareness appear to mediate posttraumatic stress symptom severity as well as mood and anxious symptoms that are associated with traumatic stress. Limitations of the study include the relatively homogenous demographics of the sample, solely utilizing a self-report measure of mindful attention and awareness, and the lack of evaluation of substance use disorders and personality disorders, which are not included in the SCIP-I/NP.

A study conducted by Owens, Walter, Chard, and Davis (2012) explored the relationship between mindfulness skills, PTSD, and depression severity among a veteran sample in a residential PTSD treatment program. A total of 149 veterans with consecutive admissions to a PTSD Residential Rehabilitation Program at a VA Medical Center participated in the study. Demographics of the sample are as follow: 75% were male and 25% were female; 62% were Caucasian, 36% were African American, and 1% were Native American. The sample had a mean age of 51.38 years (SD = 9.43). A majority of the participants in the study were diagnosed with PTSD (98%), with the remaining 2% meeting subthreshold criteria for PTSD. Furthermore, participants had comorbid conditions including major depressive disorder (62%), prior alcohol dependence (54%), past drug dependence (39%), and panic disorder (14%). Participants were administered the Clinician Administered PTSD Scale (CAPS; Blake et al., 1995) to assess severity of PTSD symptoms, the Structured Clinical Interview for *DSM-IV* Axis I Disorders (SCID-I; First, Spitzer, Gibbon, & Williams, 1996) to assess for the presence of any Axis I disorders, the PTSD Checklist-Stressor Specific Version (PCL-S; Weathers, Huska, & Keane,

1991) to measure PTSD symptomology, the Beck Depression Inventory-II (BDI-II; Beck, Steer, & Brown, 1996) to measure depressive symptoms and severity, and the Kentucky Inventory of Mindfulness Skills (KIMS; Baer, Smith, & Allen, 2004) to assess for facets of mindfulness. Facets of mindfulness measured include observing, describing, acting with awareness, and accepting without judgment. Participants were administered assessment measures pretreatment and posttreatment. The PTSD treatment program was 7 weeks and utilized cognitive processing therapy (CPT) in both a group and individual format. As part of group treatment, participants attended seven mindfulness group sessions, which was based on mindfulness-based cognitive therapy (MBCT). Each mindfulness group began with a breathing exercise then taught a new mindfulness skill and ended with an assigned mindfulness meditation. Mindfulness groups occurred weekly and participants were encouraged to practice mindfulness skills between sessions. Results of the study found participants with improved scores on the Acting with Awareness subscale on the KIMS had a lower PTSD symptom score posttreatment on the CAPS. Significant differences were observed on self-reported PTSD symptoms at posttreatment for participants who had improved scores on the Describe, Acting with Awareness, and Accepting without Judgment subscales of the KIMS. Higher scores on these subscales corresponded to fewer PTSD symptoms endorsed. Results indicated that participants were less likely to have a diagnosis of MDD when rated by a clinician at posttreatment if they had improved scores on the Acting with Awareness subscale. Furthermore, a change on the Describe subscale was related to fewer self-reported depressive symptoms at posttreatment (Owens et al., 2012). Thus, veterans who reported increases in the mindfulness reported fewer PTSD symptoms at posttreatment. Limitations of the present study include not being a randomized controlled study with a comparison group, which makes it difficult to generalize the present results. The sample was also composed of a motivated group of individuals who were actively seeking treatment.

Effectiveness of mindfulness-based interventions in treating depressive disorders. In a study conducted by Jain et al. (2007), researchers explored the utility of two brief stress reduction interventions in reducing stress in a student population. Participants were full time students in the health services field including medical students, graduate nursing students, and undergraduate students majoring in premedical or prehealth. Participants were recruited through presentations to student groups, honor societies, student classes, flyers, and listserve emails. A total of 81 students participated in the study ranging in age from 18 to 61-years (M = 25 years). Race and ethnicity of the sample was 63% White, 16% Hispanic, 7.4% Asian/Pacific Islander, 4.9% Native American, and 2.5% mixed race. The study utilized two interventions and a waitlist control group. The first intervention was a mindfulness meditation (MM), which was based on the Mindfulness-Based Stress Reduction (MBSR) program. Participants learned formal techniques taught in MBSR including body scan meditation, sitting meditation, Hatha yoga, walking meditation, and loving-kindness meditation. Participants also completed homework assignments between sessions. The second intervention group was a somatic relaxation (SR) group, which was a body awareness-based relaxation intervention. Participants learned progressive muscle relaxation, guided imagery, and simple breathing techniques. They also received homework between sessions. Both intervention groups met for 1.5 hours for four consecutive weeks as well as one 6-hour Saturday retreat between the third and fourth session. Participants were randomly assigned to the MM group, the SR group, or the wait list control group and were matched for sex and medical, nursing, premedical, or prehealth status. Participants were randomly assigned by a computerized random number generator software program. Participants completed the Daily Emotion Report (DER; Nolen-Hoeksema, Morrow, & Fredrickson, 1993), the Index of Core Spiritual Experiences (INSPIRIT-R; Kass, Friedman, Leserman, Zuttermeister, & Benson, 1991), and the Marlowe-Crowne Short Form (M-C;

Reynolds, 1982) 10 days prior to beginning the interventions and 2 weeks after completing the interventions. The DER assesses ruminative and distractive thoughts and behaviors that are associated with depression (Nolen-Hoeksema et al., 1993). The INSPIRIT-R measures relational and experiential facets of spirituality (Kass et al., 1991). The M-C measures social desirability responding (Reynolds, 1982). Additionally, participants were administered the Brief Symptom Inventory (BSI; Derogatis, 1993) and the Positive States of Mind Scale (PSOM; Horowitz, Adler, & Kegeles, 1988) and were asked to complete practice logs preintervention, postintervention, and each week during the intervention. The BSI assesses psychological symptoms of distress and calculates an overall measure of distress, which is the GSI (Derogatis, 1993). The PSOM measures aspects of positive psychological states (Horowitz et al., 1988). Preintervention scores on the GSI revealed students were experiencing substantial distress. No significant differences on baseline measures were observed between group scores on the GSI, PSOM, and INSPIRIT-R. However, significant differences were observed on the DER subscale between group. Preintervention measures revealed participants in the SR group had more distractive and ruminative thoughts and behaviors. No significant differences were observed between the MM group and SR group with respect to the total number of hours they spent practicing outside of class. No significant different between the two MM classes and the two SR classes were found on the psychological variables, which indicates different teachers, rooms, or day/time did not impact the intervention. No significant differences were observed on the INSPIRIT-R at postintervention between the groups. The MM group revealed significantly less distractive thoughts and behaviors compared to the control group and SR group postintervention and significant less ruminative thought compared to the control group. Significant decreases in GSI scores over time were observed in all groups. However, the decline in GSI scores was steeper for the MM group and SR group. Statistically significant increases in PSOM scores were

observed in the MM group and SR group. Results from the MM group revealed a large effect size in reductions in distress scores (d = 1.36), above medium effect size for increases in positive states of mind (d = .71), a medium effect for reduced rumination (d = .57), and a small effect for distraction with decreases over time (d = .25). Results from the SM group revealed a large effect size for reductions in distress (d = .91), a small effect size for increases in positive states of mind (d = .25), and a small to medium effect size for decreased rumination (d = .30; Jain et al., 2007). Both intervention groups demonstrated significant decreases in distress and increases in positive mood states over time as compared to the control group. However, the MM group had larger effect sizes in decreasing distress, reducing ruminations, increasing positive states of mind, and decreasing distraction compared to the SR group. Limitations of the study include the short length of the interventions, potential lack of generalizability due to use of a non-clinical sample, and possible self-selection bias for participating in the study.

A study conducted by Kenny and Williams (2007) explored the use of mindfulness-based cognitive therapy (MBCT) in patients with active current depression as well as patients who did not respond to standard treatments. The authors conducted a clinical audit of a consecutive series of all patients who had been referred for MBCT. Over a two-and-a-half-year period, 79 patients participated in eight consecutive MBCT programs at a CBT clinic. All participants in the MBCT program had to meet *DSM-IV* criteria for major depressive disorder (MDD), dysthymia, or bipolar affective disorder, depressed phase (BPAD). The clinical audit was performed on 50 of the patients who were still symptomatic at the beginning of the MBCT course and met *DSM-IV* criteria for either MDD or BPAD, depressed phase. The mean age of the sample was 43.3 years, ranging from 17 to 61-years-old. The sample was composed of 37 women and 13 men. Regarding diagnoses, 45 patients were diagnosed with MDD, three patients were diagnosed with BPAD I, and two were diagnosed with BPAD II and were in a depressed phase. At the beginning

of treatment 37 of the patients were on antidepressant medication and 34 patients had previously completed a CBT course. No participants received CBT while completing the MBCT program. The MBCT course was eight sessions, lasting for 2 hours each session, including 1 hour of meditation practices. Homework for 1 hour per day was also required, which included either meditation or yoga as well as other practices learned throughout the course. No control group was utilized. However, participants pre and post Beck Depression Inventory (BDI; Beck et al., 1996) scores were compared. Additionally, participants were asked to evaluate how important the MBCT group had been to them, using a Likert scale with 0 being *not at all important* and 10 being *extremely important*. Out of the sample, 49 patients completed the program and 46 patients completed the pre and post questionnaires. The mean rating of the participants of the MBCT program was 8.5. A highly significant change was found between pre and post BDI scores ($t(47) = 6.01$; $p < 0.0001$). A large effect size (1.04) was observed between pre and post-test change (Kenny & Williams, 2007). Thus, MBCT was effective in reducing depressive symptoms. Limitations of the present study include the lack of control group and the possibility that patients in the study were highly motivated to participate due to lack of progress in prior treatments.

A study conducted by Kaviani, Hatami, and Javaheri (2012) explored the effect of MBCT on depression levels, anxiety levels, and quality of life in a population of sub-clinically depressed individuals. A random selection of university dormitories produced 150 female students for the study and 139 agreed to participate in the study. Participants were administered the BDI (Beck et al., 1996). A cut off score of 15 points or above on the BDI was used for inclusion into the study, which resulted in 35 eligible participants with a mean age of 21.7 years. Out of these participants, 15 were randomly assigned to receive MBCT (mean age = 21.5) and 15 were placed in a wait list control group (mean age = 21.1). Participants who received MBCT received eight weekly 2.5 hour groups sessions with a psychologist trained in MBCT. The control group

remained on a wait list. Participants were administered assessments at the start of the first, fourth, and eighth sessions as well as 1 month and 6 months after the final session. Participants were administered the BDI to measure depressive symptoms (Beck et al., 1996), the Beck Anxiety Inventory (BAI; Beck & Steer, 1990) to measure symptoms of anxiety, the Dysfunctional Attitudes Scale (DAS; Weissman & Beck, 1978) to measure depressogenic schemata, the Automatic Thoughts Questionnaire – Negative (ATQ; Hollon & Kendall, 1980) to measure the frequency of negative automatic thoughts, and the World Health Organization Quality of Life instrument short version (WHOQOL-BREF; World Health Organization, 1996) to measure quality of life. Results found statistically significant reductions in BDI and BAI scores of participants over the course of treatment and at 1 month and 6 month follow-up in the group receiving MBCT treatment (BDI: $F(4,52) = 6.56$, $p < .01$; BAI: $F(4,52) = 7.52$, $p < .01$). Statistically significant reductions in automatic thoughts and dysfunctional attitudes were also observed in the group receiving MBCT over the course of treatment and at both follow-up sessions (DAS: $F(4, 52) = 4.14$, $p < .01$; ATQ: $F(4,52) = 4.59$, $p < .01$). Furthermore, statistically significant differences were seen in quality of life scores in the MBCT group at both follow-up sessions ($F(4, 52) = 3.87$, $p<0.01$). Differences were not found in the wait list control group (Kaviani et al., 2012). Thus, MBCT appears to be an effective in reducing symptoms of depression, anxiety, negative automatic thoughts, and dysfunctional attitudes as well as enhancing quality of life. Limitations of the study include the sample being solely composed of females and the use of convenience sampling, which may impact the generalizability of the findings. Additionally, inclusion of participants was solely based on the BDI and thus the study lacked multimethod assessment of depressive symptoms. Furthermore, the use of a waitlist control group rather than an alternative treatment condition reduces strength of findings.

A study conducted was by Kingston, Dooley, Bates, Lawlor, and Malone (2007) to assess the use of MBCT with individuals who have a history of recurrent major depressive disorder with residual symptoms. The participants were all psychiatric outpatient clients. However, no additional information regarding where or how they were recruited was provided by the researchers. Researchers assigned participants to the experimental group, who received the MBCT treatment, or the delayed wait list control group, who received treatment as usual (TAU). TAU included outpatient psychiatric care and medication. Participants were assigned to treatment groups based on when they were referred to the study, with individuals referred earlier receiving the treatment. All participants had a diagnosis of recurrent major depressive disorder with residual symptoms. To be included in the study the participants had to have had at least three prior depressive episodes. The researchers did not specify how they confirmed the number of prior depressive episodes the participants had. Additionally, participants had to have a current BDI score between 13 and 45. The total sample included 19 participants, eight receiving the MBCT group treatment and 11 receiving TAU. The mean age of participants receiving the MBCT treatment was 41.5 years. The mean age of participants receiving TAU was 42.0 years. Within the MBCT group, seven were female and one was a male. The TAU group had 10 female participants and one male. The MBCT treatment consisted of 8 weeks of 2-hour group sessions where participants were taught to shift from ‘doing’ mode to ‘being’ mode. Participants were taught mindfulness techniques including body scanning techniques, mindful movement training, and mindfulness meditation practices. Participants were also assigned homework to complete between group sessions. Participants were administered the BDI (Beck et al., 1961) and the Ruminative Response Scale (RRS; Treynor, Gonzalez, & Nolen-Hoeksema, 2003) prior to treatment and at the end of treatment. Results revealed a significant decrease in BDI score in the MBCT group when compared to the TAU group ($F(1,15) = 9.26$, $p < .05$). A significant

reduction in BDI score was also observed between pre- and post-treatment of the MBCT treatment group ($F(1,15) = 24.53$, $p < .05$). A significant difference was found on the rumination scores pre- and post-treatment in both groups ($F(1,13) = 21.83$, $p < .05$). Following the completion of the first MBCT treatment group, the control group who had TAU received the MBCT group. Researchers modified the design of the study by adding additional assessments at the midpoint of the group and at a 1-month follow-up. No significant interaction was observed between group assignment and the time of testing. Results revealed a significant change over time in BDI score ($F(3,30) = 4.25$, $p < .05$). Furthermore, the BDI scores showed a significant decreased from pre- to follow-up ($F(1, 10) = 0.41$, $p < .05$). Changes in rumination scores over time was not significant, but was approaching significance ($F(3, 24) = 2.91$, $p = .055$) with a linear decrease in rumination scores ($F(1 , 8) = 5.36$, $p < .05$) (Kingston et al., 2007). Overall, MBCT was found to be effective in decreasing residual depressive symptoms, with clinical gains maintained at 1-month follow-up. Limitations of the present study include the small sample size and lack of random assignment to treatment conditions. However, subsequent assignment of the TAU group to the MBCT treatment with similar reductions in depression and anxiety is promising. Long term posttreatment follow-up would also be useful to assess the effectiveness of MBCT over a longer period of time.

A study was conducted by Kuyken et al. (2008) to evaluate the effectiveness of MBCT in preventing depressive relapse/recurrence, residual depressive symptoms, comorbid psychiatric diagnoses, quality of life, and cost effectiveness as compared to maintenance antidepressant medication (m-ADM). Participants were recruited in Devon, England through computerized practice databases, which identified patients who had been prescribed antidepressant medication (ADM) over the prior 6 months. Identified patients were sent a letter from their primary care physician describing the study and inviting them to participate. Inclusion criteria included having

three or more previous depressive episodes, being 18 years or older, being on a therapeutic dose of m-ADM for at least the previous 6 months, and current status as in full or partial remission from their most recent depressive episode. Out of the individuals contacted who met inclusion criteria, 123 people agreed to participate in the study. Participants were randomly assigned to either the MBCT treatment (n = 61) or m-ADM (n = 62) treatment. Within the MBCT treatment group, 47 participants were women, 60 were White, and the mean age of group participants was 48.95 years (SD = 10.55). The m-ADM group also had 47 participants who were women. The m-ADM group had 62 White participants, and the total group mean age was 49.37 years (SD = 11.84). Additional demographic data was not provided. The MBCT intervention was conducted in a group format over 8 consecutive weeks for 2 hours, with homework assigned between sessions. Four follow-up sessions occurred after treatment completion. Participants within the MBCT treatment group were supported by their primary care physician in tapering and discontinuing their ADM. Researchers asked participants to consider tapering or discontinuing their ADM as soon as they felt comfortable following the cessation of the MBCT group and within 6 months of the group ending. To measure depression relapse/recurrence, participants were administered the depression module of the Structured Clinical Interview for *DSM-IV* (SCID; First et al., 1995) in order to retrospectively assess the 3-month period between assessments. Researchers utilized the observer-rated interviewer-administered Hamilton Rating Scale for Depression (HRSD; Williams, 1988) to assess residual depressive symptoms. Participants were also administered the Beck Depression Inventory Second Edition (BDI-II; Beck et al., 1996) to measure residual depressive symptoms. The World Health Organization Quality of Life instrument (WHOQOL-BREF; World Health Organization, 1996) was administered to assess quality of life. Lastly, economic data was collected including hospital data (inpatient, outpatient, emergency department), community health and social services, as well as

productivity losses due to time off from work due to illness. Economic data was collected using the Adult Service Use Schedule (AD-SUS; created by authors) at baseline and at 3-month intervals up to the 15-month posttreatment. The AD-SUS inquires into both the length and number of contacts with assorted services and professionals that are relevant to the specific disease of interest over the past 3 months. Results of the study found that at the end of the 6-month window allotted for the tapering of medication, 46 participants (75%) of the MBCT treatment group discontinued their medication. Rates of ADM usage between the two groups remained significantly different 6 months after this follow-up period. Borderline evidence was observed in the relapse/recurrence with MBCT as compared to m-ADM. Within the MBCT participants, 46% had a relapse/recurrence whereas 60% of m-ADM participants had a relapse/recurrence by 15 months. Across the five follow-ups conducted, the MBCT group reported significantly fewer residual depressive symptoms, a lower number of comorbid diagnoses, and a better quality of life, specifically in the physical and psychological domains. Results of the cost of treatment over time found the MBCT was more expensive than m-ADM over the first 12 months of treatment. However, MBCT became less expensive in the final 3-month period (12 to 15 months posttreatment; Kuyken et al.,2008). Overall MBCT was more effective in reducing residual depressive symptoms as compared to m-ADM. Limitations of the study include the fact that the participants were highly encouraged by researchers to remain adherent with m-ADM, the recruitment of participants through the screening of patients on ADMs, and the lack of evaluation of the different facets of MBCT that facilitated change.

A study conducted by Munshi, Eisendrath, and Delucci (2013) evaluated the long-term outcome of individuals who had achieved remission of their active depression after successfully completing an 8-week mindfulness-based cognitive therapy group (MBCT). Participants were adult outpatients who had completed a MBCT group between August 2006 and March 2009 at

Langley Porter Psychiatric Hospital and Clinics (LPPH&C) at the University of California San Francisco. Prior to beginning the MBCT treatment, participants had an initial score of greater than 10 on the Beck Depression Inventory (BDI; Beck et al., 1996) and a score less than 10 after completing the group, which was indicative of symptomatic remission. A total of 33 of the 87 patients between August 2006 and March 2009 achieved remission criteria for the present study. Of the 33 patients, 18 agreed to participate in the present study. The participants had a mean age of 54. All the participants were Caucasian and 77.8% were female. Before beginning the MBCT group, two participants were not on any antidepressant medication. At an unspecified follow-up, six participants were not on any antidepressant medication. Participants in the present study were asked to come in for a follow up interview at LPPH&C and to complete several assessment measures. Measures administered were the BDI-II (Beck et al., 1996) to measure depression severity, the Ruminative Response Scale (RRS; Treynor et al., 2003) to measure ruminative thinking, the State-Trait Anxiety Inventory (STAI; Spielberger, Gorsuch, & Luchene, 1970) to measure state anxiety and trait anxiety, the Freiburg Mindfulness Inventory (FMI; Walach, Buchheld, Buttenmuller, Kleinknecht, & Schmidt, 2006) to measure mindfulness, and the Longitudinal Interval Follow-up Evaluation (LIFE; Keller et al., 1987) to outline depressive episodes over time. Participants' scores on the BDI-II, RRS, STAI, and FMI were compared to their pre- and post-MBCT scores. Participants in the present study had a mean follow-up of 48.7 months (*SD* = 10.2). Results reveal statistically significant improvements on BDI-II scores from pre- to post- treatment with a large effect size. Scores on the BDI-II did not significantly change from post-treatment to follow-up. Significant decreases were observed from pre- to post-treatment on STAI scores and RRS scores. A large effect size was found for state and trait anxiety as measured by the STAI and a medium effect size was observed for RRS scores. No significant differences were detected between post-treatment and follow-up scores on the STAI

and RRS. Scores on the FMI significantly increased from pre- to post-treatment with a large effect size. Significant differences were not observed between FMI post-treatment scores and follow-up scores. Results from the LIFE assessment was unable to be analyzed due to participants being unable to give a week-by-week or month-by-month assessment of depression levels due to recall difficulties (Munshi et al., 2013). In sum, MBCT was found to be effective in decreasing depressive symptoms, anxiety, and rumination while concurrently increasing mindfulness, and the results appeared to be maintained for several years posttreatment. Limitations of the study that reduces generalizability include the small sample size, majority female sample, and 100% Caucasian participants. All assessment data was self-report and the severity of depression prior to participating in MBCT is unclear.

CHAPTER IV

Integration of Mindfulness into Treatment for Individuals Subjected to Sex Trafficking and Prostitution

Individuals who have been subjected to sex trafficking and prostitution are at an elevated risk for experiencing a myriad of mental health issues, especially posttraumatic stress disorder (PTSD) and depressive disorders (Farley & Barkan, 1998; Farley et al., 1998, 2003; Hossain et al, 2010, Raymond et al., 2001, 2002; Vanwesenbeeck, 1994). Other mental health concerns that may arise include dissociation, anxiety, suicidality, mood swings, low self-esteem, anger or resentment, difficulties trusting others, somatic issues, substance abuse, and borderline personality disorder (Farley et al., 2003; Freed, 2003; Kramer, 2003; Ross et al., 1990, 2003). Due to the lack of literature on treatment for individuals who have been sex trafficked or prostituted, treatment using mindfulness-based interventions for the specific mental health disorders and symptoms experienced by them were reviewed. Through a review of the literature, it appears mindfulness interventions are effective in decreasing a variety of mental health symptoms including symptoms of PTSD and PTSD symptom severity, symptoms of depression, and symptoms of anxiety while concurrently increasing mindfulness and perceived quality of life (Bernstein et al., 2011; Jain et al., 2007; Kalill et al., 2013; Kaviani et al., 2012; Kearney et al., 2012; Kenny & Williams, 2007; Kimbrough et al., 2010; King et al., 2013; Kingston et al., 2007; Kuyken et al., 2008; Munshi et al., 2013; Niles et al., 2012; Owens et al., 2012; Thompson & Waltz, 2010). Specifically, mindfulness-based stress reduction (MBSR) was found to be effective in reducing PTSD symptoms and PTSD symptom severity while mindfulness-based cognitive therapy (MBCT) was found to be effective in reducing depressive and anxious symptoms.

Within the literature, study interventions tended to be 8 weeks in length for 1.5 to 3 hours. However, it may be beneficial when working with the sex trafficking and prostitution population for length of treatment to be slightly longer than 8 weeks or include pretreatment sessions given the high likelihood of complex trauma and disrupted trust in order to build and establish rapport and a sense of safety. Although this would be ideal, it may not be feasible. Alternative approaches are discussed below. A solid rapport and sense of safety within the confines of treatment will be essential to make meaningful change. The stage model for treating trauma, discussed in an earlier chapter, may be a useful framework to adapt when working with this population. Many of the skills taught in MBSR and MBCT can contribute to the establishment of safety within the stage model, particularly grounding skills. Additionally, both MBSR and MBCT can be conducted within individual therapy sessions, which may be particularly beneficial for individuals who experience severe flashbacks or dissociation, are highly unstable, have a high degree of distrust, or are unable to be around groups of people. Treatment provided within an individual treatment context may provide a corrective emotional experience for individuals because they are being provided with a safe place to reconnect with a person as well as engage in self-reflection, which will allows them to become more aware of internal processes and feelings that may have been avoided or numbed. For individuals with high reactivity or hypervigilance, medication may be beneficial in the beginning of treatment to decrease the overreactivity of the sympathetic nervous system, thus allowing them to meaningfully engage in the treatment.

Given that mindfulness-based stress reduction (MBSR) has been found to be effective in decreasing symptoms of PTSD, PTSD symptom severity, depression, experiential avoidance, behavioral activation, mood and anxiety symptoms associated with traumatic stress, and ruminations, this approach should be considered in the treatment of individuals with similar

symptoms who are in prostitution or sex trafficking. Individuals who have been in prostitution and sex trafficking have been found to experience many of these symptoms, including posttraumatic stress disorder, depression, and anxiety. Studies have shown MBSR to be effective at a 4 month and 6-month follow-up postintervention (Kearney et al., 2012; Kimbrough et al., 2010). Although it would be ideal to have a similar follow-up period when working with survivors of sex trafficking and prostitution, it may not be feasible due to the potential difficulty in locating the participants again. Within the literature, MBSR group interventions tended to be 8 weeks in length, ranging from 1.5 to 3 hours each session, with assigned daily homework to practice mindfulness skills learned between group sessions (Kearney et al., 2012; Kimbrough et al., 2010). For individuals who are in a treatment program, a corrections department, or in secure housing with access to social services, this structure may be applicable. However, for those individuals who may be in temporary situations, such as living in a homeless shelter, the treatment program may need to be modified. For example, the intervention can be provided twice a week for 4 weeks, which would cut down the length of treatment. Additionally, MBSR participants often attend at least one retreat ranging from 5 to 7 hours (Kearney et al., 2012; Kimbrough et al., 2010). However, a retreat would likely not be feasible with survivors of sex trafficking and prostitution who are in a treatment program or incarcerated. Additionally, individuals who have been prostituted or sex trafficked may not feel ready to go on a retreat with people due to their trauma history and the likelihood of trust issues. One study offered participants to attend three MBSR refresher courses over the span of 4 months (Kimbrough et al., 2010). Again, although this would be ideal to assist in maintaining treatment gains, participants may not be able to be located to attend refresher courses. Overall providers need to adapt mindfulness intervention protocols based on the specific individuals seeking treatment.

Mindfulness was assessed with several different measures, depending on the study. Mindfulness assessments utilized include the Five Facet Mindfulness Questionnaire (FFMQ; Baer et al., 2008), the Mindfulness Attention Awareness Scale (MAAS; Brown & Ryan, 2003), the Kentucky Inventory of Mindfulness Skills (KIMS; Baer et al., 2004), and the Freiburg Mindfulness Inventory (FMI; Walachia et al., 2006). In one study using MBSR, the FFMQ was utilized to assess mindfulness and in another study the MAAS was used. Thus, to measure mindfulness in survivors of sex trafficking and prostitution participating in MBSR, one of these assessments is recommended. The literature was unclear on why specific mindfulness assessments were chosen. However, the FFMQ seems to capture several components of mindfulness, looking at mindfulness from a multifaceted lens, whereas the MAAS looks at mindfulness unilaterally. Therefore, the FFMQ may be a better option to measure the multiple aspects of mindfulness.

Mindfulness-based cognitive therapy (MBCT) was utilized in a number of studies to treat depression, depressive symptoms, and PTSD. In the review of the literature MBCT was found to be particularly effective in reducing depressive symptoms, anxiety, negative automatic thoughts, dysfunctional attitudes, rumination, avoidance, and numbing (Kaviani et al., 2012; Kenny & Williams, 2007; King et al., 2013; Kingston et al., 2007; Kuyken et al., 2008; Munshi et al., 2013; Owens et al., 2012). Therefore, MBCT should be considered as a possible intervention for individuals with similar symptoms who have been sex trafficked or prostituted. One study found clinical gains were maintained at 1-month postintervention follow-up (Kingston et al., 2007). A different study found clinical gains were maintained several years postintervention (Munshi et al., 2013). As discussed previously, although it would be ideal to have these follow-up periods, it may be difficult to locate individuals who have been sex trafficked or prostituted after the intervention has concluded. Additionally, MBCT was found to increase mindfulness and enhance

perceived quality of life, which would be beneficial for individuals who have been prostituted or sex trafficked (Kaviani et al., 2012; Munshi et al., 2013). Within the literature, MBCT treatment tended to span 7 to 8 weeks in length, meeting for 2 to 2.5 hours, with homework assigned between sessions (Kaviani et al., 2012; Kenny & Williams, 2007; King et al., 2013; Kingston et al., 2007; Kuyken et al., 2008; Munshi et al., 2013; Owens et al., 2012). However, this approach may not be feasible for individuals who are in temporary housing situations, such as a shelter. These individuals may benefit from a shorter, but more intense treatment framework such as attending MBCT twice a week for 4 weeks or even three times week. Individuals who have been sex trafficked or prostituted who are in a stable housing environment such as a treatment program or individuals who are incarcerated may be able to do the traditional 8-week treatment. A few studies assigned daily homework, with 25 minutes to 1 hour of mindfulness practice required (Kenny & Williams, 2007; King et al., 2013). Although daily practice may not be practical, individuals who have been sex trafficked or prostituted participating in this treatment should be encouraged to engage in mindfulness practice as often as they are able to, even if it is only a few minutes per day.

A thorough diagnostic clinical interview should take place prior to treatment to adequately assess for mental health disorders and symptoms. The diagnostic clinical interview will allow the clinician to explore and clarify any questions regarding symptoms. Individuals who are actively suicidal or homicidal should not participate in this treatment until they are no longer in crisis and are stabilized. Additionally, individuals engaging in significant self-harm or those who are actively psychotic should be excluded from treatment until they are stabilized. Caution should be exercised when using this approach with people diagnosed with personality disorders that include fluid boundaries or challenges to reality testing. Furthermore, some individuals may not be ready to engage in an intensive treatment for their trauma. Individuals

who are still actively in prostitution or are being sex trafficked may not be appropriate for the treatment because the treatment works towards reconnecting the individual with their feelings and emotions while the dissociation these individuals often employ can be a protective mechanism for those still involved in sex trafficking and prostitution. Length of time since being trafficked and prostituted should be considered. Ideally some time will have elapsed prior to engaging in this specific treatment, which allows the individual time to individually process their experiences. Individuals still being sex trafficked or prostituted would benefit from individual therapy with a focus on grounding skills and overall stabilization.

Substance abuse should be specifically inquired about due to the high rates of substance use found in studies conducted with individuals who have been sex trafficked or prostituted (Dalla 2002; Farley et al., 2003; Kramer, 2003; Raymond et al., 2001; Ross et al., 2003). Detoxification and substance abuse treatment should occur prior to participating in mindfulness treatment due to the potential impact of substances on symptom presentation.

Solid diagnostic assessment with people who have been sex trafficked or prostituted will be essential to provide effective treatment. Multimethod assessments should be administered preintervention and postintervention. Potential assessments to administer to assess for PTSD include the Clinician-Administered PTSD Scale for *DSM-5* (CAPS-5; Weathers et al., 2018) and the PTSD Checklist for *DSM-5* (PCL-5; Weathers et al., 2013). Potential assessments to administer to screen for depression include the Beck Depression Inventory-II (BDI-II; Beck et al., 1996) and the Patient Health Questionnaire-9 (PHQ-9; Kroenke et al., 2001). Administration of the Ruminative Response Scale (RRS; Treynor, Gonzalez, & Nolen-Hoeksema, 2003) may also be beneficial to assess for rumination, which is common in PTSD and depressive disorders. Should time permit, an objective assessment such as the Minnesota Multiphasic Personality Inventory, Second Edition (MMPI-2; Butcher et al., 2001) or the Personality Assessment

Inventory (PAI; Morey, 2007) should be administered to assist in diagnostic clarification. Follow-up assessments including the CAPS-5, PCL-5, BDI-II, PHQ-9, and RRS should be administered at 1-month postintervention, 6 months postintervention, and 1-year postintervention. At the 6-month postintervention or 1-year postintervention, the MMPI-2 or PAI should also be re-administered. Researchers and clinicians should explain the importance of having this objective data to potential participants and clients and acknowledge the time investment needed to complete these assessments. Offering incentives such as monetary compensation may be beneficial to encourage participants and clients to return to complete these assessments. Also reducing the number of follow-up assessments to include only one PTSD screener and one for depression screener may enhance follow-up participation. Additionally, it may be difficult to locate the individuals who participated in the treatment postintervention. Therefore, researchers and clinicians should ensure they provide a contact card to the participants and clients, which may allow the prospective participants and clients to complete some assessments over the phone if they are unable to come in person. Furthermore, participants and clients should be encouraged to come back when they can to complete postintervention assessments, even if it is outside the specified timeframes, to at least have some postintervention data. Individuals should also be offered to attend refresher courses, which may assist in sustaining treatment gains. Long term (i.e., years postintervention) follow-up would be beneficial to assess the effects of the intervention over time. Again, both of these are idealistic in nature and could be accomplished by those individuals who have a stable housing situation or program, but for those individuals in transient situations, follow-up may not be possible.

Discussion and Recommendations for Future Research

Future research on PTSD, childhood sexual abuse (CSA), and mindfulness should ideally use a randomized sample as opposed to a convenience sample to increase generalizability of the

results and to avoid sampling bias. Given the difficulties often associated with creating and using a random sample, specifically related to CSA history and PTSD, it is suggested to use a larger sample size, which may help mediate biases and increase generalizability of results. Random assignment to treatment conditions would be ideal to increase the confidence of the study results. Several studies in the literature had relatively homogenous samples, which makes it difficult to extrapolate the results to other populations. Therefore, it is imperative to conduct studies with more diverse samples with respect to race and ethnicity, gender, and age in order to increase generalizability. Additionally, a comparison or control group should be employed to rule out any other factors or confounding variables that may arise during the course of the intervention. While research can help to better explore effective interventions for individuals who have PTSD, depression, and anxiety, future studies should attempt to utilize comparison groups with other mental health concerns, and those with histories of interpersonal trauma. Ideally, participants will not be in any other treatment during the course of the study intervention due to difficulties discerning where change may come from, the study intervention or the other treatment. However, if ceasing other treatments is not possible, a control group is suggested. Of note, it would be beneficial to have a control or comparison group as opposed to a wait-list control due to many potential sources of bias including worsening of symptoms due to lack of treatment. With respect to mindfulness studies, it would be beneficial to have additional research conducted on the various mindfulness measures currently available to evaluate which measure would be best used for outcome research. At present, there are several mindfulness assessments that were discussed in the literature, which makes it difficult to compare the results from these studies due to the different ways mindfulness was measured.

In conducting future research, validated and reliable standardized assessment measures are available and thus should be utilized as opposed to those created by the authors for the study.

Use of measures created by the authors impacts the overall generalizability of the results and may create a response bias. Additionally, use of unstandardized assessment measures with unknown reliability and validity makes it unclear if the authors are actually measuring what they are proposing the assessment measures and whether the assessment is measuring the same phenomenon each administration. The need of accurate and reliable assessment is particularly important when measuring different mental health disorders and symptoms and changes over time in individuals who have been sex trafficked or prostituted because there is limited data at present to guide treatment. Although screening and self-report measures are beneficial for gleaning information, these measures should be accompanied by full diagnostic assessments as well as a diagnostic clinical interview whenever possible. Diagnostic clinical interviews would be beneficial for differential diagnosis, which will be particularly important for individuals who have been sex trafficked or prostituted due to the numerous mental health symptoms they often experience. A diagnostic clinical interview would also provide a venue to query any specific symptoms and gather additional information about symptom presentation that an assessment is unable to accomplish. Furthermore, multimethod assessments will be beneficial in assessing specific mental health disorders and symptoms, which will increase the confidence one can have in making a diagnosis and in assessing outcomes in response to interventions.

With respect to future research with individuals who have been sex trafficked or prostituted, it is essential to have good working relationships with various shelters and outreach programs in the community in order to assist in locating and contacting this population. Domestic violence shelters may prove a viable location to locate study participants as well as specific shelters whose mission is to assist individuals who have been subjected to sex trafficking. Substance abuse treatment programs may also be a good location to recruit potential subjects given the high rate of substance use in this population. Additionally, community mental

health centers could have access to this population, particularly if the staff have been trained to recognize signs of a potential trafficking survivor. Potential participants for future research may also be located on the streets, at truck stops, or at escort agencies. However, there is a high likelihood that individuals in these environments may not want to participate if they are indebted to their pimp/trafficker, who would likely forbid them from participating. To access individuals who are not currently receiving services will be quite difficult. However, these isolated individuals are likely experiencing some of the most intense mental health symptoms, given that they are likely still involved in trafficking and/or prostitution. Future researchers will need to approach this population with caution to avoid creating dangerous situations due to the pimp/trafficker. Individuals still involved may be located at escort agencies, known brothels, strip clubs, massage parlors, truck stops, through the internet, or on the street. The snowballing method of recruitment may prove a viable resource in gaining participants if one person can be located and trust built between her or him and the researchers.

Researchers and clinicians will need to be empathetic and psychologically meet the individual where they are at. Rapport will likely need to be developed over several encounters. Future researchers and clinicians will need to be especially mindful of the high likelihood of trauma and will need to be well versed in how to work with trauma survivors in order to avoid potentially re-traumatizing prospective research participants or clients. Researchers and clinicians should also be trained in how to reorient a person to the present moment if an individual has a trauma response such as a flashback. Overall, the symptoms experienced by individuals subjected to sex trafficking and prostitution are likely chronic and persistent. Thus, these individuals will likely require a continuation of services postintervention in the community, with an integration of wrap around services between primary care, mental health services, and legal services.

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