Profiles of trauma exposure and biopsychosocial health among sex trafficking survivors: Exploring differences in help-seeking attitudes and intentions

by

Lauren Michelle Ruhlmann

B.S., Oklahoma State University, 2012
M.S., Oklahoma State University, 2014

AN ABSTRACT OF A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

DOCTOR OF PHILOSOPHY

School of Family Studies and Human Services
College of Human Ecology

KANSAS STATE UNIVERSITY
Manhattan, Kansas

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Abstract

Human sex trafficking is a complex and unique phenomenon involving the commercial sexual exploitation (CSE) of persons by means of force, fraud, or coercion. The purpose of this study was to investigate unique patterns of trauma exposure and biopsychosocial health among a sample of CSE survivors. Results from a latent profile analysis with 135 adults trafficked in the United States yielded three distinct survivor sub-groups: mildly distressed, moderately distressed, and severely distressed. The mildly distressed class (18.5%) was characterized by the lowest reports of trauma exposure and an absence of clinically significant psycho-social stress symptoms. The moderately distressed class (48.89%) endorsed comparatively medial levels of trauma exposure, as well as clinically significant disturbance in six domains of psycho-social health. The severely distressed class (32.59%) reported the highest degree of trauma exposure and exhibited clinically significant symptoms of pervasive psycho-social stress across all domains assessed. To better understand variation in CSE survivors' engagement with formal support services, this study also examined differences in help-seeking attitudes and intentions between latent classes. Results indicated that compared to those in the mildly and moderately distressed classes, severely distressed survivors endorsed significantly more unfavorable attitudes toward seeking professional help, along with no intention to seek help from any source when facing a personal or emotional crisis. Findings from this study provide a snapshot of significant heterogeneity in trauma exposure and biopsychosocial health among CSE survivors, as well as associated differences in help-seeking attitudes and intentions. The identification of distinct survivor sub-groups in these and future analyses mark an important intermediate step toward developing empirically-testable support services that are specifically designed to meet the unique needs of CSE survivors.

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Human sex trafficking is a complex and unique phenomenon involving the commercial sexual exploitation (CSE) of persons by means of force, fraud, or coercion. The purpose of this study was to investigate unique patterns of trauma exposure and biopsychosocial health among a sample of CSE survivors. Results from a latent profile analysis with 135 adults trafficked in the United States yielded three distinct survivor sub-groups: mildly distressed, moderately distressed, and severely distressed. The mildly distressed class (18.5%) was characterized by the lowest reports of trauma exposure and an absence of clinically significant psycho-social stress symptoms. The moderately distressed class (48.89%) endorsed comparatively medial levels of trauma exposure, as well as clinically significant disturbance in six domains of psycho-social health. The severely distressed class (32.59%) reported the highest degree of trauma exposure and exhibited clinically significant symptoms of pervasive psycho-social stress across all domains assessed. To better understand variation in CSE survivors' engagement with formal support services, this study also examined differences in help-seeking attitudes and intentions between latent classes. Results indicated that compared to those in the mildly and moderately distressed classes, severely distressed survivors endorsed significantly more unfavorable attitudes toward seeking professional help, along with no intention to seek help from any source when facing a personal or emotional crisis. Findings from this study provide a snapshot of significant heterogeneity in trauma exposure and biopsychosocial health among CSE survivors, as well as associated differences in help-seeking attitudes and intentions. The identification of distinct survivor sub-groups in these and future analyses mark an important intermediate step toward developing empirically-testable support services that are specifically designed to meet the unique needs of CSE survivors.

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Chapter 1 - Introduction

Human trafficking is an umbrella term that refers to modern slavery in the form of labor or sexual exploitation by means of force, fraud, or coercion (The Trafficking Victims Protection Act of 2000 [TVPA], 22 U.S.C. § 7102). At any given time, an estimated 40 million people worldwide are victims of human trafficking (International Labor Organization [ILO], 2017). Although there are no universally accepted approximations of trafficking victimization in the United States, conservative projections begin in the tens of thousands (Clawson, Dutch, Salomon, & Grace, 2009; Stranksy & Finkelhor, 2012). According to the United Nations Office on Drugs and Crime (UNODC; 2016), sexual exploitation is the most common form of human trafficking. Studies have consistently linked sex trafficking victimization with major health concerns including sexually transmitted infections (STIs), posttraumatic stress disorder, substance abuse and addiction, depression, anxiety, personality disorders, psychotic behavior, physical health problems, and suicidality (e.g., Lederer & Wetzel, 2014; Oram et al., 2016; Ottisova, Hemmings, Howard, Zimmerman, & Oram, 2016). Despite the recent influx in global advocacy initiatives by non-governmental and non-profit organizations, specialized services designed to help survivors navigate these challenges are sparse.

Many argue that uniquely tailored long-term residential programs are needed to support survivor recovery (Shigekane, 2007; Williamson, Dutch, & Clawson, 2008; Williamson & Prior, 2009). Yet, effectiveness of these services has not been empirically validated and there are currently no evidence-based treatment models in existence specifically tailored to meet the unique needs of this population. In fact, many existing recovery programs are often found to be incompatible with or insufficient for the manifold needs of survivors and their families (Busch-Armendariz, Nsonwu & Hefforn, 2011; Clawson & Grace, 2007; Reid, 2010). An absence of

adequate support services in conjunction with the multi-systemic barriers facing survivors during the exit process (e.g., lack of resources to meet basic needs, poor employment opportunities, social discrimination, etc.) leads many to experience recurrent episodes of victimization.

To date, research on the sex trafficking phenomenon has generally relied on small sample sizes and qualitative analyses to examine victimization in terms of simple frequencies. Although these findings offer an important foundation for understanding the trafficking crisis, their generalizability and power to detect meaningful idiosyncrasies across survivors' unique experiences and needs is limited. The objective of this study was to examine heterogeneity in trauma exposure and biopsychosocial health among sex trafficking survivors by identifying distinct sub-groups (i.e., profiles or classes) within a sample of survivors from the United States. Further, this study investigated differences in help-seeking attitudes and intentions between these different profiles Uncovering thematic variance in trauma history and biopsychosocial health, as well as differential help-seeking factors will ultimately contribute to a broader and more inclusive framework for understanding and responding to survivors' recovery needs.

Chapter 2 - Literature Review

Human sex trafficking is a complex and multifaceted phenomenon involving the commercial sexual exploitation (CSE) of persons by means of force, fraud, or coercion (22 U.S.C. § 7102). Although CSE is consistently identified as the most common form of human trafficking (UNODC, 2016), it is not a categorical experience. Rather, it is a polymorphic practice, manifesting in various forms and industries including but not limited to, prostitution, stripping/exotic dancing, escorting, personal sexual servitude (e.g., forced marriage), familial trafficking, pornography, organized residential brothels, massage parlors, and remote interactive sex acts (Polaris, 2017). Sex trafficking can also occur within debt bondage when individuals are made to engage in commercial sex acts to settle unlawful "debts" (Polaris, 2017; Hopper & Hidalgo, 2006). Further, incidents of "survival-sex" or "survival-rape," referring to the exchange or acceptance of sex acts to meet basic needs (e.g., food, clothing, shelter, etc.) or for other survival purposes, are also considered forms of sex trafficking (Countryman-Roswurm & Bolin, 2014; Estes & Neil, 2001).

Commercial Sexual Exploitation

Sex trafficking (hereafter referred to as CSE) does not occur in a vacuum. It is multiply determined by the intersection of individual and contextual risk factors that contribute to a social ecology of vulnerability. CSE survivors are embedded within multi-level social contexts which reciprocally interact to shape survivors' experience of adversity and overall biopsychosocial health (Bronfenbrenner, 1977). Developmental theorists (Masten & Cicchetti, 2010), suggest that one mechanism by which these inter-systemic effects influence individual development is through developmental cascades. Developmental cascades refer to "the cumulative consequences for development of the many interactions and transactions occurring in developing systems that

result in spreading effects across levels, among domains, at the same level, and across different systems or generations" (Masten & Cicchetti, 2010, p. 491). In other words, cascade effects are thought to influence development through processes that function similarly to avalanches or waterfalls. Adversity experienced in one domain (e.g., in the context of a parent-child relationship) can trigger vulnerability and adversity in another domain (e.g., early substance use) which trigger vulnerability and adversity many more domains. Ultimately these cascading effects are believed to fundamentally alter the course of development (Masten & Cicchetti, 2010).

The cascading effect of adversity is prominent among survivors of CSE. CSE typically involves protracted and compounding exposure to stress and traumatic life events (i.e., polytraumatization). For example, research consistently demonstrates that childhood abuse—specifically sexual abuse—is one of the greatest risk factors for CSE (Zimmerman & Pocock, 2013). Over 70% of CSE survivors report experiences of childhood sexual abuse (Clayton, Krugman, & Simon, 2013; Farley et al., 2003; Zimmerman et al., 2006). These experiences can predispose survivors to developing the biological, psychological, and social vulnerabilities often targeted by pimps and traffickers, thereby setting them on an early trajectory for future victimization. Similar associations have been documented between CSE and mental health issues, family violence, neglect, homelessness, runaway or "throw-away" experiences in adolescence, personal or family involvement with the justice system, parental addiction and mental health issues, identifying as a member of a marginalized group (e.g., LGBT, racial minorities), being a foreign national (e.g., refugee, asylum-seeker), involvement with the foster care system, and community violence, among others (Countryman-Roswurm & Bolin, 2014; Clayton et al., 2013).

Once in "the life," CSE survivors are exposed to abject violence, degradation, and humiliation (Ottisova et al., 2016; Zimmerman & Pocock, 2013; Zimmerman et al., 2003; Zimmerman et al., 2008). Survivors report experiences of repeated rape, gang rape, and other forms of sexual assault, in addition to physical violence, psychological manipulation, control tactics (e.g., dictating when survivors can eat, sleep, go the bathroom, etc.) confinement, threats and executed acts of harm to loved ones, and torture (Baldwin et al., 2015; Reid, 2016; Hopper, 2017; Hopper & Hidalgo, 2006). CSE is a uniquely multifaceted trauma unlike any other. Because the victimization extends beyond a singular relationship, sometimes involving hundreds of other people, CSE survivors are forced to engage with their pimp/trafficker as both an abuser and a protector. This can lead to traumatic bonding (i.e., Stockholm syndrome; Briere & Elliott, 1994; Ceccehet & Thoburn, 2014; Julich, 2005) where survivors develop strong attachments to, and begin identifying with, their trafficker. This effect may be further compounded in cases where pimps pose as romantic partners or protective parent-figures during a period of grooming to fabricate an emotional connection with the survivor later used to gain loyalty (Kotrla, 2010). Similarly, children trafficked by their own parents or caregivers (Getu, 2006; Territo & Glover, 2013) may experience disorganized attachment and a heightened degree of traumatic bonding. The paradoxical nature of being forced to rely on an abuser, can cause some survivors to become hypervigilant toward the trafficker's moods and desires in order to anticipate or avoid violence (Hopper, 2017). Over time, these dynamics in tandem with severe trauma, can disrupt survivors' ability to discern the safety of people and situations, potentially engendering further dependence unsafe or abusive others.

The aggregate and chronicity of polytraumatization in this context has been linked with a complex sequela of adverse physical, psychological, and interpersonal (i.e., biopsychosocial)

outcomes. Survivors consistently report high levels of posttraumatic stress disorder, depression, anxiety, maladaptive personality traits (e.g., detachment, hostility), psychotic behavior, substance abuse and addition, STIs, and severe physical health problems (e.g., Chudakov, Ilan, Belmaker, & Cwikel, 2002; Hossain, Zimmerman, Abas, Light, & Watts, 2010; Lederer & Wetzel, 2014; Oram et al., 2016; Zimmerman, Hossain, & Watts, 2011; Zimmerman & Pocock, 2013). A systematic review conducted in 2016 identified pooled prevalence estimates for mental health problems among CSE survivors at 50% for symptoms of anxiety, 52% for depression, and 32% for symptoms of PTSD (Ottisova et al., 2016). Others have also linked CSE with complex PTSD (e.g., developmental trauma disorder; Hopper et al., 2017)—a complicated adaptation to prolonged trauma exposure punctuated by severe affective dysregulation, negative self-concepts, and interpersonal problems (van der Kolk, Roth, Pelcovitz, Sunday, & Spinazzola, 2005).

Heterogeneity of Posttraumatic Stress Responses

Existing research examining the posttraumatic sequela of CSE survivors is fairly limited in scope. Lederer and Wetzel (2014) examined the physical and psychological consequences of commercial sexual exploitation. Their sample included only 106 English-speaking female survivors of domestic sex trafficking. These results offer important information about common symptoms reported by survivors, but only in the form of basic percentiles and mean scores with a comparatively small and homogeneous sample. Oram et al. (2016) aimed to expand existing literature by conducting a general survey of both male and female trafficking survivors from over 30 countries worldwide. Although it is the largest evaluation of this kind in the United Kingdom to date, only 150 survivors participated in the study. Consistent with Lederer and Wetzel (2014), the vast majority of participants reported a wide range of physical and mental health symptoms. These findings inform a broader understanding of the effects of human trafficking across genders

and nationalities, yet provide only simple percentiles and odds ratios. The line of inquiry did not extend to the unique differences between survivor profiles (e.g., nationality, type of trauma exposures, trauma load, etc.). Thus, while the general biopsychosocial problems experienced by survivors are well documented, small sample sizes drastically limit statistical power and generalizability. These results also beget conceptualizations of sex trafficking survivors as homogenous (e.g., all traumatized or all resilient). However, the complex interplay of multi-systemic factors (e.g., age, ethnicity, social support, legal status, physical and mental health, social stigma, etc.) contributing to survivors' risk and resilience requires a multifarious understanding of survivors' varied experiences and recovery support needs.

Existing trauma research and theory (e.g., Agaibi & Wilson, 2005; Bonanno, 2004; Bonanno & Mancini, 2012; Dickstein, Suvak, Litz, & Adler, 2010; Steenkamp, Dickstein, Salters-Pedneault, Hofmann, & Litz, 2012) suggest that that the presence of pathology following trauma exposure – even complex trauma – is not binary. Several studies investigating the heterogeneity of traumatic stress responses using person-centered analytic techniques, such as latent class analyses, provide evidence of distinct symptom profiles (e.g., Ayer et al., 2011; Breslau, Reboussin, Anthony, & Storr, 2005; Cloitre, Garvert, Weiss, Carlson, & Bryant, 2013; Elhai et al., 2011; Elklit, Hyland, & Shevlin, 2014; Palic et al., 2016; Steenkamp, Dickstein, Salters-Pedneault, Hofmann, & Litz, 2012; Wolf et al., 2012). Contractor et al. (2015) examined clusters of PTSD, depression, and anxiety symptoms among military service members and identified three symptom patterns differentiated by severity (i.e., mild, moderate, and severe). Elklit et al. (2014) explored constellations of PTSD, depression, anxiety, dissociation, sleep disturbance, somatic, interpersonal sensitivity, and aggression symptoms among different groups of trauma survivors (i.e., sexual trauma, physical assault, death of a child) and also uncovered

three distinct symptom patterns (i.e, PTSD, complex PTSD, and low PTSD/complex). Further, considering the aggregate of longitudinal research with trauma survivors, Bonanno and Mancini (2012) suggest that there are four common trajectories of posttraumatic responses: resilience, recovery, delayed reactions, and chronic dysfunction. These studies illustrate a varied topography of posttraumatic adaptation among individuals exposed to a variety of traumatic life events. However, there is no known study assessing heterogeneity in trafficking survivors' symptom profiles. Trauma-specific characteristics—commodification of the survivor, scope of victimization, role of traumatic bonding—may mean that survivors of CSE report unique symptoms profile that are not currently represented in the empirical literature.

The Present Study

The purpose of this study was to address this gap by examining the heterogeneity of CSE survivors' trauma exposure and post-trauma adaptations. The first aim was to answer the following research question:

RQ1: Are there distinct profiles of trauma exposure and biopsychosocial health within this sample of CSE survivors?

Based on previous investigations with other populations, it was hypothesized that there would be at least three distinct sub-groups of survivors, likely differentiated by symptom severity. Identifying these unique profiles has important clinical implications as they can facilitate a deeper understanding of survivors' unique service needs and aid in the development of person-centered intervention programs. Thus, a second goal of this study was to explore the association between different survivor profiles and their help-seeking behaviors. This is critical as previous research suggests that trauma survivors, specifically survivors of CSE, do not access and/or receive appropriate psychological support despite a manifest need for such services

(Dewan, 2014; Ghafoori & Taylor, 2017; Ghafoori, Barragan, & Palinkas, 2014). Some studies show that increased trauma exposure and severity of posttraumatic symptoms are associated with greater likelihood that survivors will seek professional support services (Barrett and St. Pierre, 2011; Ghafoori et al., 2014; Gavrilovic, Schutzwohl, Fazel, Priebe et al, 2005; Johnson & Ziotnick, 2007; Nurius et al., 2011). Yet, other research suggests that rates of service utilization are low among individuals coping with psychological trauma (Murphy et al., 2014; Pynoos et al., 2008). Particularly among survivors of CSE, their sense of real or perceived danger, the feared loss of security, financial instability, poverty, addiction, lack of material resources (e.g., transportation), past negative experiences with service provides, and internalized beliefs that they are beyond help have all been identified as factors that inhibit help-seeking attitudes and behaviors (Dewan, 2014; Kynn, Steiner, Hoge, & Postmus, 2016; Zimmerman et al., 2011). To achieve a more nuanced understanding of help-seeking among CSE survivors, the second research question addressed in this study was:

RQ2: Are there differences in help-seeking attitudes and intentions between different latent profiles of CSE survivors' trauma history and biopsychosocial health?

It is hypothesized that there will be significant differences between survivor profiles regarding help-seeking attitudes and intentions. However, based on the mixed results of previous research, I cannot hypothesize about the specific nature of these differences. This study extends existing empirical and theoretical literature by applying a person-centered approach to investigating heterogeneity among CSE survivors' trauma exposure and biopsychosocial health, and associated differences in help-seeking attitudes and intentions.

Chapter 3 - Method

Procedure

This study was grounded in the Community-Based Participatory Research (CBPR; Minkler & Wallerstein, 2008; Wallerstein & Duran, 2010; Wallerstein et al., 2008) framework. CBPR departs from traditional research methodology by building trust with marginalized communities to establish and mobilize collaborative community partnerships for research and intervention. CBPR is defined by the equitable integration of community members, service organizations, and researchers in all aspects of the research process (Minkler & Wallerstein, 2008; Wallerstein & Duran, 2010; Wallerstein et al., 2008). In CBPR, research agendas originate from, are conducted within, and are subsequently owned by the community of interest. When research emanates from community need, it is more likely that results will meaningfully inform action and policy (Minkler & Wallerstein, 2008; Wallerstein & Duran, 2010; Wallerstein et al., 2008). By engaging community stakeholders and responding to their self-identified empirical priorities, researchers contribute to the "democratization" of research, thereby bridging the gap between science and practice (Minkler & Wallerstein, 2008; Wallerstein & Duran, 2010; Wallerstein et al., 2008). This, in turn, facilitates an integration of knowledge generation and action in context to promote social change and improve biopsychosocial outcomes.

In practice, CBPR is an iterative process that relies on strong, ongoing community partnerships characterized by mutual learning, trust, and empowerment (Minkler & Wallerstein, 2008; Wallerstein & Duran, 2010; Wallerstein et al., 2008). These relationships enable researchers to connect with vulnerable and traditionally hard to reach populations. Further, they also facilitate bidirectional exchanges between community members, service organizations, and researchers that enhance the cultural and contextual appropriateness of research protocol, thereby

strengthening research outcomes (Minkler & Wallerstein, 2008; Wallerstein & Duran, 2010; Wallerstein et al., 2008). CBPR initiatives are also translational in that they rely on interdisciplinary expertise and coalesce assets across professions. This multi-perspective focus increases understanding of the target phenomenon, which is integrated back into the professional discipline to enhance prevention and intervention efforts in the broader social system.

Community-Based Participatory Research Program: RESTORE

Consistent with this framework, I established a CBPR program called RESTORE *(Research and Education with Sex Trafficking Survivors on Resilience and Empowerment)* to serve as the platform for a collaborative partnership between an interdisciplinary group of community stakeholders who share the mission of improving the quality of recovery services offered to CSE survivors. These individuals include CSE survivors, representatives from community-based agencies that facilitate survivor rescue and recovery programs, mental health professionals, law enforcement officials, medical professionals, and researchers from various fields of study. Members of this group, hereafter identified as the advisory board, represent diverse geographic locations within the United States and each maintains active involvement with advocacy, prevention, and/or intervention initiatives specific to CSE.

Drawing on their knowledge and expertise, I led board members in identifying thematic challenges facing survivors of CSE, barriers to support service engagement, and existing gaps in recovery service provision. This information was used to co-construct the present study's research questions. I then worked in tandem with board members to develop the survey instrument, advertisements, and data collection procedures.

Data presented in this study are part of a large-scale, ongoing project aiming to gather data from 500 CSE survivors across the United States. Given the scale of the parent study, and

the challenges of conducting research with vulnerable populations, I built partnerships with community service providers (i.e., community partners, partner organizations), who disseminate information about this study to the CSE survivors they serve. At this time, RESTORE has community partnerships with 29 organizations in 19 different states.

Participant Recruitment

The staff members of our community partners served as the primary recruiters for this study. I held telephone or on-site meetings with each partner organization at least once to provide training on screening for the study's inclusion criteria, explain the parameters of participant recruitment, and troubleshoot any unique challenges facing each individual location. To protect potential participants from any perceived coercion to take part in this study, partner organizations were not involved in data collection or analysis. Further, being overly cautious and mindful of the participant pool, partner organizations were asked to limit study advertisements (i.e., individual text or email messages) to a total of two communications (e.g., one email and one text message). Each community partner received an assorted kit of advertisement materials (e.g., flyers, small handouts, email and text message templates, and social media graphics) and was asked to distribute these resources to individuals who fulfilled the study's inclusion criteria:

1. Experienced commercial exploitation in the form of human sex trafficking at some point in their lives;
2. Was 18 years of age or older at the time of participation (in other words, they may have experienced CSE as a child but are now adults and therefore eligible to take part in the study); and,
3. Was either (a) currently receiving support services, or (b) received support services some time in the past from an organization that provides services to CSE survivors

(e.g., non-profit organization, community-based agency, faith-based institution, domestic and sexual violence shelters, etc.).

Regarding inclusion criterion two, sex trafficking was operationalized by the U.S. government's definition as outlined in the Trafficking Victims Protection Act of 2000 (i.e., sex trafficking occurs when a commercial sex act is induced by force, fraud, or coercion, or in which the person induced to perform such act has not attained 18 years of age; 22 U.S.C. § 7102). Finally, although inclusion criterion three limits generalizability of the results, previous studies carried out by experts with extensive experience researching survivors of human trafficking established it as a precedent for safe and ethical empirical practice with this unique population (i.e., Hossain et al., 2010; Zimmerman, 2003). For this reason, it was applied to the present study and no individuals who were currently experiencing CSE were included in this study.

Data Collection

The primary mechanism of data collection was an online survey facilitated by Qualtrics (http://survey.k-state.edu/). Qualtrics is a comprehensive, highly secure online survey tool maintained by servers armed with strong fire wall systems and thus adequately equipped to protect participant data. Recruitment materials directed survivors to the RESTORE website (www.therestorecoalition.com) where they could read the informed consent, find answers to frequently asked questions, and review information about the research team. If survivors decided they wanted to be in the study, they clicked the survey link on the website which securely re-directed them to the informed consent page in Qualtrics. Participants gave their consent by clicking the "ACCEPT" icon. To protect the anonymity of their data, participants were not asked to sign or provide their name on the informed consent page. The first page of the survey contained the inclusion criteria screening questions. Individuals who fulfilled the inclusion

criteria were directed on to the full survey; those who did not fulfill the inclusion criteria were directed to an informational page that explained why they were not able to take part in the study. The skipped-question pop-up reminder option available in Qualtrics was activated to reduce the frequency of unintentionally skipped questions within the survey. Finally, skip logic was used to ensure that only questions relevant to each individual were presented, thereby reducing survey length, and by extension, participant burden/survey fatigue. At the end of the survey, participants were directed to a page with the debriefing statement which thanked participants, explained study goals, provided education on potential reactions to trauma-related research, offered a list of national resources accessible regardless of geographic location, and listed the contact information for the researchers' and Institutional Review Board. The debriefing statement and resource list were also made available to download on the RESTORE website. On average, it took participants 60 to 90 minutes to complete the online survey.

Remuneration. To compensate participants for their time, I provided remuneration in the form of a $30 Visa gift card. The conditions for receiving this payment were described in both the informed consent and debriefing statement. At the end of the debriefing statement page in Qualtrics, participants were asked if they wanted to be securely redirected to a separate survey where they could provide a mailing address to be used only for distribution of payment. Securely redirecting participants to a separate survey means that participants' questionnaire responses cannot be linked to the mailing information they provide. Prior to being asked whether they would like to provide information for remuneration distribution, I clearly outlined what information would be solicited on the remuneration page (i.e., name, mailing address), as well as the protocol for protecting participants' confidentiality. To this end, I emphasized that participants did not have to provide their personal contact information to receive their gift card;

rather, they had the option of providing a pseudonym, their initials, and/or the contact information of an organization to which they would life their gift card sent. Further, I explain that the mailing information provided would be destroyed after payment is distributed.

Gift cards were mailed in blank "thank you" cards—I did not write in or sign them and there were no discernable connections to this study or RESTORE. The gift cards were also mailed with a P.O. box return address. The primary purpose of this protocol – which was articulated in the debriefing statement, on the remuneration mailing address entry page, and on the RESTORE website – was to protect participants' confidentiality should their mail be knowingly received or unknowingly intercepted by a third party. Mailing blank cards and withholding any reference to the university or RESTORE demonstrated an abundance of caution and consideration for the real and perceived risks facing CSE survivors who choose to participate in research. This degree of hypervigilance in study protocol design is intended to reflect the researchers' commitment to nonmaleficence and survivor safety. Participants who selected "YES," indicating that they wanted to provide mailing information for remuneration, were redirected to the separate survey; participants who selected "NO" were redirected to a "thank you" page reminding them that all informed consent, debriefing, and resource information are provided on the RESTORE website.

Pilot testing the survey and study protocol. Prior to initiating the full study, I pilot tested the participant recruitment, consent, surveying, debriefing, and remuneration distribution procedures described above with a sample of 10 CSE survivors. The purpose of this pilot test was to (a) understand points of participant fatigue, (b) solicit feedback on strategies to strengthen participant retention, (c) identify and resolve problems with the survey or Qualtrics software, and (d) determine what, if any questions pilot participants found confusing, repetitive, or irrelevant.

The initial Institutional Review Board (IRB) application for this study was approved in September 2017 (see Appendix A). Pilot testing was carried out from October 2017 to December 2017. Revisions made to the study survey were submitted to and approved by the IRB in January 2018. Full data collection was launched in January 2018 and is ongoing.

Online survey accessibility enhancements. Many of the measures used in this study were already available in both English and Spanish. A research assistant who speaks fluent Spanish, with the support of a University faculty member who teaches Spanish in the Modern Languages department, translated the remaining measures, along with the informed consent, debriefing statement, resource information, and remuneration description. Participants therefore had the option of taking the online survey in either English or Spanish. Further, to accommodate participants who have limited literacy skills, audio recordings of all questions were embedded in the Qualtrics survey. Participants simply clicked a microphone icon next to the question to hear the item read aloud. In circumstances where the online survey format was incompatible with participant need or ability, surveys were facilitated over the phone by a trained member of the research team.

Undergraduate research assistants. To support the execution of this study, I developed a collaborative research team of 15 undergraduate research assistants. These students assisted with survey maintenance, community partner engagement, and data collection, among other tasks. I facilitated weekly team meetings to monitor research protocol adherence. Undergraduate research assistants were trained in ethical and trauma-informed research practices prior to joining the team. Senior research assistants involved in direct data collection (i.e., by phone, in-person) received additional training in identifying signs of participant distress (e.g., feeling triggered, dissociation, etc.) and responding according to a pre-established debriefing protocol.

Previous research suggests that if individuals participating in trauma-focused research experience elevated stress as a result of being in a study, these reactions are generally minor and brief (see meta-analysis from Jaffe et al., 2015). However, to be overly cautious, I adapted principles from Draucker et al. (2009) and Zimmerman and Watts' (2004) to develop a protocol for responding to adverse participant reactions to research. Procedures included but were not limited to, evidence-based affect regulation exercises, brief risk assessments, research experience debriefing, and service referrals. Research assistants were supervised during their first time facilitating direct data collection and they were required to debrief with me after each subsequent iteration.

Phone surveys. Study advertisements instructed participants who wished to complete the survey via phone with a member of the research team to contact me to schedule a time for their survey. When possible, I worked to accommodate the preferences of each survivor taking part in this study; thus, when they called to schedule a phone survey, I asked if they had a preference of female or male interviewer. Based on the type and perpetrators of a survivor's traumatic experiences, their personal gender identity, as well as their sense of internalized shame or embarrassment regarding sexuality, among other factors, interviewer gender may have significant effects on their degree of comfort and honesty while answering survey questions. Inviting participants to choose the gender of their interviewer is another example of our survivor-centered, trauma-informed approach to the research process as it actively demonstrates our respect for their autonomy.

Researchers did not collect any identifying information from participants while scheduling or facilitating phone surveys; participants were asked to "choose a name" and were reminded that they had the option of supplying a pseudonym or initial. To further protect the

anonymity of participants' data, the secure Zoom meeting software was used to facilitate all phone surveys because it eliminated the need to gather specific contact information. Phone surveys were not recorded. Using a computer in a confidential location, researchers entered participant responses to both the study survey and remuneration survey directly in the Qualtrics survey. Research team members facilitating data collection over the phone read the informed consent aloud and solicited the participants' verbal consent before beginning the survey. They monitored participants' distress levels throughout the survey and, consistent with the online survey protocol, cued participants to take breaks as needed. If participants reported elevated distress, during or after the survey, researchers responded according to the debriefing protocol described above. On average, it took approximately 90 minutes to complete a survey via phone. Two participants in the present sample completed the survey by phone.

In addition to online and phone-based data collection mechanisms, I also developed a protocol for in-person data collection. However, no in-person data collection has been necessary at this time. Thus, that protocol is not articulated, as it was not used, in this study.

Participant protection and data storage. Data were gathered via Qualtrics, a comprehensive, highly secure survey tool available to all faculty and staff at Kansas State University (http://survey.k-state.edu/). Qualtrics' servers are equipped with strong fire wall systems and thus are adequately equipped to protect the confidentiality of research participants and study data. Access to the Qualtrics system is severely restricted to specific individuals who are monitored and audited for compliance. Survey data in the present study is completely anonymous; participants have the option to relinquish their anonymity by providing a mailing address for remuneration distribution. However, the mailing details provided by participants are impossible to link to survey responses. Neither the research nor mailing address surveys collect

participant IP addresses or the geographic location. These settings were disabled in Qualtrics. Finally, all data are stored on a secure, password-protected university computer drive and an encrypted external hard drive. Only IRB-approved members of the research team have access to the Qualtrics survey and data storage drives.

Sample

The present study included cross-sectional data from 135 adult survivors of CSE living in the United States. Participants had a mean age of 34.78 (*SD* = 9.86, Range: 18 – 64) and the majority were female (95.6%; male = 3.3%; transgender = 1.1%). A majority of the sample identified their primary racial identity as White (55.1%), followed by Black (28.1%), Other (7.9%), Hispanic (3.4%), American Indian/Alaska Native (2.2%), Native Hawaiian/Pacific Islander (2.2%), and Asian (1.1%). Regarding education, just over one fourth of the sample reported earning a high school diploma or GED (27%), followed by those who earned some college credit but no degree (23.6%), some schooling, but no high school diploma (12.3%), a bachelor's degree (10.1%), technical or vocational training degree (7.9%), an associate's degree (7.9%), no schooling (6.7%), and a master's or professional degree or higher (4.5%). The two largest employment categories were almost evenly split between unemployed-looking for work (23.6%) and employed full time (22.5%). Among the other half of the sample, 13.5% were employed part time, 13.5% were unable to work, 9% were students, 5.6% were unemployed and not looking for work, 5.6% endorsed other, 3.4% were homemakers, and 3.4% were self-employed. The three most frequently endorsed income brackets were: below $9,999 (51.2%), $10,000 - $19,999 (16.3%), and $20,000 - $29,999 (16.3%). Regarding geographic locations, almost one third (31.1%) of participants lived in the southern region of the United States when

they took part in this study; among remaining participants, 23% lived in the West, 5.2% in the Midwest, and 3% in the northeast.

Descriptive statistics are presented in Table 1. The types of commercial sexual exploitation reported by each survivor is depicted in Figure 1. Study participants reported exposure to an average of 10.79 (*SD* = 6.50) traumatic life events, 7.31 (*SD* = 1.77) adverse childhood experiences, and 11.54 years (*SD* = 8.83) of CSE.

Measures

One of the primary objectives of this study was to identify distinct profiles of trauma exposure and biopsychosocial health among a sample of CSE survivors. These are not static constructs that can be easily measured by a single indicator; they are clusters of symptoms and experiences representative of dynamic processes. For this reason, a robust survey comprised of gold-standard assessments was developed to examine multiple components of trauma exposure and biopsychosocial health. Fifteen scales and a demographic questionnaire were used to measure a total of 52 variables in the present study. Detailed descriptions of all scales and items included in these present analyses, including associated scoring procedures, clinical cutoffs, and psychometric properties, are provided in Table 2.

Data Analysis Plan

Prior to investigating the research questions, data were cleaned and re-coded such that higher scores represented higher amounts (i.e., degrees) of the specific construct. Variables were checked for normality and all were found to be normally distributed. To investigate missing data patterns, I performed a Missing Values Analysis using the expectation maximization (EM) technique in SPSS (version 21.0). Missing data was generally low (≤ 5%) for all variables ranging from 0% (on multiple variables) to 5% (number of times self-harmed). Results from

Little's MCAR test revealed a non-significant chi-square indicating that data were missing completely at random (MCAR) [$\chi 2(1394) = 1373.64$, $p = .65$]. Simulation studies suggest that the full information maximum likelihood estimation outperforms other techniques for handling missingness (e.g., Cham, Reshetnyak, Rosenfeld, & Breitbart, 2017; Peters & Enders, 2002).

To answer the two research questions posed in this study, I performed a latent profile analysis (LPA; Gibson, 1959; Lazarsfeld & Henry, 1968; Muthén & Muthén, 1998–2012) using the BCH stepwise procedure (Bakk, Tekle, & Vermunt, 2013; Bakk & Vermunt, 2015; Bolck, 2004; Vermunt, 2010) in Mplus 8.0. First, I addressed Research Question 1 by running a series of successive LPAs where classes were iteratively added to the model one-by-one to identify which solution best fit the data (see Nylund, Asparouhov, & Muthén, 2007). Model fit was evaluated by the log-likelihood, Bayesian Information Criterion (BIC), Akaike's Information Criterion (AIC), Lo-Mendell-Rubin likelihood ratio test (LMR), and bootstrap ratio test (BLRT). Lower log-likelihood, BIC, and AIC values indicate better fitting models. Both the LMR and BLRT are used during the class enumeration process to determine whether the specified model fits the data significantly better than a model with k-1 classes. A statistically significant LRT value indicates that the model with k classes is a better fit than the solution with one less class. Entropy was also used to evaluate model fit. Entropy values greater than 0.8 demonstrate sufficient distinction between classes with higher values signifying better delineation (Celeux & Soromenho, 1996; Tein, Coxe, & Cham, 2013). Finally, theoretical relevance and the rule of parsimony played a critical role in identifying the best class solution for the data. Participants were assigned to a single class according to their highest posterior probability for membership and pairwise comparisons were performed to investigate statistically significant differences between the latent classes.

To address Research Question 2, I applied the BCH procedure to the LPA. The BCH method enables researchers to explore mean-differences between latent classes on distal outcome variables, which are included in the model syntax as auxiliary variables. This is accomplished by applying a class assignment weight that essentially re-creates true latent classification (Bakk et al., 2013; Bakk & Vermunt, 2015; Bolck, 2004; Vermunt, 2010). A weighted multiple-group analysis is then performed using the Wald chi-square test where groups correspond to the latent class assignments. This approach avoids shifts in latent class membership that can occur when distal outcomes are included in the LPA through other techniques (Bakk et al., 2013; Bakk & Vermunt, 2015) and yields both global and class-specific difference statistics. In the present study, items from the help-seeking attitudes and intentions instruments were examined as distal outcomes using this BCH protocol.

Chapter 4 - Results

Descriptive statistics for all study variables are presented in Table 2 and bivariate correlations are presented in Table 3. Preliminary analyses revealed that, on average, the sample surpassed provisional diagnostic thresholds for PTSD, anxiety, depression, alcohol use, and suicidality. However, differential associations between study variables illustrate the need for further investigation into the heterogeneity of CSE survivors' biopsychosocial health and its relation to their help seeking-attitudes and intentions.

Latent Profile Analysis

To answer Research Question 1, a latent profile analysis was performed investigating whether there were distinct profiles of biopsychosocial health within this sample of CSE survivors. Table 4 provides class enumeration fit statistics. The 2-class solution produced a significant ($p < .001$) LMR test, suggesting it was a better fit to the data than the 1-class solution. Entropy was also high (.91), further supporting strong class delineation. The LMR test for the 3-class model approached, but ultimately did not reach statistical significance ($p = .08$). However, there were substantial declines in the AIC, BIC, and SSA-BIC values between the 2- and 3-class models, and the 3-class solution appeared highly discriminative as evidenced by an entropy value of .89. Simulation studies suggest that BIC, SSA-BIC, and BLRT indices are the most consistent indicators of correct class identification, irrespective of sample size and number of indicators included in the LPA (see Nylund et al., 2007; Tein et al., 2013). For this reason, the 3-class model was retained for further consideration. Finally, the 4-class solution produced a nonsignificant LMR test, modest declines in BIC, and two latent classes that were relatively indistinguishable. Consequentially, it was ruled-out as a contender for the optimal class solution.

To determine which model best fit the data, I examined the theoretical relevance of both the 2-class and 3-class solutions. Despite some similarities between groups, the biopsychosocial symptom clusters identified in the 3-class model had clinically meaningful distinctions across each latent class. This finding is consistent with existing research and theory. Most studies using person-centered analyses to assess heterogeneity in trauma survivors' symptomology support the 3-class solution, (e.g., Ayer et al., 2011; Breslau et al., 2005; Contractor et al., 2015; Elhai et al., 2011; Steenkamp et al., 2012; Wolf et al., 2012). Contractor et al. (2015), even when examining variation in PTSD and C-PTSD symptom sequalae (e.g., Cloitre, Garvert, Weiss, Carlson, & Bryant, 2014; Cloitre et al., 2013; Elklit et al., 2014; Palic et al., 2016). Thus, the 3-class model was identified as the optimal class solution based on the dual consideration of statistical fit indices and theoretical congruence.

Class Descriptions

Descriptive statistics for each class are provided in Table 1 and a breakdown of the forms of CSE reported by each class is included in Figure 1. Consistent with previous studies examining the symptoms of trauma survivors (e.g., Ayer et al., 2011; Breslau et al., 2005; Contractor et al., 2015; Elhai et al., 2011; Steenkamp et al., 2012), results from the present LPA indicated that classes of CSE survivors reported different levels of symptom severity, but not necessarily different symptom cluster types (e.g., dysphoria, emotional numbing). To maintain theoretical consistency, I adopted the labels most commonly used in existing literature and refer to the three classes as having mild (class 1), moderate (class 2), and severe (class 3) symptoms.

Mildly distressed class. Almost one-fifth (n = 25, 18.5%) of CSE survivors in this study were grouped in the mildly distressed class. These survivors reported the lowest exposure to traumatic life events (M = 9.29) and adverse childhood experiences (M = 6.79) of all three

classes. They also experienced the shortest duration of CSE (*M* = 7.50 years) and were the furthest removed from their most recent incident of CSE (approximately 1-5 years). Most notably, survivors in this class did not report clinically significant levels of PTSD, anxiety, depression, substance use, or suicidality. They were also characterized by the sample's lowest self-harm, maladaptive personality trait, and diagnosed mental health condition scores, and the second-lowest diagnosed physical health condition scores. Not only did these survivors report a comparative absence of psychological distress, they were also the only class to report a high degree of comfort with relational intimacy (i.e., attachment dimension – anxiety), and a moderate degree of comfort depending on others/believing others will be there when needed (i.e., attachment dimension – depend)—two key components of secure attachment (Collins, 1996). Regarding support services, survivors with mild symptoms reported some of the shortest durations of service engagement (present, *M* = 1.71 years; past, *M* = 2.40) years of all study participants. All survivors in this class identified as female and their average age was 36.56 years-old. Over 80% reported that their primary racial identity was either white (55.6%) or black (27.8%), and together they maintained the highest average education, employment, and income levels of the three classes.

Moderately distressed class. The second and largest cluster of CSE survivors in the present study was the moderately distressed class (*n* = 66, 48.89%). These survivors reported marginally higher exposure to traumatic life events (*M* = 9.60) and adverse childhood experiences (*M* = 7.12), compared to those in the mildly distressed class. On average, they experienced nearly 10 years of CSE (*M* = 9.81), with the most recent incident taking place roughly 7-12 months prior to completing the study survey. Regarding mental health, survivors in this class narrowly exceed clinical thresholds for anxiety, depression, and alcohol use. Their

average suicidality reports neared the clinical cutoff score. Although survivors' average PTSD symptom total scores fell five points below the preliminary diagnostic cutoff, they endorsed clinically meaningful levels of re-experiencing and avoidance symptoms. Further, this class was characterized by medial maladaptive personality trait reports, with their two highest sub-scale scores being negative affect and detachment. Despite these indicators of psychological stress, these survivors indicated a relatively small history of self-harm, low levels of drug use, the fewest number of diagnosed physical health conditions, and the classes' median number of diagnosed mental health problems. Survivors in the moderately distressed class appeared to maintain more anxious attachment styles, as evidenced by a high fear of rejection/abandonment (i.e., attachment dimension – anxiety), coupled with an intermediate degree of comfort with relational intimacy (i.e., attachment dimension – close; Collins, 1996). Compared to the other two classes, survivors characterized by moderate symptoms reported the longest history of support services (M = 4.19 years) and were second in the length of current support services (M = 1.84 years). Two of the 66 survivors in this class identified as male (5.4%) and the rest identified as female (94.6%). Most class members identified as either White (50%) or Black (41.7%), and these individuals represented the sample's second highest education, employment, and income levels.

Severely distressed class. The third, and final, class represents survivors with the most severe and complex symptoms. This group comprised 32.59% (n = 44) of the sample and was characterized by the highest exposure to traumatic life events (M = 13.09) and adverse childhood experiences (M = 7.88), in addition to the longest duration of CSE (M = 16.09 years), and the most recent experience of CSE (within the past 1-12 months). Survivors in the severely distressed class reported clinically significant levels of PTSD, anxiety, depression, alcohol use,

drug use, and suicidality. This group also reported the highest rate of self-harm, diagnosed mental health conditions, and diagnosed physical health conditions of all three classes. Regarding maladaptive personality traits, these survivors reported moderately-high total symptom scores with noteworthy negative affect, detachment, and psychoticism sub-scale scores. Compared to participants in the mild and moderately distressed classes, survivors in this class also reported the greatest disruptions in attachment. Namely, they maintained the highest fear of rejection or abandonment (i.e., attachment dimension – anxiety) and the lowest sense of comfort with both intimacy (i.e., attachment dimension – close) and depending on others/believing others will be there when needed (i.e., attachment dimension – depend; Collins, 1996). Despite having the sample's highest rate of biopsychosocial distress and the shortest duration of past service engagement (M = 2.38 years), these survivors had been receiving their current support services longer than survivors in the other two classes (M = 3.50 years). Survivors in the severe symptoms group predominantly identified as female (94.3%) but also included one person who identified as male (2.9%) and one who identified as transgender (2.9%). This class was further characterized by the greatest racial diversity, the widest range of educational and employment backgrounds, and the lowest income levels of all three classes (see Table 2).

Class Validity

Participants were assigned to a single class according to their highest posterior probability for membership (see Table 4) and mean-level comparisons were performed to examine differences between latent classes on all indicator variables used in the LPA. First, the Levene's statistic was used to examine homogeneity of variance between classes. Twelve of the 28 variables violated the assumption of homogeneity (see Table 6). The Welch's test and Games-

Howell post-hoc were used for mean comparisons on these variables. All other variables were compared using one-way ANOVA and Tukey post-hoc tests. Results of these analyses are presented in Table 6. Notably, there were no statistically significant differences in length of current or past support services, number of physical health conditions, or report of degree of comfort depending on others/believing others will be there when needed (i.e., attachment dimension – depend) between the three classes. There were statistically significant differences between two or more classes on all other LPA indicator variables.

Help-Seeking Attitudes and Intentions by Latent Class

Finally, the BCH stepwise approach to latent class modeling was used to answer Research Question 2. Per this three-step method, help-seeking attitudes and intentions (i.e., distal outcomes) were included in the LPA as auxiliary variables. The BCH procedure examines overall and between-class mean differences for each distal outcome within the model using the Wald chi-square test. Full results are presented in Table 7, but a few key findings are highlighted here. First, results indicated that survivors in the mildly distressed class reported greater value and need in seeking professional psychological help than those in the severely distressed class. Further, survivors in the severely distressed class endorsed that talking about psychological problems is a poor way to solve emotional problems and that coping without professional help is admirable, significantly more than survivors in the mild and moderately distressed classes. More than the other two classes, the severely distressed class also indicated that they would not seek help from anyone if having a personal or emotional problem. Finally, survivors in the moderate and severely distressed classes indicated that they might want counseling in the future significantly more than those in the mildly distressed class. However, the same survivors also

reported a significantly higher belief that therapy would not have value for them, compared to their counterparts in the mildly distressed class.

Chapter 5 - Discussion

Over the past decade, campaigns to raise awareness about sex trafficking gained considerable traction and facilitated a marked increase in victim identification (e.g., Foot, Toft, & Cesare, 2015; Renzetti, Bush, Castellanos, & Hunt, 2015; Salisbury, Dabney, & Russell, 2015). These advances have left mental health and medical+ service providers facing the challenge of providing appropriate recovery support services to an ever-growing number of survivors, without an empirically-validated roadmap for effective treatment protocols. Although some studies suggest that CSE survivors may be well-served by existing intervention programs (e.g., Aron, Zweig, & Newmark, 2006; Davy, 2015; Deb, Mukhergee, & Mathews, 2011; Dell et al., 2017; Hopper, Azar, Bhattacharyya, Malebranche, & Brennan, 2018; Kerr, 2016; Maculan, Lozzi, & Rothman, 2017; Westwood et al., 2016), others indicate that many survivors do not find these services capable of effectively ameliorating their distress or supporting their long-term recovery process (e.g., Davy, 2015; Dell et al., 2017; Oram et al., 2016; Powell, Asbill, Louis, & Stoklosa, 2018; Westwood et al., 2016). Thus, there is an urgent need to develop evidence-based care models that optimize positive adaptation and sustained resilience for survivors of CSE. Central to achieving this goal is the need for a more comprehensive and nuanced understanding of survivors' unique experiences and service needs. A significant body of research illustrates the adverse and complex biological, psychological, and relational outcomes associated with CSE (e.g., Abas et al., 2013; Borschmann et al., 2016; Hossain et al., 2010; Lederer & Wetzel, 2014; Muftić & Finn, 2013; Oram et al., 2016; Ottisova et al., 2016; Zimmerman & Pocock, 2013). However, there are currently no studies which examine heterogeneity in survivor symptom profiles using person-centered analyses. The purpose of the present study was to address this gap by using a latent profile analysis to investigate distinct clusters of trauma exposure and

biopsychosocial health indicators, as well as associated differences in help-seeking attitudes and intentions among a national sample of CSE survivors. Results yielded three discrete survivor sub-groups characterized as mildly distressed, moderately distressed, and severely distressed.

Distinct Patterns of Trauma Exposure and Biopsychosocial Health

Nearly one in five (18.5%) survivors were clustered in the mildly distressed class—the smallest of the three latent profiles. Characterized by the lowest reports of polytraumatization and no clinically significant indicators of biopsychosocial stress, these survivors appeared seemingly resistant to the adverse effects of compounding trauma exposure. Compared to other survivors in the sample, trauma exposure among the mildly distressed class was ostensibly low. However, epidemiological research in the broader field of trauma studies suggests that 70 – 90% (Benjet et al., 2016; Kilpatrick et al., 2013) of people experience a traumatic event at some point in their lives and are exposed to an average of two trauma types per capita (Kessler et al., 2017). In other words, at the time of survey completion, survivors in the mildly distressed group were already reporting exposure to almost five times the average number of trauma types experienced by the general population over the lifespan. Along with general increases in overall psychological distress and functional impairment (Kessler et al., 2017; Seery et al., 2010), previous studies indicate that successive trauma exposure may be linked with a two- to three-fold increase in the risk of developing PTSD (Breslau, Chilcoat, Kessler, & Davis, 1999; Breslau, Peterson, & Schultz, 2008; Cougle, Resnick, & Kilpatrick, 2009; Schock, Böttche, Rosner, Wenk-Ansohn, & Knaevelsrud, 2016). Yet, despite high polytraumatization, survivors in the mildly distressed class did not report symptoms of PTSD, anxiety, depression, alcohol use, drug abuse, or suicidality at clinically significant levels.

Theories of posttraumatic adaptation (e.g., Bonanno, 2004, 2005, 2008; Bonanno & Mancini, 2008, 2012) suggest that the most common response to trauma exposure is psychological resilience [i.e., "the ability of individuals in otherwise normal circumstances who are exposed to an isolated and potentially highly disruptive event…to maintain relatively stable, healthy levels of psychological and physical functioning" (Bonanno, 2004, p. 20-21)]. Even under conditions of repeated and prolonged exposure to the same stressor, many survivors are resilient and adapt with little to no disturbance in biopsychosocial well-being (e.g., Pat-Horenczyk et al., 2017). Thus, findings from the present study may be illustrative of this normative response to a series of non-normative events. Although difficult to infer from cross-sectional data, survivors in the mildly distressed class may possess individual and environmental resources that buffer the adverse effects of traumatic stress and promote resilient post-trauma adaptations. For instance, increased education and income have been found to mitigate posttraumatic stress (Bonanno, Galea, Bucciarelli, & Vlahov, 2007), and survivors in this group reported the highest rates of both factors. Moreover, studies show that social support and secure interpersonal attachment may promote resilient adaptations to trauma exposure (Bonanno et al., 2007). Mildly distressed survivors were the only class to surpass the recommended clinical threshold for the closeness dimension of attachment, suggesting that they feel a high level of comfort with emotional intimacy in significant relationships. This may be a potential indicator of strong attachment and social support that is working to dilute the aggregate effects of compounding trauma exposure.

Another possibility is that the variance in these empirically identified survivor profiles is attributed, at least in part, to trauma-specific characteristics. Qualities such as duration, chronicity, degree of exposure, and relationship to the perpetrator(s), among other factors, are

differentially associated with posttraumatic outcomes (Breslau et al., 1999; Breslau et al., 2008; Cougle et al., 2009; Dunn, Nishimi, Powers, & Bradley, 2017; Guina, Nahhas, Sutton, & Farnsworth, 2018; Schock et al., 2016) and may therefore be responsible for some of the delineation between latent profiles. Further, a significant body of research points to the sobering effect of time on posttraumatic adaptation and a gradual decrease in symptom severity (Bonanno & Mancini, 2012; Shalev, 2009) that typically occurs in the months and years following the traumatic event. On average, the most recent incident of CSE experienced by survivors in the mildly distressed class happened one to five years before taking part in this study. Thus, the marked difference in symptom severity between each class could highlight important distinctions in proximal versus distal effects of trauma exposure (e.g., Pine, Costello, & Masten, 2005; Pynoos, Steinberg, & Piacentini, 1999). Addressing these questions is beyond the scope of this study. Future research employing longitudinal and mixed-method designs with multiple informants is needed to investigate the multifarious and interconnected factors that promote posttraumatic growth among CSE survivors.

The second cluster identified in this study was characterized as the moderately distressed class and represented almost half of all participants (48.9%). The biopsychosocial health profile of this group was highly congruent with the existing literature on CSE survivors' physical, psychological, and relational well-being. The mildly distressed class endorsed clinically significant anxiety, depression, alcohol use, re-experiencing, and avoidance symptoms. They also had medial reports of the negative affect (i.e., frequent and intense experiences of high levels of a wide range of negative emotions; American Psychiatric Association [APA], 2013, pp. 779-781) and detachment (i.e., avoidance of socio-emotional experiences including both withdrawal from interpersonal interactions and restrictive affective expression; APA, 2013, pp.

779-781) personality traits. Finally, moderately distressed survivors also endorsed a clinically meaningful report of the anxiety attachment domain, suggesting high fears of rejection/abandonment. Although comparable to the mildly distressed class on many indicators of polytraumatization, and despite reporting the longest history of receiving support services, these survivors maintained high levels of psycho-social disturbance.

One possible interpretation of these findings may be rooted in the comorbidity of anxiety and depression. Epidemiological research suggests that the prevalence of comorbid anxiety and depressive disorders is exceptionally high (40% to 70%; Hirschfeld, 2001; Wu & Fang, 2014), particularly among trauma survivors (Grant, Beck, Marques, Palyo, Clapp, 2008; Marshall et al., 2001). Comorbidity has been linked with slower recovery rates, greater functional impairment, increased substance abuse and suicidality, decreased quality of life, and increased help-seeking behaviors (Grant et al., 2008; Hirschfeld, 2001; Marshall et al., 2001; Wu & Fang, 2014). The reciprocal symptom sequence inherent in the concurrence of these disorders typically begins with anxiety (Cummings, Caporino, & Kendall, 2014). Anxiety symptoms are associated with increased psycho-physiological arousal (Cummings et al., 2014). As this arousal causes increasingly greater discomfort, individuals begin avoiding potential triggers to modulate their distress (Cummings et al., 2014). However, this paradoxically limits exposure to positive and corrective experiences, thereby fueling greater feelings of hopelessness and pessimism—i.e., depression (Cummings et al., 2014). Avoidance coping strategies have been identified as one key mechanism of comorbidity and a threat to trauma recovery (Pineles et al., 2011). This is particularly poignant for CSE survivors who may experience a significantly higher rate of avoidance symptoms than survivors of non-commercial sexual exploitation (Cole et al., 2016). The potential role of paradoxical relationships between stress and coping in predicting variance

among CSE survivors' recovery trajectories warrants specific investigation in future studies. Such information would help guide effective service provision tailored to address the unique needs of survivors in this latent class.

The final class was characterized by survivors who exhibited the highest degree of polytraumatization and clinically significant symptoms of pervasive psycho-social stress. The severely distressed class (32.6%) had been exposed to almost 1.5 times the number of trauma types as the mild symptoms class and they experienced CSE for over double the length of time. Severely distressed survivors also reported that their most recent incident of CSE occurred within just one year of taking part in the study. The multi-domain disturbance expressed by this class is likely illustrative of a sequela of complex PTSD (see Cloitre et al., 2013; Cloitre et al., 2014; Elhai et al., 2011; Elklit et al., 2014; Palic et al., 2016). Concomitant with clinically significant reports of PTSD, depression, anxiety, substance use, drug abuse, and suicidality, the severely distressed class exhibited signs of distress consistent with at least two of the three unique C-PTSD symptom clusters, affective dysregulation and interpersonal problems. Severely distressed survivors reported a comparably high degree of general personality dysfunction, along with notable disturbances in the negative affect, detachment, and psychoticism (i.e., exhibiting a wide range of culturally incongruent odd, eccentric, or unusual behaviors and cognitions; APA, 2013, p. pp. 779-781) trait domains. Previous research has found that these personality traits are significantly associated with emotion dysregulation (Pollock, McCabe, Southard, & Zeigler-Hill, 2016), relational functioning (Mogilski & Welling, 2016; Southard, Noser, Pollock, Mercer, & Zeigler-Hill, 2015; Zeigler-Hill & Hobbs, 2017; Zeigler-Hill & Noser, 2016), as well as addictive behaviors and drug abuse (Gervasi et al., 2017; Massaldjieva, Georguiev, & Hadzhiyska, 2016). Thus, results from the present study may be suggestive of general

disturbances in self-organization and a degree of affective dysregulation, key features of C-PTSD (Cloitre et al., 2013; Elklit et al., 2017; van der Kolk et al., 2005). Moreover, in the context of interpersonal relationships, survivors in the severely distressed class exhibited the greatest fear of rejection and abandonment (i.e., attachment dimension – anxiety), the lowest degree of comfort with emotional intimacy (i.e., attachment dimension – close), and the lowest degree of comfort depending on others/believing others will be there when needed (i.e., attachment dimension – depend). These findings are consistent with existing research linking CSE with symptoms of C-PTSD (e.g., affect dysregulation, impulsivity, alterations in attention, interpersonal distress, somatic dysregulation, alterations in self-perception; Hopper & Gonzalez, 2018).

Although results did not yield significant differences between classes on all demographic variables, it is important to note that the heightened distress exhibited by survivors in the severely distressed class could be partially explained by a higher concentration of predisposing vulnerabilities. For example, the severely distressed class reported significantly lower education, income, and employment rates than those in the mildly distressed class. Further, they were also the youngest and most racially diverse class, and the only group to include female, male, and transgender participants. Existing research suggests that low socioeconomic status and identifying as a member of a marginalized community (e.g., racial or gender minority) are linked with greater vulnerability for trafficking victimization (Countryman-Roswurm & Bolin, 2014; Clayton et al., 2013). These characteristics are also linked with greater PTSD, C-PTSD, and general symptom severity in the aftermath of CSE and other types of trauma exposure (see Bonanno et al., 2007; Hopper & Gonzalez, 2018). Further, these survivors may also have limited access to intrapersonal, interpersonal, and community resources capable of buffering the adverse

effects of cumulative stress. Thus, the marked increase in distress manifested between the three classes could be partially explained by the cumulative effect of pre-existing, CSE-specific, and other adversities experienced across multiple levels of the socio-ecological system (i.e., individual, relational, organizational, cultural, and socio-historical) and across the developmental life span. The small and demographically homogeneous quality of the present sample does not permit further inferences about these constructs. Future research should prioritize collecting data from larger, more diverse samples to better investigate the role of pre-existing, CSE-specific, and CSE non-specific factors in shaping survivor symptom profiles.

Class Differences in Help-Seeking Attitudes and Intentions

Examination of differential help-seeking attitudes and intentions by latent class membership revealed several significant findings. Although the global group comparison was not significant, results suggested that there may be between-class differences in the sources of support each are likely to access if having a personal or emotional problem (see Table 7). Future studies with larger samples should replicate these analyses to further investigate potential differences in survivors' support source preferences.

Significant global and between class differences were identified on five of the help-seeking attitude and intention variables. First, the mildly distressed class reported a significantly higher value and need in seeking professional psychological help than the severely distressed class. Further, survivors in the severely distressed class endorsed that talking about psychological problems is a poor way to solve emotional problems and that coping without professional help is admirable significantly more than those in the mildly or moderately distressed classes. Both the severely and moderately distressed classes indicated that they may want counseling in the future significantly more than their mildly distressed counterparts. However, these same groups also

reported a significantly stronger belief that therapy would not have value for them when compared to the mildly distressed class. Finally, significantly more than the other two classes, survivors in the severely distressed class indicated that they would not seek help from anyone if having a personal or emotional problem.

There is conflicting research on help-seeking among trauma survivors. Some studies suggest that increased symptom severity and functional impairment predict greater help-seeking attitudes and intentions among trauma survivors (Barrett and St. Pierre, 2011; Gavrilovic et al., 2005; Ghafoori et al., 2014; Johnson & Ziotnick, 2007; Nurius et al., 2011). Yet, other research indicates that psychological trauma is associated with decreased help-seeking (Murphey et al., 2014; Pynoos et al., 2008), and that CSE survivors may be particularly reluctant to engage formalized support services (Dewan, 2014; Kynn et al., 2016; Zimmerman et al., 2011). In this sample, it appeared that increased distress was generally linked with decreases in favorable attitudes and intentions toward help-seeking. However, there may be notable exceptions to this interpretation.

In their theoretical model of help-seeking and attainment among sexually and physically victimized women, Kennedy et al. (2012) suggested that trauma survivors' access and response to formalized recovery resources is influenced by a myriad of individual, contextual, and trauma-specific factors. According to this theory, the help attainment process begins with survivors self-evaluating their psychological distress, functional impairment, beliefs about mental health problems, availability of appropriate resources, and the cost-benefit ratio of seeking formal support services. They asserted that this intrapersonal process is strongly influenced by socio-cultural context and accumulative experience with service providers. For example, service providers' discriminatory behavior, their inability to provide helpful support, and broader social

stigma toward mental health have been inversely linked to survivor beliefs about intervention effectiveness, safety, and utility (Diala et al., 2000; Ojeda & Bergstresser, 2008; Patterson et al., 2009; Vega et al., 2001). Thus, it could be that survivors in the severely distressed class have had more negative experiences with service providers or perhaps maintain beliefs that their problems are beyond hope (Baker et al., 2010; Dewan, 2014; Hammond & McGlone, 2014), which diminishes their value and confidence in professional support services. It may also be that the cost-benefit ratio of seeking help is skewed more toward risk than reward (Liang, Goodman, Tummala-Narra, & Weintraub, 2005; Richards & Lyneham, 2014). For example, when considering whether or not they will engage in professional support services, many CSE survivors must contend with the potential for significant life-altering consequences such as deportation, involvement of child protective services, criminal charges for crimes committed as part or as a result of CSE (e.g., drug use, drug trafficking, recruiting for pimps/traffickers, etc.), and retaliation from pimps/traffickers, among many others (Hammond & McGlone, 2014; Richards & Lyneham, 2014). Thus, even though survivors coping with stress and the sequela of CSE (i.e., mildly and moderately distressed classes) may see the need for and desire professional help more than those with lower stress (i.e., mildly distressed class), the costs of seeking these services may overshadow the anticipated benefit.

Further, preferred self-reliance may also be an adaptation to the polytraumatization reported by the severely distressed class. In addition to the effects of pre-CSE adversity, the commercialization and mass distribution of abuse that occurs in CSE can engender a pervasive sense of fear and skepticism as survivors may have difficulty discerning who is safe to trust (Hopper & Hidalgo, 2006). Moreover, many pimps/traffickers try to instill feelings of distrust in formal service providers and support systems to keep survivors isolated and therefore easier to

control (Hopper & Hidalgo, 2006). These and other trauma-specific characteristics could therefore incline the severely distressed class to be more self-reliant when it comes to managing stress. Identifying the conditions and mechanisms that may explain the variance in help-seeking attitudes and intentions observed between the mildly, moderately, and severely distressed classes is beyond the scope of this study. Additionally, this study only included CSE survivors who were currently connected or had been connected at some time in the past, to formal service providers. It is likely that the help-seeking attitudes and intentions of this group have fundamental differences from those of survivors who never seek professional help or recovery services. In other words, even though some participants in this study indicated that they would not seek help if having a personal or emotional problem and that they do not believe counseling would have value for them, they still engaged – at least to some degree – with a service organization. This therefore begs the question of what differentiates these survivors from those who never seek professional help. Future studies should investigate potential moderators and mediators of help-seeking among a broader pool of CSE survivors to facilitate a better understanding of the barriers inhibiting those with the highest levels of distress from seeking professional support.

Limitations

The findings from this study should be considered in the context of key limitations. First, the small sample size diminishes statistical power which means that there may be true associations between study variables that were undetectable in the present study. Further, the small and demographically homogenous nature of the sample likely means that the classes identified are not inclusive of all survivor experiences. Even in the context of the present study, participants from minority survivor groups (e.g., male and transgender survivors, certain racial groups, etc.) may not be well-represented by the classes to which they were assigned, but were

grouped accordingly because there were not enough other participants with similar characteristics around whom they could coalesce. Future investigations should prioritize gathering data from a more diverse sample in order to strengthen the generalizability and utility of the results.

Further, the sample is also limited by the recruitment method during data collection. Namely, results may be influenced by double layers of self-selection biases. First, community service organizations who served as the platform for participant recruitment determined whether, and the degree to which, they disseminated advertisements about this study. Several organizations did not respond to solicitations for participation. Still others agreed to share information about this study with certain survivors, but felt that some would find the content triggering and therefore did not inform them of the research opportunity. This means that not all survivors connected to our partner organizations had an equal opportunity to learn about the study and self-select for participation. Therefore, factors specific to individual service providers and/or organizational culture (e.g., perception of survivor distress tolerance abilities, limited resources to allocate to participant recruitment, etc.) likely influenced study results, but were not possible to account for in analyses. Similarly, survivors self-selected to take part in this study. There may be differentiating qualities between survivors who are willing to participate in research and those who are not, just as there are likely differentiating qualities between survivors connected to formal support services and those who are not. Consequentially, we cannot be certain of the degree to which the results from this study represent the larger population of trafficking survivors in the U.S., particularly compared to those who do not have the means or desire to access support services and those who choose not to participate in a research studies.

Additional research is needed to address these specific gaps in order to continue toward the goal of developing tailored, person-centered support services for CSE survivors.

Clinical Implications

Despite these limitations, results from the present study have several useful implications for service providers working with survivors of CSE. First, they suggest that mental health professionals, in particular, may increase their sphere of influence and usefulness to CSE survivors by taking a more proactive approach to providing education about therapy, expectations for relationships with counselors, confidentiality, etc. It could be that the classes with the greatest need also have the most fear about connecting with service providers, believe that their problems are beyond hope, or even perceive that the cost of seeking help does not outweigh the benefits (Ghafoori et al., 2014; Kennedy et al., 2012; Vogel et al., 2007). Several scholars suggest that in these circumstances, the onus of responsibility for dispelling myths about mental health treatment and taking proactive steps to increase survivors' comfort in therapy, belongs to the service provider (e.g., Angermyer et al., 2006; Wright et al., 2007). Further, these results may also elude to the need of emphasis on survivors' self-defined needs (Kennedy et al., 2012; Liang et al., 2005). These results may also emphasize the needs for service providers to focus on survivors' self-identified needs' over specific - or treatment-defined protocol. CSE survivors have unique needs based on their unique context. Therefore, when a highly stressed survivor reaches out to a therapist for help finding a safe place to live and is subsequently referred to another professional, they may internalize the belief that therapy is not helpful, discouraging them from seeking services again in the future.

Conclusion

There are persistent gaps in our current understanding about the unique needs and help-seeking patterns of CSE survivors. The purpose of this study was to apply a person-centered mixture modeling technique to identify latent classes of CSE survivors' trauma exposure and biopsychosocial health. The three distinct profiles identified add nuance to our existing theories about post-CSE adaptation. Moreover, they illuminate potential opportunities for the development and subsequent clinical evaluation of targeted intervention protocols that may more effectively support the needs of CSE survivors.

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Appendix B - IRB Approval Letter

KANSAS STATE UNIVERSITY | University Research Compliance Office

TO: Dr. Briana Goff
Family Studies and Human Services
343K Justin Hall

Proposal Number: 8943

FROM: Rick Scheidt, Chair
Committee on Research Involving Human Subjects

DATE: 09/29/2017

RE: Approval of Proposal Entitled, "One Size Does Not Fit All: Exploring the Diversity of Sex Trafficking Survivors in the United States."

The Committee on Research Involving Human Subjects has reviewed your proposal and has granted full approval. This proposal is **approved for one year from the date of this correspondence, pending "continuing review."**

APPROVAL DATE: 09/29/2017

EXPIRATION DATE: 09/29/2018

Several months prior to the expiration date listed, the IRB will solicit information from you for federally mandated **"continuing review" of the research.** Based on the review, the IRB may approve the activity for another year. **If continuing IRB approval is not granted, or the IRB fails to perform the continuing review before the expiration date noted above, the project will expire and the activity involving human subjects must be terminated on that date. Consequently, it is critical that you are responsive to the IRB request for information for continuing review if you want your project to continue.**

In giving its approval, the Committee has determined that:

☒ There is no more than minimal risk to the subjects.
☐ There is greater than minimal risk to the subjects.

This approval applies only to the proposal currently on file as written. Any change or modification affecting human subjects must be approved by the IRB prior to implementation. All approved proposals are subject to continuing review at least annually, which may include the examination of records connected with the project. Announced post-approval monitoring may be performed during the course of this approval period by URCO staff. Injuries, unanticipated problems or adverse events involving risk to subjects or to others must be reported immediately to the Chair of the IRB and / or the URCO.

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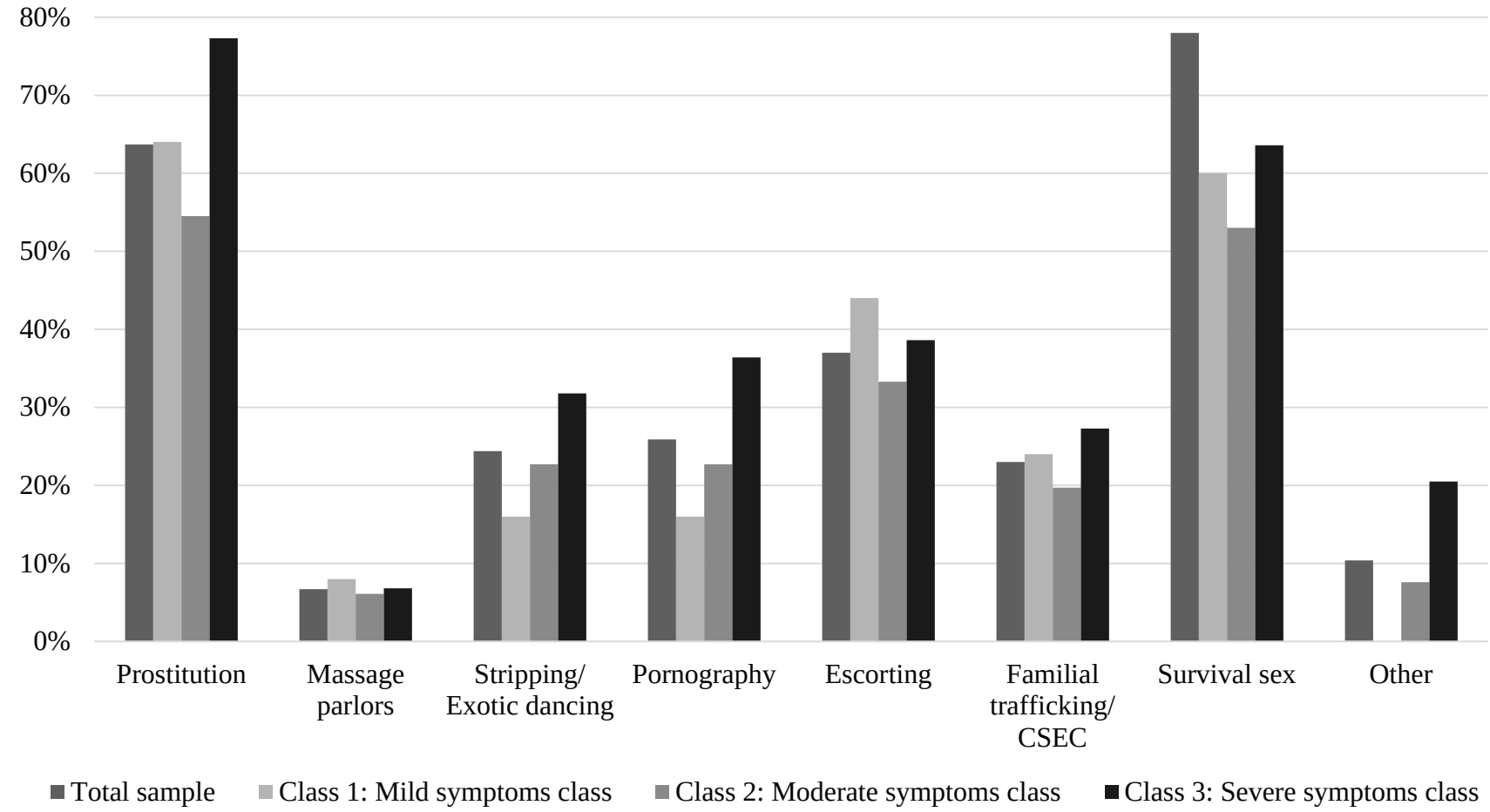
Appendix C - Figures

Figure 1. Forms of Commercial Sexual Exploitation Reported by Participants



Note. *N* = 135; CSEC = commercial sexual exploitation of children.

Appendix D - Tables

Table 1. Summary of Measures

Construct	Instrument	Description	Items	Psychometrics
Adverse Childhood Experiences	Adapted from portions of the Adverse Childhood Experiences International Questionnaire (ACE-IQ; WHO, 2017)	Assesses exposure to various adverse childhood experiences.	12	
Alcohol Use	Alcohol Use Disorders Identification Test (AUDIT; Saunders et al., 1993)	Assesses hazardous alcohol consumption using 5-point Likert scales, all of which range from 0 to 4. Total scores range from 0 to 49 with a score of 8 or higher representing a higher likelihood of harmful drinking behaviors.	10	α = .80-.98
Anxiety	GAD-7 (Spitzer et al., 2006)	Assesses the severity of anxiety symptoms using a 4-point Likert scale (0 = *not at all,* 3 = *nearly every day*). Total scores range from 0 to 21 with cut points for mild (≥5), moderate (≥10), and severe anxiety (≥15).	7	α = .92
Attachment	Revised Adult Attachment Scale (AAS; Collins, 1996)	Assesses 3 domains of attachment styles (close, depend, and anxiety) using a 5-point Likert scale (1 = *not at all characteristic of me*, 5 = *very characteristic of me*).	18	Close (α = .82), Depend (α = .80), Anxiety (α = .85)

Construct	Instrument	Description	Items	Psychometrics
Depression	The Patient Health Questionnaire (PHQ-9; Kroenke et al., 2001)	Assesses the severity of depression symptoms using a 4-point Likert scale (0 = *not at all*, 3 = *nearly every day*). Total scores range from 0 to 27 with cut points for mild (≥5), moderate (≥10), moderately severe (≥15), and severe depression (≥20).	9	α = .89
Drug Use	Drug Abuse Screening Test (DAST-10; Skinner, 1982; Yudko, Lozhkina, & Fouts, 2007)	Assesses drug use and associated degree of consequence by summing items representing problematic substance abuse to generate a total, continuous score ranging from 0 to 10 (0 = *no problems*; 1-2 = *low level*; 3-5 = *moderate level*; 6-8 = *substantial level*; 9-10 = *severe level*).	10	α = .94
Help-Seeking Attitudes	Attitudes Toward Seeking Professional Psychological Help Scale-Short Form (ATSPPH-SF; Elhai, Schweinle, & Anderson, 2008)	Assesses mental health treatment attitudes using a 4-point Likert scale (0 = *disagree*, 3 = *agree*). Scores range from 0 to 30 with higher scores representing more positive help-seeking attitudes. Also includes subscales assessing value and need in professional help, as well as openness to professional help.	10	α = .82-.84

Construct	Instrument	Description	Items	Psychometrics
Help-Seeking Intentions	General Help-Seeking Questionnaire (GHSQ; Wilson et al., 2005)	Assesses intentions to seek help for personal-emotional pain using a 7-point Likert scale (1 = *extremely unlikely*, 7 = *extremely likely*).	11	α = .85
History of Suicidality	The Suicidal Behaviors Questionnaire-Revised (SBQ-R; Osman et al., 2001)	Assesses past suicidal behaviors across 4 dimensions (lifetime suicide ideation/attempts, frequency of ideation in the past 12 months, threat of suicidal behavior, and self-reported likelihood of suicidal behavior). Each item has its own scoring scale.	4	α = .76-.87
Non-Suicidal Self-Injury		Two questions were included in the survey to assess participants' history of non-suicidal self-harm.	2	
Personality Dysfunction	The Personality Inventory for DSM-5-Brief Form (PID-5-BF; Krueger et al., 2013)	Assesses maladaptive personality traits (i.e., negative affect, detachment, antagonism, disinhibition, and psychoticism) using a 4-point Likert scale (1 = *very false/often false*, 4 = *very true/often true*). Total scores range from 0 to 75; mean score were used for sub-scales; higher scores indicator greater personality/trait dysfunction.	25	Negative Affect (α = .70); Detachment (α = .69); Antagonism (α = .68); Disinhibition (α = .76); Psychoticism

Construct	Instrument	Description	Items	Psychometrics
				(α = .78)
Physical Health Assessment		This is a broad yes/no assessment of participants' physical and mental health status. Total scores for physical health and mental health were calculated by summing all endorsed items in each category (i.e., physical health and mental health)	44	
PTSD Symptoms	PTSD Checklist for DSM-5 (PCL-5; Blevins et al., 2015)	Assesses PTSD symptoms according to DSM-5 diagnostic criteria using a 5-point Likert scale (0 = *not at all*, 4 = *extremely*). Total scores range from 0 to 80 with scores of 33 or higher suggesting a provisional diagnosis of PTSD. Subscales corresponding with the four PTSD diagnostic criteria are also included in this assessment – mean scores were used to analyze subscale scores	20	α = .94
Sex Industry Experiences		This assessment was developed by the researchers to understand participants' experiences while in the sex industry.	15	
Trauma Exposure	Modified Version of the Trauma History Questionnaire (THQ;	Assesses participants' exposure to traumatic life events through a series of yes/no questions.	20	

Construct	Instrument	Description	Items	Psychometrics
	Hooper, Stockton, Krupnick, & Green, 2011)	Each yes response is followed by questions regarding age of exposure and number of times exposed. Researchers modified this assessment to include questions specific to participants experience in the sex industry.		

Table 2. Full Sample and Class-Specific Descriptive Statistics

					Latent classes		
	Total sample				Class 1: Mild symptoms	Class 2: Moderate symptoms	Class 3: Severe symptoms
	N = 135				*n* = 25 (18.5%)	*n* = 66 (48.9%)	*n* = 44 (32.6%)
Variables	*M*	*SD*	Range	α	*M(SE)*	*M(SE)*	*M(SE)*
Total traumatic life events experienced	10.79	6.50	0 – 16		9.29(1.28)	9.60(.85)	13.09(1.29)
Adverse childhood experiences s core	7.31	1.77	3 – 10		6.79(.37)	7.12(.29)	7.88(.26)
Length of CSE (in years)	11.54	8.83	.50 – 42		7.50(2.02)	9.81(1.14)	16.09(2.18)
Last experience of CSE[a]	3.45	1.33	1 – 5		4.02(.28)	3.66(.20)	2.92(.24)
Length of current support services[b]	2.54	3.92	0 – 20		1.71(.48)	1.84(.40)	3.50(1.05)
Length of past support services[b]	3.17	4.34	0 – 20		2.40(.58)	4.19(1.02)	2.38(1.02)
PTSD symptoms	34.32	26.45	0 – 79	.97	8.42(2.02)	28.21(2.94)	56.29(4.62)
Re-experiencing symptoms	2.29	1.33	0 – 4	.94	.49(.11)	2.04(.15)	3.48(.11)
Avoidance symptoms	2.32	1.32	0 – 4	.80	.61(.16)	2.12(.16)	3.41(.14)

Table 2. Continued

Variables	*M*	*SD*	Range	α	M(SE)	M(SE)	M(SE)
Neg. thoughts/feelings symptoms	2.18	1.22	0 – 4	.93	.70(.17)	1.84(.13)	3.30(.12)
Arousal symptoms	2.05	1.19	0 – 4	.89	.44(.13)	1.78(.11)	3.16(.11)
Anxiety symptoms	11.58	6.44	0 – 21	.93	3.72(.75)	10.68(.71)	17.06(.67)
Depression symptoms	12.50	6.92	0 – 27	.88	3.58(.65)	11.84(.62)	18.25(.96)
Alcohol use	8.77	9.97	0 – 40	.93	3.87(.74)	8.62(1.32)	11.74(1.81)
Drug use	5.45	3.43	0 – 10	.89	4.08(.84)	5.23(.46)	6.51(.48)
Number of times self-harmed	2.71	2.86	0 – 7		1.69(.59)	1.96(.40)	4.12(.44)
Suicidality	7.66	2.95	3 – 16	.75	5.96(.48)	6.74(.31)	9.70(.52)
Personality traits	35.19	14.60	2 – 66	.91	18.95(2.69)	32.62(1.76)	47.74(1.89)
Negative affect traits	1.93	0.77	0 – 3	.79	.98(.19)	1.87(.08)	2.55(.05)
Detachment traits	1.56	.69	0 – 3	.65	1.03(.12)	1.36(.08)	2.11(.08)
Antagonism traits	1.15	.75	0 – 3	.76	.67(.08)	1.09(.12)	1.51(.14)
Disinhibition traits	1.24	.76	0 – 3	.82	.70(.17)	1.23(.11)	1.56(.13)

Table 2. Continued

Variables	*M*	*SD*	Range	α	M(SE)	M(SE)	M(SE)
Psychoticism traits	1.37	.87	0 – 3	.85	.63(.12)	1.19(.11)	2.03(.14)
Number of diagnosed mental health conditions	4.06	2.54	0 – 11		2.51(.30)	3.44(.28)	5.84(.46)
Number of diagnosed physical health conditions	2.92	2.27	0 – 13		2.93(.45)	2.71(.28)	3.19(.39)
Attachment dimension – close	2.76	.68	1 – 5	.73	3.08(.14)	2.81(.11)	2.53(.12)
Attachment dimension – depend	2.54	.83	1 – 5	.64	2.73(.16)	2.67(.13)	2.29(.15)
Attachment dimension – anxiety	3.31	1.19	1 – 5	.89	2.68(.24)	3.33(.16)	3.64(.25)
Help-seeking attitudes	21.86	5.11	10 – 30	.80	22.15(1.25)	22.42(.89)	21.18(.87)
Openness	2.32	.64	0 – 3	.80	2.14(.19)	2.36(.10)	2.40(.10)
Value and need	2.07	.75	0 – 3	.79	2.29(.14)	2.14(.13)	1.88(.14)
HSA-1. Would obtain professional help if having a mental breakdown[c]	2.35	.87	0 – 3		2.56(.21)	2.22(.15)	2.33(.15)

Table 2. Continued

Variables	*M*	*SD*	Range	α	M(SE)	M(SE)	M(SE)
HSA-2. Talking about psychological problems is a poor way to solve emotional problems[c]	.87	1.09	0 – 3		.55(.22)	.74(.18)	1.20(.20)
HSA-3. Would find relief in therapy if having an emotional crisis[c]	2.13	.93	0 – 3		1.85(.26)	2.18(.15)	2.25(.15)
HSA-4. Coping without professional help is admirable[c]	1.39	1.19	0 – 3		1.05 (.27)	1.22(.21)	1.76(.20)
HSA-5. Would obtain psychological help if upset for a long time[c]	2.39	.86	0 – 3		2.35(.24)	2.24(.16)	2.55(.13)
HSA-6. Might want counseling in the future[c]	2.48	.84	0 – 3		1.94(.25)	2.74(.11)	2.58(.13)
HSA-7. A person with an emotional problem is likely to solve it with professional help[c]	2.26	.85	0 – 3		1.99(.23)	2.40(.13)	2.29(.15)

Table 2. Continued

Variables	*M*	*SD*	Range	α	M(SE)	M(SE)	M(SE)
HSA-8. Therapy would not have value for me[c]	.94	.99	0 – 3		.59(.15)	1.16(.21)	.94(.16)
HSA-9. A person should work out their problems without counseling[c]	.69	.92	0 – 3		.70(.18)	.50(.16)	.86(.17)
HSA-10. Emotional problems resolve by themselves[c]	.75	.98	0 – 3		.65(.21)	.69(.18)	.86(.17)
Likely to seek help from…[d]							
Intimate partner	4.49	2.21	1 – 7		4.79(.59)	4.29(.38)	4.47(.44)
Friend	4.89	1.84	1 – 7		5.11(.47)	4.64(.31)	5.00(.32)
Parent/caregiver	3.09	2.19	1 – 7		2.94(.50)	3.64(.41)	2.68(.36)
Other family member	3.02	2.16	1 – 7		2.79(.46)	3.39(.38)	2.83(.39)
Mental health professional	5.51	1.66	1 – 7		5.60(.41)	5.56(.29)	5.42(.28)
Phone helpline	3.65	2.31	1 – 7		3.08(.49)	4.27(.42)	3.44(.39)
Internet	3.53	2.16	1 – 7		3.45(.49)	3.39(.38)	3.70(.38)

Table 2. Continued

Variables	*M*	*SD*	Range	α	M(SE)	M(SE)	M(SE)
Doctor/nurse	4.30	2.15	1 – 7		3.63(.56)	4.82(.35)	4.25(.37)
Community agency	4.72	2.00	1 – 7		4.45(.51)	4.76(.33)	4.86(.36)
Religious leader	4.24	2.30	1 – 7		4.40(.55)	4.45(.41)	3.94(.40)
Would not seek help from anyone	2.46	1.90	1 – 7		1.84(.34)	2.28(.33)	3.01(.35)
Age	34.78	9.86	18 – 64		36.56(11.90)	34.79(9.22)	33.75(9.61)

	Total sample	Class 1: Mild symptoms	Class 2: Moderate symptoms	Class 3: Severe symptoms
Variables	%	%	%	%
Gender				
Male	3.3	0	5.4	2.9
Female	95.6	100	94.6	94.3
Transgender	1.1	0	0	2.9
Race				
American Indian/Alaska Native	2.2	0	0	5.7

Table 2. Continued

Variables	%	%	%	%
Asian	1.1	5.6	0	0
Black	28.1	27.8	41.7	14.3
Hispanic/Latino	3.4	0	5.6	2.9
Native Hawaiian/Pacific Islander	2.2	5.6	0	2.9
White	55.1	55.6	50	60
Other	7.9	5.6	2.8	14.3
Education				
No schooling completed	6.7	5.6	0	14.3
Some schooling, no diploma	12.3	0	16.7	14.3
High school diploma/GED	27	16.7	27.8	31.4
Some college credit, no degree	23.6	16.7	36.1	14.3
Technical/vocational training	7.9	16.7	2.8	8.6
Associate degree	7.9	27.8	5.6	0

Table 2. Continued

Variables	%	%	%	%
Bachelor's degree	10.1	11.1	8.3	11.4
Master's degree or higher	4.5	5.6	2.8	5.7
Employment				
Full time	22.5	33.3	19.4	20
Part time	13.5	22.2	16.7	5.7
Unemployed, looking for work	23.6	22.2	25	22.9
Unemployed, not looking for work	5.6	0	5.6	8.6
Student	9	5.6	11.1	8.6
Homemaker	3.4	0	2.8	5.7
Self-employed	3.4	5.6	0	5.7
Unable to work	13.5	5.6	13.9	17.1
Other	5.6	5.6	5.6	4.5
Income				
Below $9,999	51.2	35.3	44.4	66.7

Table 2. Continued

Variables	%	%	%	%
$10,000-19,999	16.3	17.6	19.4	12.1
$20,000-29,999	16.3	11.8	22.2	12.1
$30,000-39,999	8.1	17.6	11.1	0
$40,000-49,999	2.3	0	0	6.1
$60,000-69,999	1.2	5.9	0	0
$70,000-79,999	1.2	0	0	3
$80,000-89,999	2.3	5.9	2.8	0
$90,000-99,999	1.2	5.9	0	0
Region of the U.S. currently living				
West[e]	23	28	19.7	25
Midwest[f]	5.2	8	4.5	4.5
South[g]	31.1	32	25.8	38.6
Northeast[h]	3	4	3	2.3

Note. CSE = commercial sexual exploitation [a]Last experience of CSE (1 = within the past month, 2 = in the past 1 to 6 months, 3 = in the past 7 to 12 months, 4 = in the past 1 to 5 years, 5 = more than 5 years ago). [b]Length of time receiving support services (in years).

Table 2. Continued

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[c]Help-seeking attitude (HSA) scale (ATSPPH-SF) questions. [d]Help-seeking intentions scale (GHSQ) questions. [e]West = WA, OR, CA, NV, AZ, UT, ID, MT, WY, CO, NM, AK, HI. [f]Midwest = ND, SD, NE, KS, MN, IA, MO, WI, IL, IN, MI, OH. [g]South = OK, TX, AR, LA, MS, AL, FL, GA, TN, SC, NC, VA, WV, KY, DC, MD, DE. [h]Northeast = PA, NJ, NY, CT, RI, MA, VT, NH, ME.

Table 3. Bivariate Correlations among LPA Indicator and Distal Outcome Variables

Variables	1	2	3	4	5	6	7	8	9	10
1. Total traumatic life events	–									
2. Adverse childhood experiences score	.23*	–								
3. Length of CSE (in years)	.35***	.04	–							
4. Last experience of CSE[a]	-.01	-.16	-.23*	–						
5. Length of current support services[b]	.17	-.01	.08	.39**	–					
6. Length of past support services[b]	.02	-.14	.02	.07	-.05	–				
7. PTSD symptoms	.22*	.13	.32**	-.25*	.24†	.14	–			
8. Re-experiencing symptoms	.19†	.11	.41***	-.23*	-.20	.17	.94***	–		
9. Avoidance symptoms	.15	.15	.32**	-.22*	.26†	.05	.85***	.83***	–	
10. Neg. thoughts/feelings symptoms	.25*	.11	.34**	-.29**	.19	.16	.95***	.82***	.75***	–
11. Arousal symptoms	.15	.22*	.39***	-.28**	.21	.05	.94***	.83***	.77***	.85***
12. Anxiety symptoms	.27**	.25**	.26*	-.24*	.17	-.18	-.44***	.59***	.60***	.59***
13. Depression symptoms	.28**	.18*	.32**	-.14	.32*	-.01	.58***	.66***	.67**	.69***
14. Alcohol use	-.01	.19*	.26*	-.50***	-.12	-.07	.11	.20*	.19†	.24*

Table 3. Continued

Variables	1	2	3	4	5	6	7	8	9	10
15. Drug use	.28**	.14	.21†	-.22*	.15	-.11	.19*	.21*	.11	.19†
16. Number of times self-harmed	.34***	.07	.18	.08	.34*	-.08	.33***	.30**	.28**	.28**
17. Suicidality	.06	.15	.25*	-.27**	.20	.14	.37***	.46***	.39***	.46***
18. Personality traits	.04	.27**	.34***	-.32**	.08	-.16	.38***	.50***	.41***	.51***
19. Negative affect traits	.16†	.15†	.33**	-.11	.12	-.11	.44***	.55***	.49***	.55***
20. Detachment traits	.13	.24**	.34***	-.21*	.08	-.32*	.34***	.33***	.33***	.41***
21. Antagonism traits	-.19†	.20*	-.01	-.33***	-.11	-.07	.20*	.29**	.24*	.29**
22. Disinhibition traits	-.01	.17†	.16	-.32***	-.01	-.16	.12	.24*	.12	.28**
23. Psychoticism traits	.07	.24**	.40***	-.22*	.21	.01	.33***	.47***	.37***	.39***
24. Diag. mental health conditions[c]	.41***	.16†	.30**	-.19†	.35**	.12	.37***	.47***	.48***	.47***
25. Diag. physical health conditions[c]	.24*	-.04	.32**	.12	.06	.11	.11	.20*	-.02	.11
26. Attachment dimension – close	-.12	-.10	-.10	-.01	-.34*	.30*	-.27**	-.23*	-.32**	-.24*
27. Attachment dimension – depend	-.28**	-.06	-.11	-.10	-.11	-.10	-.21*	-.18†	-.28**	-.18†
28. Attachment dimension – anxiety	.35***	.00	.13	.15	.25†	.11	.30**	.25*	.28**	.31**

Table 3. Continued

Variables	1	2	3	4	5	6	7	8	9	10
29. Help-seeking attitudes	.39***	-.16	.25*	.38***	.20	.20	-.07	.06	.01	-.01
30. Help-seeking – openness	.21*	-.13	.13	.27**	.24†	.10	.20*	.30**	.22**	.22*
31. Help-seeking – value and need	.34***	-.11	.24*	.27**	.07	.20	-.24*	-.15	-.16	-.18†
32. HSA–1[d]	.08	-.23*	.09	.27**	.20	.17	.02	.08	.01	.04
33. HSA–2[e]	-.22*	.08	-.11	-.21*	-.11	-.13	.32***	.26*	.17†	.30**
34. HSA–3[f]	.22*	.01	.28*	.26*	.24†	.03	.21*	.29**	.16	.23*
35. HSA–4[g]	-.23*	.05	-.07	-.10	.13	-.20	.23*	.16	.26*	.20†
36. HSA–5[h]	.12	-.10	.03	.18†	.24†	.05	.18†	.24*	.18†	.21†
37. HSA–6[i]	.25*	-.08	.09	.02	.11	.09	.25*	.31**	.32**	.24*
38. HSA–7[j]	.11	-.08	-.01	.25*	.08	-.01	.08	.19†	.14	.09
39. HSA–8[k]	-.37***	.04	-.29**	-.18†	-.14	-.13	.13	.07	-.02	.07
40. HSA–9[l]	-.13	.15	-.20†	-.24*	-.05	-.11	.13	.07	.13	.07
41. HSA–10[m]	-.30**	.12	-.25*	-.30**	-.12	-.15	.05	-.03	.00	-.01
42. HSI – intimate partner[n]	.09	-.29**	.00	.16	.12	.24	-.01	-.01	.04	.05

Table 3. Continued

Variables	1	2	3	4	5	6	7	8	9	10
43. HSI – friend[n]	.19†	.09	.00	.16	.25†	.24†	.04	.05	.08	.00
44. HSI – parent/caregiver[n]	-.22*	-.13	-.21†	.03	-.01	.12	-.09	-.05	-.08	-.09
45. HSI – other family member[n]	-.07	.01	-.07	-.07	.00	.13	.00	.05	-.07	-.01
46. HSI – mental health professional[n]	.13	-.12	-.03	.30**	.16	.12	-.04	.04	.05	.00
47. HSI – phone helpline[n]	-.04	-.07	.21†	.04	-.06	.08	.00	.07	.01	.02
48. HSI – internet[n]	-.01	-.09	.21†	.04	-.05	-.11	.01	.08	.08	.03
49. HSI – doctor/nurse[n]	.13	-.10	.23*	.13	.04	.26†	.09	.14	.09	.13
50. HSI – community agency[n]	.22*	-.10	.19	.06	.04	.03	.11	.12	.12	.11
51. HSI – religious leader[n]	.20†	.03	.17	.10	.10	.20	-.03	.02	-.05	.04
52. Would not seek help from anyone[n]	-.18†	.06	-.13	-.28**	-.09	-.13	.26*	.20*	.13	.21*

Variables	11	12	13	14	15	16	17	18	19	20
11. Arousal symptoms	–									
12. Anxiety symptoms	.60***	–								
13. Depression symptoms	.67***	.76***	–							

Table 3. Continued

Variables	11	12	13	14	15	16	17	18	19	20
14. Alcohol use	.23*	.29***	.23*	–						
15. Drug use	.18†	.27**	.27**	.18*	–					
16. Number of times self-harmed	.23*	.33***	.32***	.04	-.03	–				
17. Suicidality	.40***	.37***	.39***	.25**	.18*	.38***	–			
18. Personality traits	.59***	.62***	.56***	.36***	.25**	.18†	.35***	–		
19. Negative affect traits	.59***	.69***	.66***	.19*	.24**	.27**	.32***	.79***	–	
20. Detachment traits	.47***	.50***	.51***	.19*	.14	.19*	.22*	.75***	.61***	–
21. Antagonism traits	.38***	.30***	.17†	.37***	.15	-.11	.19*	.68***	.35***	.28**
22. Disinhibition traits	.31**	.35***	.24**	.36***	.19*	.00	.18†	.73***	.42***	.40***
23. Psychoticism traits	.46***	.50***	.52***	.24**	.20*	.30**	.39***	.83***	.62***	.58***
24. Diag. mental health cond.[e]	.47***	.38***	.42***	.09	.14	.51***	.41***	.29***	.38***	.17†
25. Diag. physical health cond.[e]	.20†	.06	.13	-.03	.05	.21*	.11	.00	.13	-.11
26. Attachment dimension – close	-.26*	-.42***	-.37***	.02	-.17	-.34**	-.13	-.30**	-.37***	-.48***
27. Attachment dimension – depend	-.21†	-.22*	-.31**	.03	.10	-.26*	-.02	-.03	-.19†	-.20†

Table 3. Continued

Variables	11	12	13	14	15	16	17	18	19	20
28. Attachment dimension – anxiety	.29**	.17	.34***	.04	-.03	.35***	.24*	.15	.27**	.15
29. Help-seeking attitudes	-.08	-.08	.01	-.25*	.15	.19†	-.12	-.31**	-.06	-.18†
30. Help-seeking – openness	.25*	.06	.16	-.17†	.08	.25*	-.09	-.07	.14	-.07
31. Help-seeking – value and need	-.28**	-.13	-.09	-.17	.14	.04	-.07	-.35***	-.17	-.20†
32. HSA–1[d]	.09	-.05	.02	-.25*	.03	.11	-.31**	-.17	.01	-.07
33. HSA–2[e]	.34***	.20†	.16	.14	.01	.07	.17	.29**	.16	.16
34. HSA–3[f]	.26*	.04	.14	-.10	.13	.23*	.00	.00	.19†	-.01
35. HSA–4[g]	.32**	.16	.03	.15	-.15	-.02	.09	.27**	.17	.21*
36. HSA–5[h]	.21*	.07	.07	-.13	-.02	.20†	-.12	-.03	.10	-.03
37. HSA–6[i]	.26*	.19†	.27**	-.01	.06	.34***	.14	.03	.14	-.07
38. HSA–7[j]	.06	-.03	.07	-.15	.10	.06	-.02	-.09	.05	-.09
39. HSA–8[k]	.14	.05	-.01	.12	-.12	-.12	.01	.22*	.04	.02
40. HSA–9[l]	.12	.03	.11	.00	-.13	-.02	.01	.23*	.12	.18†
41. HSA–10[m]	.08	.02	.03	.20†	-.15	-.09	-.05	.26*	.13	.13

Table 3. Continued

Variables	11	12	13	14	15	16	17	18	19	20
42. HSI – intimate partner[n]	.04	-.07	.05	-.08	-.03	.00	-.20†	-.03	.02	-.08
43. HSI – friend[n]	-.04	.01	-.10	-.07	.05	.16	.02	-.09	-.07	-.23*
44. HSI – parent/caregiver[n]	-.12	-.21*	-.14	.08	.01	-.27*	-.17	.02	-.04	-.15
45. HSI – other family member[n]	.01	-.05	-.05	.00	.02	-.16	-.16	.04	.03	-.17†
46. HSI – mental health professional[n]	-.08	-.13	-.03	-.24*	.00	.23*	-.18†	-.18†	-.02	-.09
47. HSI – phone helpline[n]	.06	-.07	-.03	-.12	.06	-.06	.04	.11	.19†	.02
48. HSI – internet[n]	.05	.05	.03	-.02	-.12	.13	.19†	-.02	.05	.02
49. HSI – doctor/nurse[n]	.15	-.02	.08	-.07	.14	.01	-.14	.02	.08	.10
50. HSI – community agency[n]	.07	.07	.04	-.06	.16	.12	-.10	-.02	.10	.02
51. HSI – religious leader[n]	.01	-.17†	-.09	-.15	.08	.00	-.04	-.13	-.05	-.11
52. Would not seek help from anyone[n]	.28**	.17†	.11	.19†	.06	.07	.15	.32**	.16	.17†

Variables	21	22	23	24	25	26	27	28	29	30
21. Antagonism traits	–									
22. Disinhibition traits	.50***	–								

Table 3. Continued

Variables	21	22	23	24	25	26	27	28	29	30
23. Psychoticism traits	.45***	.44***	–							
24. Diag. mental health cond.[e]	.10	.18*	.25**	–						
25. Diag. physical health cond.[e]	-.08	-.02	.04	.23**	–					
26. Attachment dimension – close	.00	-.13	-.18†	-.18†	.13	–				
27. Attachment dimension – depend	.25*	.04	-.02	-.19†	-.09	.44***	–			
28. Attachment dimension – anxiety	-.02	.13	.02	.35***	.25*	-.22*	-.49***	–		
29. Help-seeking attitudes	-.45***	-.23*	-.24*	.07	.32**	-.04	-.21*	.03**	–	
30. Help-seeking – openness	-.18†	-.12	-.05	.20*	.36***	-.01	-.25*	.41***	.65***	–
31. Help-seeking – value and need	-.44***	-.22*	-.28**	-.04	.15	-.01	-.07	.08	.78***	.05
32. HSA–1[d]	-.27**	-.20†	-.12	.05	.24*	-.05	-.25*	.20†	.46***	.76***
33. HSA–2[e]	.37***	.16	.23*	.03	-.05	-.05	.18†	-.10	-.56***	-.06
34. HSA–3[f]	-.07	-.12	-.02	.22*	.44***	.08	-.08	.35***	.56***	.80***
35. HSA–4[g]	.29**	.20†	.18†	.07	-.15	-.04	-.16	.15	-.47***	.11
36. HSA–5[h]	-.11	-.02	-.05	.19†	.22*	.00	-.22*	.29**	.45***	.77***

Table 3. Continued

Variables	21	22	23	24	25	26	27	28	29	30
37. HSA–6[i]	-.06	.00	.09	.22*	.20†	-.09	-.32**	.40***	.44***	.67***
38. HSA–7[j]	-.15	-.07	-.08	.06	.19†	.00	-.05	.28**	.51***	.68***
39. HSA–8[k]	.38***	.21*	.18†	-.08	-.16	.07	.23*	-.14	-.63***	-.12
40. HSA–9[l]	.25*	.07	.22*	.08	-.09	-.07	-.09	-.05	-.58***	-.08
41. HSA–10[m]	.32***	.13	.22*	.05	-.09	.11	.11	-.19†	-.65***	-.09
42. HSI – intimate partner[n]	.03	-.03	-.10	-.09	.12	.10	-.13	.43***	.20†	.35***
43. HSI – friend[n]	-.01	-.14	.06	.12	.15	.22*	-.08	.05	.23*	.27**
44. HSI – parent/caregiver[n]	.15	-.01	.09	-.13	-.27**	.34***	.23*	-.14	-.27**	-.06
45. HSI – other family member[n]	.06	.00	.20*	-.15	.01	.41***	.08	-.08	-.22*	.02
46. HSI – mental health professional[n]	-.29**	-.14	-.18†	.03	.11	.09	-.26*	.33***	.49***	.49***
47. HSI – phone helpline[n]	.00	.02	.17	.05	.11	.11	.03	.12	.06	.23*
48. HSI – internet[n]	-.11	-.13	.06	.05	.15	.05	.11	.03	.01	.08
49. HSI – doctor/nurse[n]	-.13	-.06	.07	.08	.27**	.14	.05	.14	.30**	.49***
50. HSI – community agency[n]	-.21*	-.08	.06	-.01	.17	.03	-.16	.27**	.40***	.41***

Table 3. Continued

Variables	21	22	23	24	25	26	27	28	29	30
51. HSI – religious leader[n]	-.22*	-.15	.04	-.01	.23*	.28**	.04	.09	.23*	.20†
52. Would not seek help from anyone[n]	.43***	.20*	.21*	.11	-.10	-.18†	.08	-.05	-.43***	-.08

Variables	31	32	33	34	35	36	37	38	39	40
31. Help-seeking – value and need	–									
32. HSA–1[d]	-.01	–								
33. HSA–2[e]	-.71***	.01	–							
34. HSA–3[f]	.10	.51***	-.08	–						
35. HSA–4[g]	-.70***	.07	.39***	.07	–					
36. HSA–5[h]	-.03	.61***	.07	.57***	.10	–				
37. HSA–6[i]	.05	.29**	-.07	.37***	.11	.36***	–			
38. HSA–7[j]	.11	.36***	-.16	.43***	.06	.28**	.45***	–		
39. HSA–8[k]	-.75***	-.07	.46***	-.17	.36***	-.05	.01	-.16	–	
40. HSA–9[l]	-.71***	.00	.36***	-.14	.34***	-.04	-.10	-.02	.36***	–
41. HSA–10[m]	-.78***	-.01	.35***	-.07	.38***	.01	-.17†	-.12	.58***	.61***

Table 3. Continued

Variables	31	32	33	34	35	36	37	38	39	40
42. HSI – intimate partner[n]	-.01	.31**	.00	.28*	.08	.27*	.23*	.20†	-.06	.05
43. HSI – friend[n]	.09	.23*	-.06	.15	.03	.34***	.17†	.12	-.16	-.01
44. HSI – parent/caregiver[n]	-.30**	.04	.13	-.10	.20†	-.07	-.14	.04	.28**	.26*
45. HSI – other family member[n]	-.26*	.08	.13	-.03	.22*	-.04	-.03	.08	.20†	.27**
46. HSI – mental health professional[n]	.28**	.37***	-.23*	.41***	-.06	.33***	.27**	.39***	-.34***	-.19†
47. HSI – phone helpline[n]	-.10	.13	.03	.31**	.19†	.05	.14	.18†	.01	.01
48. HSI – internet[n]	-.02	-.02	-.02	.15	.02	-.03	.03	.14	.04	-.05
49. HSI – doctor/nurse[n]	.00	.42***	.03	.52***	.10	.31**	.15	.38***	-.17	-.06
50. HSI – community agency[n]	.20†	.29**	-.17	.34***	-.01	.23*	.30**	.37***	-.16	-.22*
51. HSI – religious leader[n]	.11	.20†	-.03	.17†	.01	.05	.12	.21*	-.18†	-.09
52. Would not seek help from anyone[n]	-.48***	.01	.38***	-.09	.26**	-.06	-.07	-.10	.35***	.36***

Variables	41	42	43	44	45	46	47	48	49	50
41. HSA–10[m]	–									
42. HSI – intimate partner[n]	-.05	–								

Table 3. Continued

Variables	41	42	43	44	45	46	47	48	49	50
43. HSI – friend[n]	-.13	.36***	–							
44. HSI – parent/caregiver[n]	.23*	.09	.25*	–						
45. HSI – other family member[n]	.14	.19†	.29**	.64***	–					
46. HSI – mental health professional[n]	-.23*	.42***	.38***	.13	.17†	–				
47. HSI – phone helpline[n]	.11	.04	-.05	.08	.24*	.22*	–			
48. HSI – internet[n]	.10	.06	.01	-.09	-.04	.19†	.45***	–		
49. HSI – doctor/nurse[n]	.09	.21†	.13	.04	.16	.37***	.45***	.23*	–	
50. HSI – community agency[n]	-.20†	.37***	.20†	-.05	.15	.46***	.36***	.22*	.40***	–
51. HSI – religious leader[n]	-.15	.16	.29**	.23*	.40***	.33**	.39***	.17	.32**	.40***
52. Would not seek help from anyone[n]	.42***	-.01	-.12	.06	-.04	-.07	.08	.26**	-.02	-.17†

Variables	51	52
51. HSI – religious leader[n]	–	
52. Would not seek help from anyone[n]	-.15	–

Table 3. Continued

Note. N = 135. [a]Last experience of CSE (in years): 1 = *within the past month*, 2 = *in the past 1 to 6 months*, 3 = *in the past 7 to 12 months*, 4 = *in the past 1 to 5 years*, 5 = *more than 5 years ago.* [b]Length of time receiving support services (in years). [c]Number of diagnosed conditions. [d]HSA–1= *Would obtain professional help if having a mental breakdown*. [e]HSA–2 = *Talking about psychological problems is a poor way to solve emotional problems*. [f]HSA–3 = *Would find relief in therapy if having an emotional crisis*. [g]HSA–4 = *Coping without professional help is admirable*. [h]HSA–5 = *Would obtain psychological help if upset for a long time.* [i]HSA–6 = *Might want counseling in the future*. [j]HSA–7 = *A person with an emotional problem is likely to solve it with professional help*. [k]HSA–8 = *Therapy would not have value for me*. [l]HSA–9 = *A person should work out their problems without counseling*. [m]HSA–10 = *Emotional problems resolve by themselves*. [n]HSI = Help-seeking intentions scale (GHSQ) questions (*Likely to seek help from…*).

†$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.

Table 4. Latent Profile Analysis Fit Statistics for 1-4 Class Solutions

								Participants per class (%)			
Model	LL	AIC	BIC	SSA-BIC	Entropy	LMR	BLRT	1	2	3	4
1 class	-6960.24	14032.48	14195.18	14018.03				100			
2 class	-6591.26	13352.51	13599.46	13330.58	.91	-6960.24**	-6960.24**	61.48	38.52		
3 class	-6454.43	13136.86	13468.06	13107.44	.89	-6591.56	-6591.26**	18.52	48.89	32.59	
4 class	-6378.41	13042.83	13458.28	13005.92	.90	-6454.43	-6454.23**	30.37	16.30	26.63	23.70

Note. LL = log-likelihood. AIC = Akaike information criterion. BIC = Bayesian information criterion. SSA-BIC = Sample-size adjusted Bayesian information criterion. LMR = Lo-Mendell-Rubin likelihood ratio test. BLRT = Bootstrapped likelihood ratio test. Participants per class (%) = the proportion of participants in each of the classes in the model. *$p < .10$. **$p < .001$

Table 5. Classification Posterior Probabilities for the Three-Class Solution

		Average classification posterior probabilities		
	n(%)	Mildly distressed class	Moderately distressed class	Severely distressed class
Mildly distressed class	25 (18.52)	.98	.02	.00
Moderately distressed class	66 (48.89)	.06	.91	.04
Severely distressed class	44 (32.59)	.00	.01	.99

Note. Values on the diagonal are the average posterior probabilities associated with the classes to which participants were assigned.

Table 6. Mean Comparisons between Latent Classes on Biopsychosocial Health LPA Indicator Variables

Indicator variables	*F(df)*	η^2	Pairwise comparisons
Total traumatic life events (CSE)	3.96(2,104)*	.07	3 > 1[1]
Adverse childhood experiences score	3.90(2,128)*	.06	3 > 1
Length of CSE (in years)	6.98(2,99)**	.14	3 > 1, 3 > 2[1]
Last experience of CSE	5.62(2,99)**	.11	1 > 3, 2 > 3
Length of current support services[a]	1.33(105)	.05	*ns*[1]
Length of past support services[a]	1.26(2,105)	.05	*ns*
PTSD symptoms	53.13(2,120)***	.47	3 > 2 > 1[1]
Re-experiencing symptoms	102.80(2,95)***	.68	3 > 2 > 1[1]
Avoidance symptoms	73.35(2,97)***	.61	3 > 2 > 1
Neg. thoughts/feelings symptoms	85.31(2,95)***	.64	3 > 2 > 1
Arousal symptoms	126.93(2,95)***	.73	3 > 2 > 1
Anxiety symptoms	78.94(2,120)***	.57	3 > 2 > 1
Depression symptoms	85.80(2, 120)***	.59	3 > 2 > 1[1]
Alcohol use	5.28(2, 118)**	.08	2 > 1, 3 > 1[1]
Drug use	4.56(2, 118)*	.07	3 > 1[1]
Number of times self-harmed	9.82(2, 109)***	.15	3 > 1, 3 > 2
Suicidality	22.25(2,116)***	.28	3 > 1, 3 > 2[1]
Personality traits	68.52(2,121)***	.53	3 > 2 > 1
Negative affect traits	72.55(2,121)***	.55	3 > 2 > 1[1]

Table 6. Continued

Indicator variables	*F(df)*	η^2	Pairwise comparisons
Detachment traits	40.00(2,121)***	.40	3 > 2 > 1
Antagonism traits	11.80(2,121)***	.16	3 > 2 > 1[1]
Disinhibition traits	11.98(2,121)***	.17	3 > 2 > 1
Psychoticism traits	35.71(2,121)***	.37	3 > 2 > 1
Number of diagnosed mental health conditions	26.66(2,132)***	.29	3 > 1, 3 > 2[1]
Number of diagnosed physical health conditions	.37(2,132)	.01	*ns*
Attachment dimension – close	4.59(2,97)*	.10	3 > 1
Attachment dimension – depend	2.86 (2,97)†	.06	*ns*
Attachment dimension – anxiety	4.37(2,97)*	.09	3 > 1[1]

Note. One-way ANOVA and Tukey post-hoc analyses were used to test mean differences between latent classes on all LPA indicator variables. Only significant differences ($p < .05$) between the three classes are reported. *ns* = not significant. [1]Homogeneity of variance assumption violated; Welch's test and Games-Howell post-hoc statistic used for mean comparisons. 1 = mildly distressed class; 2 = moderately distressed class; 3 = severely distressed class. [a]Length of time receiving support services (in years).

†$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.

Table 7. Results from Distal Outcome Analysis of Help-Seeking Attitudes and Intentions by Latent Classes of Biopsychosocial Health among Survivors of Sex Trafficking

Distal outcome variables	Global $\chi 2$	Class comparisons			Summary of comparisons
		1 v 2	1 v 3	2 v 3	
Help-seeking attitudes	1.05	.03	.40	.93	*ns*
Openness	1.56	.97	1.56	.09	*ns*
Value and need	4.80*	.59	4.69**	1.78	1 > 3
HSA-1. Would obtain professional help if having a mental breakdown[a]	1.46	1.45	.74	.26	*ns*
HSA-2. Talking about psychological problems is a poor way to solve emotional problems[a]	5.31*	.39	4.74**	2.76*	3 > 1, 3 > 2
HSA-3. Would find relief in therapy if having an emotional crisis[a]	1.84	1.05	1.84	.11	*ns*
HSA-4. Coping without professional help is admirable[a]	5.86**	.22	4.43**	3.37**	3 > 1, 3 > 2
HSA-5. Would obtain psychological help if upset for a long time[a]	2.44	.14	.51	2.25	*ns*
HSA-6. Might want counseling in the future[a]	7.24**	7.23***	5.14**	.83	2 > 1, 3 > 1

Table 7. Continued

Distal outcome variables	Global $\chi 2$	1 v 2	1 v 3	2 v 3	Summary of comparisons
HSA-7. A person with an emotional problem is likely to solve it with professional help[a]	2.06	2.05	1.22	.26	*ns*
HSA-8. Therapy would not have value for me[a]	5.23*	4.58**	2.59*	.67	2 > 1, 3 > 1
HSA-9. A person should work out their problems without counseling[a]	2.21	.62	.43	2.21	*ns*
HSA-10. Emotional problems resolve by themselves[a]	.79	.02	.63	.48	*ns*
Likely to seek help from…Intimate partner[b]	.43	.43	.19	.09	*ns*
Likely to seek help from…friend[b]	.88	.64	.04	.63	*ns*
Likely to seek help from…Parent/caregiver[b]	2.92	1.03	.19	2.91*	2 > 3
Likely to seek help from…Other family member[b]	1.26	.89	.00	.99	*ns*
Likely to seek help from…Mental health professional[b]	.19	.01	.14	.11	*ns*
Likely to seek help from…Phone helpline[b]	3.33	2.99*	.32	1.96	1 > 2
Likely to seek help from…Internet[b]	.35	.01	.16	.31	*ns*
Likely to seek help from…Doctor/nurse[b]	2.98	2.82*	.84	1.19	2 > 1

Table 7. Continued

Distal outcome variables	Global $\chi 2$	1 v 2	1 v 3	2 v 3	Summary of comparisons
Likely to seek help from…Community agency[b]	.46	.23	.46	.04	*ns*
Likely to seek help from…Religious leader[b]	.93	.01	.47	.76	*ns*
Would not seek help from anyone[b]	5.90**	.77	5.77**	2.51*	3 > 1, 3 > 2

Note. Distal outcome mean differences were assessed by Wald chi-square tests performed as part of the BCH stepwise approach to latent class modeling in Mplus. 1 = mildly distressed class; 2 = moderately distressed class; 3 = severely distressed class. *ns* = not significant. [a]Help-seeking attitude (HSA) scale (ATSPPH-SF) questions. [b]Help-seeking intentions scale (GHSQ) questions. *$p < .10$. **$p < .05$. ***$p < .01$.

Appendix E - Measures

Inclusion Criteria Screening Questions

Instructions. These questions are designed to screen for whether or not you meet the inclusion criteria for this study.

1. What is your birthday? _ _/_ _/_ _ (mm/dd/yyyy)

2. What age range do you fall into?
   - ○ 17 or younger
   - ○ 18-24
   - ○ 25-34
   - ○ 35-44
   - ○ 45-54
   - ○ 55-64
   - ○ 65 or older

3. Has anyone ever tricked or pressured you into engaging in a sex act that you did not want to do? (e.g., prostitution, stripping, escorting, familial trafficking, etc.)
   - ○ Yes
   - ○ No

4. Has anyone ever threatened you or someone you care about to cause you to perform a sex act?
   - ○ Yes
   - ○ No

5. Has anyone ever taken a sexual photo of you that you were uncomfortable with and either sold it or posted it online without your permission?
   - ○ Yes
   - ○ No

6. Have you ever engaged in a sex act for things of value (e.g., money, housing, food, gifts, or favors) either because A) you were pressured or forced to do this, or B) it was essential for your survival?
   - ○ Yes
   - ○ No

Trauma History Questionnaire (Adapted)

Instructions. In this section of the survey, we ask questions about life experiences that people often describe as stressful or traumatic. Although these types of events actually occur pretty regularly, we understand that many people want to keep information about such experiences private. We also know that sometimes people feel it is emotionally difficult to answer questions about stressful or traumatic experiences. We will not ask you to share any specific or detailed information about the event(s) you have experienced. You will not be asked to describe the event in any way. We will only ask two categorical questions about (1) the number of times the event happened to you, and (2) how old you were when it happened. Many people experience these events multiple times over a long period of time. In these cases, it is okay to estimate on the number of times you experienced the event and to enter multiple ages or age ranges, as needed. It is okay if you do not know, cannot remember, or do not want to give an answer to these questions. Please remember, you can pause the survey and take a break at any time. You can also skip any questions that you do not want to answer. All the answers you provide are completely anonymous.

1. Has anyone ever tried to take something directly from you by using force or the threat of force, such as a stick-up or mugging?

   1 Yes 0 No

→ If yes, please respond to the following questions:			How many times did it happen?	How old were you?
A) This happened to me as part of my experience with commercial sexual exploitation	1 0	Yes No		

B) This happened to me separate from my experience with commercial sexual exploitation	1 0	Yes No		

2. Has anyone ever attempted to or succeeded in breaking into your home?

   1 Yes 0 No

→ If yes, please respond to the following questions:			How many times did it happen?	How old were you?
A) This happened to me <u>as part of</u> my experience with commercial sexual exploitation	1 0	Yes No		
B) This happened to me separate from my experience with commercial sexual exploitation	1 0	Yes No		

3. Have you ever had a life-threatening accident at work, in a car, or somewhere else?

   1 Yes 0 No

→ If yes, please respond to the following questions:			How many times did it happen?	How old were you?
A) This happened to me <u>as part of</u> my experience with commercial sexual exploitation	1 0	Yes No		
	1	Yes		

B) This happened to me separate from my experience with commercial sexual exploitation	0	No		

4. Have you ever experienced a natural disaster (e.g., tornado, hurricane, flood, major earthquake, etc.) where you felt you or your loved ones were in danger of death or injury?

1 Yes 0 No

→ If yes, please respond to the following questions:			How many times did it happen?	How old were you?
A) This happened to me <u>as part of</u> my experience with commercial sexual exploitation	1	Yes		
	0	No		
B) This happened to me separate from my experience with commercial sexual exploitation	1	Yes		
	0	No		

5. Have you ever seen someone seriously injured or killed?

1 Yes 0 No

→ If yes, please respond to the following questions:			How many times did it happen?	How old were you?
A) This happened to me <u>as part of</u> my experience with commercial sexual exploitation	1	Yes		
	0	No		
	1	Yes		

B) This happened to me separate from my experience with commercial sexual exploitation	0	No		

6. Have you ever received news of a serious injury, life-threatening illness, or unexpected death of someone close to you?

1 Yes 0 No

→ If yes, please respond to the following questions:			How many times did it happen?	How old were you?
A) This happened to me <u>as part of</u> my experience with commercial sexual exploitation	1	Yes		
	0	No		
B) This happened to me separate from my experience with commercial sexual exploitation	1	Yes		
	0	No		

7. Have you ever had a spouse, romantic partner, or child die?

1 Yes 0 No

→ If yes, please respond to the following questions:			How many times did it happen?	How old were you?
A) This happened to me <u>as part of</u> my experience with commercial sexual exploitation	1	Yes		
	0	No		
	1	Yes		

B) This happened to me separate from my experience with commercial sexual exploitation	0	No		

8. Have you ever had a serious or life-threatening illness?

1 Yes 0 No

→ If yes, please respond to the following questions:			How many times did it happen?	How old were you?
A) This happened to me <u>as part of</u> my experience with commercial sexual exploitation	1	Yes		
	0	No		
B) This happened to me separate from my experience with commercial sexual exploitation	1	Yes		
	0	No		

9. Have you ever had to engage in combat while in military service in an official or unofficial war zone?

1 Yes 0 No

→ If yes, please respond to the following questions:			How many times did it happen?	How old were you?
A) This happened to me <u>as part of</u> my experience with commercial sexual exploitation	1	Yes		
	0	No		
	1	Yes		

B) This happened to me separate from my experience with commercial sexual exploitation	0	No		

10. Has anyone ever made you have intercourse or oral or anal sex against your will?

1 Yes 0 No

→ If yes, please respond to the following questions:			How many times did it happen?	How old were you?
A) This happened to me <u>as part of</u> my experience with commercial sexual exploitation	1	Yes		
	0	No		
B) This happened to me separate from my experience with commercial sexual exploitation	1	Yes		
	0	No		

11. Has anyone ever touched private parts of your body, or made you touch theirs, under force or threat?

1 Yes 0 No

→ If yes, please respond to the following questions:			How many times did it happen?	How old were you?
A) This happened to me <u>as part of</u> my experience with commercial sexual exploitation	1	Yes		
	0	No		

B) This happened to me separate from my experience with commercial sexual exploitation	1 0	Yes No		

12. Other than the incidents already mentioned, have there been any other situations in which another person tried to force you to have any unwanted sexual contact?

1 Yes 0 No

→ If yes, please respond to the following questions:			How many times did it happen?	How old were you?
A) This happened to me <u>as part of</u> my experience with commercial sexual exploitation	1 0	Yes No		
B) This happened to me separate from my experience with commercial sexual exploitation	1 0	Yes No		

13. Has anyone, including family members or friends, ever attacked you with a gun, knife, or some other weapon?

1 Yes 0 No

→ If yes, please respond to the following questions:			How many times did it happen?	How old were you?
A) This happened to me <u>as part of</u> my experience with commercial sexual exploitation	1 0	Yes No		

B) This happened to me separate from my experience with commercial sexual exploitation	1 0	Yes No		

14. Has anyone, including family members or friends, ever attacked you without a weapon and seriously injured you?

1 Yes 0 No

→ If yes, please respond to the following questions:			How many times did it happen?	How old were you?
A) This happened to me <u>as part of</u> my experience with commercial sexual exploitation	1 0	Yes No		
B) This happened to me separate from my experience with commercial sexual exploitation	1 0	Yes No		

15. Has anyone in your family ever beaten, spanked, or pushed you hard enough to cause injury?

1 Yes 0 No

→ If yes, please respond to the following questions:			How many times did it happen?	How old were you?
A) This happened to me <u>as part of</u> my experience with commercial sexual exploitation	1 0	Yes No		
	1	Yes		

B) This happened to me separate from my experience with commercial sexual exploitation	0	No		

16. Have you ever been in any other situation in which you were or feared you might be seriously injured?

1 Yes 0 No

→ If yes, please respond to the following questions:			How many times did it happen?	How old were you?
A) This happened to me <u>as part of</u> my experience with commercial sexual exploitation	1	Yes		
	0	No		
B) This happened to me separate from my experience with commercial sexual exploitation	1	Yes		
	0	No		

17. Have you experienced any other extraordinarily stressful situations or events that were not already covered?

1 Yes 0 No

→ If yes, please respond to the following questions:			How many times did it happen?	How old were you?
A) This happened to me <u>as part of</u> my experience with commercial sexual exploitation	1	Yes		
	0	No		

B) This happened to me separate from my experience with commercial sexual exploitation	1 0	Yes No		

Physical Health Assessment

In this section, we'll ask several questions about your physical health and family history. Some of these questions may be sensitive. Please remember that you can skip any question that you do not wish to answer and all of your information will be completely confidential.

Have you ever been diagnosed with any of the following physical health conditions?

	Yes	**No**
Heart disease		
Stroke		
Diabetes		
Asthma or COPD		
Arthritis		
Osteoporosis		
Cancer		
Epilepsy		
Stomach ulcers		
Migraines		
ME (Chronic Fatigue Syndrome)		
Vision problems		
Hearing problems		
High blood pressure		
High cholesterol		
Overweight/obesity		
Sexually transmitted disease		

Any other disease or medical condition		

	Have **you** ever been diagnosed with any of the following mental health conditions?		Has one of **your immediate family members** ever been diagnosed with any of the following mental health conditions?		
	Yes	**No**	**Yes**	**No**	**If yes, who (i.e., mom, dad, etc.)?**
Alcohol/Substance Abuse					
Generalized Anxiety Disorder					
Attention Deficit/Hyperactivity Disorder (ADHD)					
Bipolar Disorder					
Depression					
Eating Disorder					
Obsessive-Compulsive Disorder					
Posttraumatic Stress Disorder					
Schizophrenia					
Dissociative Identity Disorder					
Depersonalization Disorder					
Borderline Personality Disorder					
Narcissistic Personality Disorder					
Autism Spectrum Disorder					
Reactive Attachment Disorder					
Learning Disability					
Intellectual or Developmental Disability					
Other (please describe):					

Adverse Childhood Experiences International Questionnaire (Adapted)

When you were growing up during the first 18 years of your life…

	Never	**Rarely**	**Sometimes**	**Most of the time**	**Always**
Did your parents/guardians understand your problems and worries?	1	2	3	4	5
Did your parents/guardians ***really*** know what you were doing with your free time when you were not at school or work?	1	2	3	4	5
How often did your parents/guardians ***not*** give you enough food even when they could easily have done so?	1	2	3	4	5
Were your parents/guardians too drunk or intoxicated by drugs to take care of you?	1	2	3	4	5
How often did your parents/guardians ***not*** send you to school even when it was available?	1	2	3	4	5

When you were growing up during the first 18 years of your life…

	No	**Yes**
Did you live with a household member who was a problem drinker or alcoholic, or misused street or prescription drugs?		
Did you live with a household member who was depressed, mentally ill or suicidal?		
Did you live with a household member who was ever sent to jail or prison?		
Were your parents ever separated or divorced?		

Did your mother, father or guardian die?		
Were you bullied by siblings or other family members?		
Were you bullied by peers at school or in your neighborhood?		

Personality Inventory for DSM-5-Brief Form

Instructions: Below is a list of things different people might say about themselves. We are interested in how you would describe yourself. There are no right or wrong answers. So you can describe yourself as honestly as possible, we will keep your responses confidential.

	Very False or Often False	Sometimes or Somewhat False	Sometimes or Somewhat True	Very True or Often True
People would describe me as reckless.	1	2	3	4
I feel like I act totally on impulse.	1	2	3	4
Even though I know better, I can't stop making rash decisions.	1	2	3	4
I often feel like nothing I do really matters.	1	2	3	4
Others see me as irresponsible.	1	2	3	4
I'm not good at planning ahead.	1	2	3	4
My thoughts often don't make sense to others.	1	2	3	4
I worry about almost everything.	1	2	3	4
I get emotional easily, often for very little reason.	1	2	3	4
I fear being alone in life more than anything else.	1	2	3	4

I get stuck on one way of doing things, even when it's clear it won't work.	1	2	3	4
I have seen things that weren't really there.	1	2	3	4
I steer clear of romantic relationships.	1	2	3	4
I'm not interested in making friends.	1	2	3	4
I get irritated easily by all sorts of things.	1	2	3	4
I don't like to get too close to people.	1	2	3	4
It's no big deal if I hurt other peoples' feelings.	1	2	3	4
I rarely get enthusiastic about anything.	1	2	3	4
I crave attention.	1	2	3	4
I often have to deal with people who are less important than me.	1	2	3	4
I often have thoughts that make sense to me but that other people say are strange.	1	2	3	4
I use people to get what I want.	1	2	3	4
I often "zone out" and then suddenly come to and realize that a lot of time has passed.	1	2	3	4
Things around me often feel unreal, or more real than usual.	1	2	3	4

It is easy for me to take advantage of others.	1	2	3	4

Generalized Anxiety Disorder – GAD-7

Instructions: For the following questions, think back over the past ***two weeks***, how often have you been bothered by any of the following problems?

	Not at all	Several days	More than half the days	Nearly every day
Feeling nervous, anxious or on edge	0	1	2	3
Not being able to stop worrying	0	1	2	3
Worrying too much about different things	0	1	2	3
Trouble relaxing	0	1	2	3
Being so restless that it's hard to sit still	0	1	2	3
Becoming easily annoyed and irritable	0	1	2	3
Feeling afraid as if something awful might happen	0	1	2	3

The Patient Health Questionnaire – PHQ-9

	Not at all	Several days	More than half the days	Nearly every day
Little interest or pleasure in doing things	0	1	2	3
Feeling down, depressed, or hopeless	0	1	2	3
Trouble falling or staying asleep, or sleeping too much	0	1	2	3
Feeling tired or having little energy	0	1	2	3
Poor appetite or over eating	0	1	2	3
Feeling bad about yourself - or that you are a failure or have let yourself or family down	0	1	2	3

Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
Moving or speaking so slowly that other people could have noticed? Or the opposite-being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
Thoughts that you could be better off dead or of hurting yourself in someway	0	1	2	3
	Not difficult at all	Somewhat difficult	Very Difficult	Extremely difficult
If you checked any off any of the problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?				

Posttraumatic Stress Disorder Checklist – PCL-5

Instructions: The following questions ask about problems you may have had after experiencing a very stressful event involving actual or threatened death, serious injury, or sexual violence. It could be something that happened to you directly, something you witnessed, or something you learned happened to a close family member or close friend. Some examples include a serious accident, fire, natural disaster, physical or sexual attack or abuse, war, homicide, or suicide.

Without going into about what happened, if you had to identify the worst event you've ever experienced – which, for this survey, means the one that currently bothers you the most – what would it be? _____

Keeping your worst event in mind, please read each one carefully and select the option that indicates how much you have been bothered by that problem ***in the past month***.

In the past month, how much were you bothered by:	Not at all	A little bit	Moderately	Quite a bit	Extremely
Repeated, disturbing, and unwanted memories of the stressful experience?	1	2	3	4	5
Repeated, disturbing dreams of the stressful experience?	1	2	3	4	5
Suddenly feeling or acting as if the stressful experience were actually happening again (as if you were actually back there reliving it)?	1	2	3	4	5
Feeling very upset when something reminded you of the stressful experience?	1	2	3	4	5
Having strong physical reactions when something reminded you of the stressful experience (e.g., heart pounding, trouble breathing, sweating)?	1	2	3	4	5
Having strong physical reactions when something reminded you of the stressful experience (e.g., heart pounding, trouble breathing, sweating)?	1	2	3	4	5
Avoiding memories, thoughts, or feelings related to the stressful experience?	1	2	3	4	5
Avoiding external reminders of the stressful experience (e.g., people, places, conversations, activities, objects, or situations)?	1	2	3	4	5
Trouble remembering important parts of the stressful experience?	1	2	3	4	5

Having strong negative beliefs about yourself, other people, or the world (e.g., having thoughts such as: I am bad, there is something seriously wrong with me, no one can be trusted, the world is completely dangerous)?	1	2	3	4	5
Blaming yourself or someone else (who didn't directly cause the event or actually harm you) for the stressful experience or what happened after it?	1	2	3	4	5
Having strong negative feelings such as fear, horror, anger, guilt, or shame?	1	2	3	4	5
Loss of interest in activities that you used to enjoy?	1	2	3	4	5
Feeling distant or cut off from other people?	1	2	3	4	5
Trouble experiencing positive feelings (e.g., being unable to feel happiness or have loving feelings for people close to you)?	1	2	3	4	5
Irritable behavior, angry outbursts, or acting aggressively?	1	2	3	4	5
Taking too many risks or doing things that could cause you harm?	1	2	3	4	5
Being "super alert" or watchful or on guard?	1	2	3	4	5
Feeling jumpy or easily startled?	1	2	3	4	5
Having difficulty concentrating?	1	2	3	4	5
Trouble falling or staying asleep?	1	2	3	4	5

Alcohol Use Disorders Identification Test (AUDIT)

Instructions: The next questions ask about alcohol, drug use, self-harm, and suicidal thoughts or actions. Please remember that your responses are completely confidential, and that you can take a break at any time if you start to feel tired or overwhelmed. You are able to skip any question you do not want to answer and we are available by phone to answer any questions you may have.

For the following items, please select the answer that is most correct for you.

1. How often do you have a drink containing alcohol?

Never	Monthly or less	2-4 times a month	2-3 times a week	4 or more times a week

2. How many drinks containing alcohol do you have on a typical day when drinking?

1 or 2	3 or 4	5 or 6	7 to 9	10 or more

3. How often do you have six or more drinks on one occasion?

Never	Less than monthly	Monthly	Weekly	Daily or almost daily

4. How often during the last year have you found that you were not able to stop drinking once you had started?

Never	Less than monthly	Monthly	Weekly	Daily or almost daily

5. How often during the last year have you failed to do what was normally expected from you because of drinking?

Never	Less than monthly	Monthly	Weekly	Daily or almost daily

6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?

Never	Less than monthly	Monthly	Weekly	Daily or almost daily

7. How often during the last year have you had a feeling of guilt or remorse after drinking?

Never	Less than monthly	Monthly	Weekly	Daily or almost daily

8. How often during the last year have you been unable to remember what happened the night before because you had been drinking?

Never	Less than monthly	Monthly	Weekly	Daily or almost daily

9. Have you or someone else been injured as a result of your drinking?

No	Yes, but not in the past year	Yes, during the past year

10. Has a relative or friend, doctor or other health worker been concerned about your drinking or suggested you cut down?

No	Yes, but not in the past year	Yes, during the past year

The Drug Abuse Screening Test

Instructions. "Drug use" refers to (1) the use of prescribed or over-the-counter drugs in excess of the directions, and (2) any nonmedical use of drugs. These include cannabis (marijuana, hashish), solvents (e.g., paint thinner), tranquilizers (e.g., Valium), barbiturates, cocaine, stimulants (e.g., speed), hallucinogens (e.g., LSD) or narcotics (e.g., heroin). The questions do not include alcohol or tobacco. Please answer the following questions by indicating yes or no; if you have difficulty with a statement, then choose the response that is mostly right for you.

	No	Yes
Have you used drugs other than those required for medical reasons?		
Do you use more than one drug at a time?		
Are you always able to stop using drugs when you want to?		
Have you had “blackouts” or “flashbacks” as a result of drug use?		
Do you ever feel bad or guilty about your drug use?		
Does your spouse (or parents) ever complain about your involvement with drugs?		
Have you neglected your family because of your use of drugs?		
Have you engaged in illegal activities in order to obtain drugs?		
Have you ever experienced withdrawal symptoms (felt sick) when you stopped taking drugs?		
Have you had medical problems as a result of your drug use (e.g., memory loss, hepatitis, convulsions, bleeding, etc.)?		

If you have used drugs other than those required for medical reasons, at what age did you begin using? _____

Non-Suicidal Self-Injury

Instructions: For the following questions, please check the box beside the statement or phrase that best applies to you.

	No	Yes
Have you ever physically hurt or mutilated your body (e.g., cutting, burning, etc.) with the purpose of intentionally hurting yourself, but without trying to end your life?		
Based on your best guess, how many total times have you intentionally hurt yourself without trying to end your life? ☐ Only once ☐ 2-3 times		

□ 4-5 times □ 6-10 times □ 11-20 times □ 21-50 times □ More than 50 times		

Suicidal Behaviors Questionnaire (Revised)

1. Have you ever thought about or attempted to kill yourself?
□ Never □ It was just a brief passing thought □ I have had a plan at least once to kill myself but did not try to do it □ I have had a plan at least once to kill myself and really wanted to die □ I have attempted to kill myself, but did not want to die □ I have attempted to kill myself, and really hoped to die
2. How often have you thought about killing yourself in the past year?
□ Never □ Rarely (1 time) □ Sometimes (2 times) □ Often (3-4 times) □ Very Often (5 or more times)
3. Have you ever told someone that you were going to commit suicide, or that you might do it?
□ No □ Yes, at one time, but did not really want to die □ Yes, at one time, and really wanted to die □ Yes, more than once, but did not want to do it □ Yes, more than once, and really wanted to do it
4. How likely is it that you will attempt suicide someday? (check one)

□ Never	□ Likely
□ No chance at all	□ Rather likely
□ Rather unlikely	□ Very likely
□ Unlikely	

Commercial Sexual Exploitation

We would now like to ask you a few more specific questions about your experience(s) with commercial sexual exploitation. We understand that some of these questions are very personal and may be difficult to answer. You are under no obligation to answer any question and you may skip any question that you do not want to answer. We also want to remind you that your answers are completely anonymous and that you can take breaks as needed throughout the survey.

1. Were you born in a country other than the United States?

○ Yes
○ No
○ I don't know

IF "No" or "I don't know," SKIP to the next question.

2. Did you arrange your own travel to the United States?	1	Yes	0	No
3. Did anyone force you to migrate or travel to the United States? Or, was there a time during your journey where you did not want to continue and wanted to return home but were not allowed to?	1	Yes	0	No
4. Sometimes people travel to the United States because they are promised work or an education, only to find out when they get here that they will not be doing what they expected. Did you come to the United States because you or a member of your family were promised work or an education?	1	Yes	0	No

IF "No," SKIP to the next question.

5. Was the work and payment that you received the same as you were originally promised?	1	Yes	0	No
6. Sometimes when people travel to the United States, they make an agreement with the person or people who organized their travel. Did you or your family owe something to the person or people who helped you come to the United States?	1	Yes	0	No

IF "No," SKIP to the next question.

7. Were the services or the amount of time it took to repay the debt different than what you expected?	1	Yes	0	No
8. Were you or your family threatened or told that if you did not repay the debt, you or your family would be harmed?	1	Yes	0	No
9. Has anyone ever held your ID or other legal documents without your consent?	1	Yes	0	No
10. In thinking back over your past experiences, has anyone ever used force, fraud, or coercion to get you to perform a sex act or to sexually exploit you? (e.g., prostitution, pornography, stripping/dancing, escorting, familial trafficking, providing any sexual service in exchange for items of value – money, drugs, shelter, food, clothes, etc.)?	1	Yes	0	No

IF "No," SKIP to the next question.

11.	How old were you the first time this happened?	_____
12.	How long did this happen? (Please specify whether your answer is in days, weeks, months, or years)?	_____

13.	How would you describe your relationship with the person/people who tricked/forced/manipulated you? (e.g., pimp, romantic partner, parent/guardian, stranger, etc.)?	_____
14.	Did any of your family members, friends, or others in your life - who were not involved in the situation – know this was happening?	○ Yes ○ No

15. In thinking back over your past experiences, did a romantic partner/family member ever have you engage in commercial sexual acts in order to "help the relationship/the family"?

○ Yes

○ No

IF "No," SKIP to the next question.

16.	How old were you the first time this happened?	_____
17.	How long did this happen? (Please specify whether your answer is in days, weeks, months, or years)?	_____
18.	How would you describe your relationship with the person/people who tricked/forced/manipulated you? (e.g., boyfriend, girlfriend, parent, grandparent, etc.)?	_____
19.	Did any of your family members, friends, or others in your life - who were not involved in the situation – know this was happening?	○ Yes ○ No

20. Sometimes people who are having financial or relational difficulties have very few options to survive or fulfill their basic needs, such as food and shelter. Sometimes they are exploited or feel the need to use their sexuality to help them survive. Have you or anyone else ever received anything of value, such as money, a place to stay, food, drugs, gifts, or favors in exchange for your performing a sexual activity?

○ Yes

○ No

IF "No," SKIP to the next question.

21. If yes, how old were you the first time this happened? _____

22. How long did this happen? (Please specify whether your answer is in days, weeks, months, or years)? _____

23. Did any of your family members, friends, or others in your life - who were not involved in the situation – know this was happening? ○ Yes ○ No

24. How would you describe your experience(s) with commercial sexual exploitation? (Please check all that apply)?

- ○ Prostitution
- ○ Escorting
- ○ Massage parlor
- ○ Familial trafficking
- ○ Stripping/dancing
- ○ Other: _____
- ○ Pornography

25. Using your best guess, what is the total amount of time you experienced commercial sexual exploitation? (Please specify whether your answer is in days, weeks, months, or years) 26. _____

27. How long ago was your last experience of commercial sexual exploitation?

- ○ Within the past month
- ○ In the past 1-6 months
- ○ In the past 7-12 months
- ○ In the past 1-5 years
- ○ More than 5 years ago

150. Is there any other information you would like to share or believe is important for people to understand about your unique experience with commercial sexual exploitation?

_____

Attitudes Toward Seeking Professional Help

Instructions. We're interested in learning more about your attitudes, intentions, and experiences regarding help-seeking. For the following items, please indicate how much you agree or disagree with the statement concerning yourself.

	Disagree	Partly Disagree	Partly Agree	Agree
Would obtain professional help if having a mental breakdown	0	1	2	3
Talking about psychological problems is a poor way to solve emotional problems*	0	1	2	3
Would find relief in psychotherapy if in emotional crisis	0	1	2	3
A person coping without professional help is admirable*	0	1	2	3
Would obtain psychological help if upset for a long time	0	1	2	3
Might want counseling in the future	0	1	2	3
A person with an emotional problem is likely to solve it with professional help	0	1	2	3
Psychotherapy would not have value for me*	0	1	2	3
A person should work out his/her problems without counseling*	0	1	2	3
Emotional problems resolve by themselves	0	1	2	3

General Help Seeking Questionnaire

Instructions. If you were having a personal or emotional problem, how likely is it that you would seek help from the following people/resources? (Please indicate your response by

circling a number on the continuum that best describes your intention to seek help from the source listed)

	Extremely unlikely		Unlikely		Likely		Extremely likely
Intimate partner (e.g., girlfriend, boyfriend, spouse, etc. *skip if you do not have an intimate partner)	1	2	3	4	5	6	7
Friend (not related to you)	1	2	3	4	5	6	7
Parent or caregiver	1	2	3	4	5	6	7
Other relative/family member	1	2	3	4	5	6	7
Mental health professional (e.g., psychologist, social worker, counselor)	1	2	3	4	5	6	7
Phone helpline	1	2	3	4	5	6	7
Internet	1	2	3	4	5	6	7
Doctor or nurse	1	2	3	4	5	6	7
Non-profit or community service agency	1	2	3	4	5	6	7
Minister or religious leader (e.g., Priest, Pastor, Rabbi, Chaplain)	1	2	3	4	5	6	7
I would not seek help from anyone	1	2	3	4	5	6	7

I would seek help from another not listed. If yes, please describe in the space provided (if no, leave blank):	_____

Revised Adult Attachment Scale

Instructions. The following questions concern how you generally feel in important close relationships in your life. Think about your past and present relationships with people who have been especially important to you, such as family members, romantic partners, and close friends. Respond to each statement in terms of how you generally feel in these relationships.

	Not at all characteristic of me				Very characteristic of me
I find it relatively easy to get close to people	1	2	3	4	5
I find it difficult to allow myself to depend on others*	1	2	3	4	5
I often worry that other people don't really love me	1	2	3	4	5
I find that others are reluctant to get as close as I would like	1	2	3	4	5
I am comfortable depending on others	1	2	3	4	5
I don’t worry about people getting too close to me	1	2	3	4	5

I find that people are never there when you need them*	1	2	3	4	5
I am somewhat uncomfortable being close to others*	1	2	3	4	5
I often worry that other people won't want to stay with me	1	2	3	4	5
When I show my feelings to others, I'm afraid they will not feel the same about me	1	2	3	4	5
I often wonder whether other people really care about me	1	2	3	4	5
I am comfortable developing close relationships with others	1	2	3	4	5
I am uncomfortable when anyone gets too emotionally close to me*	1	2	3	4	5
I know that people will be there when I need them	1	2	3	4	5
I want to get close to people, but I worry about being hurt	1	2	3	4	5
I find it difficult to trust others completely*	1	2	3	4	5
People often want me to be emotionally closer than I feel comfortable being*	1	2	3	4	5

I am not sure that I can always depend on people to be there when I need them*	1	2	3	4	5

Demographic Questionnaire

We're going end by gathering some basic information about you. Please answer the following questions using the scales provided:

1. What is your primary language? _____

2. What is your current gender identity?

- Male
- Female
- Transgender (M to F)
- Trangender (F to M)
- Other

3. What was the sex on your original birth certificate?

- Male
- Female
- I don't know

4. What is your current gender identity?

- Gay
- Lesbian
- Bisexual
- Straight/Heterosexual
- Other: _____

5. What is your primary racialc identity?

- Asian/Pacific Islander

- Black
- Hispanic or Latino
- American Indian or Alaska Native
- White
- Other: _____

6. What is the highest degree or level of school you have completed?
    - ☐ No schooling completed
    - ☐ Nursery school to 8th grade
    - ☐ Some high school, no diploma
    - ☐ High school graduate, diploma or the equivalent (for example: GED)
    - ☐ Some college credit, no degree
    - ☐ Trade/ technical/ vocational training
    - ☐ Associate degree
    - ☐ Bachelor's degree
    - ☐ Master's degree
    - ☐ Professional degree
    - ☐ Doctorate

7. In the last 12 months, have you received any of the following types of income support?
    - ☐ Family support
    - ☐ Unemployment benefit
    - ☐ Domestic purposes benefit
    - ☐ Sickness or invalids benefit
    - ☐ Student allowance
    - ☐ Other government benefits (disability allowance, war pension, etc.)
    - ☐ None of the above
    - ☐ Other

8. What is your employment status?
    - ☐ Family support

- ☐ Unemployment benefit
- ☐ Domestic purposes benefit
- ☐ Sickness or invalids benefit
- ☐ Student allowance
- ☐ Other government benefits (disability allowance, war pension, etc.)
- ☐ None of the above

9. Which category would include your gross family income, from all sources, before taxes last year?

☐ Below $9,999	☐ $40,000 - 49,999	☐ $80,000 - 89,999
☐ $10,000 - 19,999	☐ $50,000 - 59,999	☐ $90,000 - 99,999
☐ $20,000 - 29,999	☐ $60,000 - 69,999	☐ $100,00 - above
☐ $30,000 - 39,999	☐ $70,000 - 79,999	