Disordered Eating Among Sex Trafficking Survivors: An Application of Objectification Theory to Experiences of Extreme Objectification

Lauren Hayes

Follow this and additional works at: https://digitalcommons.memphis.edu/etd

Recommended Citation

This Dissertation is brought to you for free and open access by University of Memphis Digital Commons. It has been accepted for inclusion in Electronic Theses and Dissertations by an authorized administrator of University of Memphis Digital Commons. For more information, please contact khggerty@memphis.edu.
DISORDERED EATING AMONG SEX TRAFFICKING SURVIVORS: AN APPLICATION OF OBJECTIFICATION THEORY TO EXPERIENCES OF EXTREME OBJECTIFICATION

by

Lauren Hayes

A Dissertation
Submitted in Partial Fulfillment of the
Requirements for the Degree of
Doctor of Philosophy
Major: Counseling Psychology
The University of Memphis
August 2022
Abstract

While precise prevalence rates are not available, it is expected that there are many survivors of sex trafficking within the United States. Substantial evidence demonstrates the physical, mental, and social health disparities experienced by sex trafficking survivors (STS). The limited exploration of disordered eating symptomology in STS is a notable gap in understanding their health needs, especially considering the known link between exposure to trauma and disordered eating. One purpose of this study was to document the occurrence of disordered eating in a sample of STS. The current study also examined the unique effect of the sex trafficking experience, separate from other traumas, in explaining disordered eating directly and indirectly through variables of self-surveillance and body shame. Survey data related to sex trafficking status, disordered eating, self-surveillance, body shame, and discrimination were collected from 180 women who were not trafficked and 113 women who were trafficked. Findings demonstrate that STS report higher rates of disordered eating than their non-trafficked counterparts. Additionally, when controlling for general trauma and subjective socioeconomic status, trafficking status was found to significantly predict disordered eating through certain mechanisms of self-objectification, including body shame, and a combination of self-surveillance and body shame, but not self-surveillance alone. These results have implications for future research and clinical work with STS, which will be instrumental in mitigating the impact of the sex trafficking epidemic plaguing women in the U.S.

Key words: sex trafficking, disordered eating, trauma, objectification
# Table of Contents

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Introduction</td>
<td>1</td>
</tr>
<tr>
<td>Sex Trafficking in the United States</td>
<td>1</td>
</tr>
<tr>
<td>Lived Experiences of STS</td>
<td>2</td>
</tr>
<tr>
<td>Negative Health Outcomes</td>
<td>3</td>
</tr>
<tr>
<td>Disordered Eating and Trauma</td>
<td>4</td>
</tr>
<tr>
<td>Objectification Theory</td>
<td>5</td>
</tr>
<tr>
<td>Extended Objectification Theory</td>
<td>6</td>
</tr>
<tr>
<td>Purpose of the Present Study</td>
<td>8</td>
</tr>
<tr>
<td>2. Method</td>
<td>11</td>
</tr>
<tr>
<td>Sample</td>
<td>11</td>
</tr>
<tr>
<td>Instruments</td>
<td>14</td>
</tr>
<tr>
<td>Procedure</td>
<td>18</td>
</tr>
<tr>
<td>3. Results</td>
<td>20</td>
</tr>
<tr>
<td>Data Preparation</td>
<td>20</td>
</tr>
<tr>
<td>Preliminary Analysis</td>
<td>21</td>
</tr>
<tr>
<td>Main Analyses</td>
<td>24</td>
</tr>
<tr>
<td>4. Discussion</td>
<td>28</td>
</tr>
<tr>
<td>Limitations</td>
<td>32</td>
</tr>
<tr>
<td>Implications for Research</td>
<td>33</td>
</tr>
<tr>
<td>Implications for Practice</td>
<td>34</td>
</tr>
<tr>
<td>5. Conclusion</td>
<td>35</td>
</tr>
<tr>
<td>References</td>
<td>36</td>
</tr>
</tbody>
</table>
Introduction

Sex Trafficking in the United States

The Victims of Trafficking and Violence Protection Act of 2000 operationalizes sex trafficking as “a commercial sex act that is induced by force, fraud, or coercion, or in which the person induced to perform such an act has not attained 18 years of age” (U.S. Department of State, 2000, Sec. 103. Definitions). The United States (U.S.) federal government does not consider prostitution by willing adults sex trafficking, regardless of whether it is criminalized, although there is scholarly debate regarding the differentiation of sex trafficking from prostitution (Mutfic & Finn, 2013). Discrepancies in defining sex trafficking may be one reason for the inconsistencies in prevalence data for sex trafficking (U.S. State Department, 2019). For instance, the National Human Trafficking Hotline received 7,859 reports of sex trafficking in 2018; however, this is likely a gross underestimation of the prevalence of sex trafficking in the U.S. (Polaris Project, 2018). Another reliable source, the Trafficking in Persons Report (U.S. State Department, 2019), cited only 833 human trafficking investigations opened in 2018 by the U.S. Department of Homeland Security. Even with the inconsistencies in how data related to sex trafficking are gathered and reported, it is clear that trafficking affects many individuals, often in devastating ways.

Based on scant existing data from court cases, sex trafficking survivors (STS) in the U.S. are overwhelmingly female, young (under the age of 18), and U.S. citizens (Banks & Kyckelhahn, 2011). Additionally, STS are more likely to identify as Black (40%) or White (26%) than any other race (Banks & Kyckelhahn, 2011). Despite these trends, STS can be any age, gender, nationality, or race. Universal risk factors for being trafficked have been identified and include childhood exposure to trauma (Hopper & Gonzalez, 2018; Reid et al., 2017),
maintaining a stigmatized identity such as being part of the LGBTQ+ community, having been involved in the foster care system (U.S. State Department, 2019), poverty, lack of family support, and limited education (Clawson et al., 2009). Although this much is known about STS, it is critical to continue exploring the lived experiences of this group, in particular, the ways in which the trafficking experience negatively affects physical and mental health functioning for survivors. One potentially affected area that has received little attention is disordered eating. Yet the trauma, restricted autonomy, and powerlessness that characterizes the trafficking experience (Ioannou & Oostinga, 2015; Sukach et al., 2018) could set the stage for disordered eating. Using objectification theory (Fredrickson & Roberts, 1997; Moradi, 2010), this study examined the direct and indirect relationships between being a sex trafficking survivor and disordered eating.

**Lived Experiences of STS**

The experience of being trafficked is characterized by almost daily trauma. Sukach and colleagues (2018) provided a detailed account of some of the experiences that STS undergo while being trafficked. Survivors are often inducted into the industry through an initiation process involving physical violence and perpetration of gang rapes and other sexual violence. This allows traffickers to gain power and control over their victims. Throughout the duration of the trafficking experience, survivors’ freedom is restricted; they lose their autonomy, voice, and rights to make decisions; and they are completely isolated, further perpetuating their powerlessness and helplessness. Traffickers have been found to assert control over their victims through controlling access to housing, social isolation, threat of or actual physical violence, confiscation of travel documents, restricting access to financial means, constant surveillance, psychological abuse, and threat of shame and humiliation (Ioannou & Oostinga, 2015). The shared commonality among these methods of control is the dehumanization of STS; survivors
are treated by their traffickers as no more than objects, with no respect or dignity, and merely something to exploit for financial gain. Given the great degree of trauma, including abuse, exploitation, and objectification, that STS are exposed to while being trafficking, this population is susceptible to a broad array of health conditions that impact functioning and overall quality of life (Sukach et al., 2018).

**Negative Health Outcomes**

Understanding the physical and mental health needs of STS is critical given the extreme trauma that this population suffers while being trafficked (Sukach et al., 2018; Zimmerman et al., 2011). STS demonstrate elevated rates of physical health concerns, which have also been linked to the high prevalence of violence experienced when being trafficked (Ottisova et al., 2016). Based on a meta-analysis related to health outcomes of trafficked people (Ottisova et al., 2016), evidence suggests that back pain, headaches, and stomach pain are prevalent in this population. Additional documented physical health concerns for STS include chronic pain, memory impairment, fatigue, malnutrition, and cardiovascular risk (Clawson et al., 2009; Zimmerman et al., 2011). Sexually transmitted infections such as chlamydia, gonorrhea, and HIV/AIDS have been documented as occurring at rates ranging between 15% to 74% (for review see Le et al., 2018). STS are at great risk for physical violence and, as a result, demonstrate high rates of adverse physical health outcomes that warrant attention when providing aftercare services to this population.

In a sample of STS seeking aftercare services in Europe, elevated rates of depression and suicidal thoughts, posttraumatic stress disorder, and anxiety were identified (Zimmerman et al., 2011). Hopper and Gonzalez (2018) corroborated these findings within a sample of STS in the U.S., finding high occurrences of mental health disorders, such as depression (70%) and
posttraumatic stress disorder (68%). In order to cope with such traumatic experiences, STS often employ maladaptive coping skills such as alcohol use, drug use, and self-harm (Sukach et al., 2018). Alcohol and drugs also serve as a means for traffickers to control STS, a way to stay warm while on the streets, and to have energy to sustain long hours (Sukach et al., 2018; Zimmerman et al., 2011). Substantial evidence indicates the prevalence of co-occurring mental health disorders for STS and highlights the need for comprehensive treatment approaches when providing services to STS (Clawson et al., 2009). Although disordered eating in STS has not been studied, racial minority women who have suffered intimate partner violence experience similar high rates of violence. Results from a recent meta-analysis indicate high rates of disordered eating in that population (Stockman et al., 2015).

In conjunction with elevated risk of mental and physical health conditions, STS are often exposed to social barriers, such as lack of knowledge of services, absence of job training, difficulty acquiring housing, limited access to health care, and legal insecurities (Clawson et al., 2009; Rajaram & Tidball, 2018). Such social disparities are thought to exacerbate mental and physical health disparities experienced by STS (Muftić & Finn, 2013). Overall, the extreme trauma this population is exposed to dramatically increases STS’ likelihood of experiencing health disparities and impacts STS’ aftercare needs. As such, it is necessary to investigate other health outcomes, such as disordered eating, that STS are likely to develop as a result of the degree of trauma to which they are exposed.

**Disordered Eating and Trauma**

Despite the knowledge about the other negative health conditions experienced by STS, there is a dearth of literature examining the occurrence of disordered eating within this population (Le et al., 2018). Symptoms of disordered eating include, but are not limited to, food
restriction, purging, binge eating, and body image disturbance (American Psychiatric Association [APA], 2013). Although clinical diagnoses of anorexia nervosa, bulimia nervosa, and binge-eating disorder are relatively uncommon in the general population, disordered eating behavior that does not meet criteria for a diagnosis, also known as subclinical disordered eating, has been shown to occur at alarming rates (Shaefer & Thompson, 2018). Both clinically significant eating disorders and subclinical disordered eating constitute serious health risks for women (for review see National Eating Disorder Association [NEDA], 2018). Disordered eating is difficult to treat due to low treatment-seeking rates and high relapse rates (for review, see Holmes et al., 2019); as such, it is critical to identify those at heightened risk for disordered eating and tailor interventions to meet specific population needs.

Although most women in the Western cultures have a relatively high risk of disordered eating, subgroups of women are even more susceptible to increased risk of disordered eating due to their exposure to traumatic life events. Empirical research with victims of intimate partner violence (Bartlett et al., 2018; Lacey et al., 2015), victims of interpersonal trauma (Holmes et al., 2019), and victims of childhood abuse and neglect, including childhood exposure to intimate partner violence (Kimber et al., 2017), has demonstrated a link between experiences of trauma and disordered eating. However, no previous studies have documented the rates of disordered eating in STS and whether that frequency is greater than that in the general population of women.

**Objectification Theory**

Objectification theory can be utilized to conceptualize the traumatic experiences of STS and explain some health outcomes for this population (Fredrickson & Roberts, 1997), especially those related to disordered eating. In Fredrickson and Roberts’ model, sexual objectification
refers the degree to which a women’s body is treated like an object to be looked at, evaluated, and consumed. Through internalization of this societal norm, women are conditioned to see themselves as merely body parts and to consider how their body parts meet, or do not meet, societal standards. Thus, women’s internalization of messages from observers regarding their physical selves leads to self-objectification and habitual body monitoring and comparison against the societally established norm for the “appropriate or ideal body type.”

Self-objectification and comparison frequently lead to negative emotions such as shame and anxiety (Moradi & Huang, 2008; Shaefer & Thompson, 2018). Objectification theory suggests these mechanisms then explain increased rates of emotional distress and disordered eating (Fredrickson & Roberts, 1997). This theoretical framework has been used to explain disordered eating in populations similar to that of STS, including women who have experienced sexual victimization (Holmes & Johnson, 2017) and adolescents who have been victims of peer sexual harassment (Petersen & Hyde, 2013). Holmes and Johnson (2017) extended previous research utilizing objectification theory by examining extreme objectifying experiences (i.e., sexual victimization), specifically how internalization of messages is associated with disordered eating through self-surveillance and body shame. As such, objectification theory (Fredrickson & Roberts, 1997) demonstrates utility with populations, similar to STS, that have experienced extreme sexual objectification.

Extended Objectification Theory

Moradi (2010) proposed an extension of Fredrickson and Roberts’ (1997) objectification theory that includes the influence of socialization experiences of racially and ethnically diverse women on the self-objectification process, and the mental health symptomology they may experience. Specifically, Moradi (2010) emphasized sexual objectification, gender or cultural
identity conflict, and experiences of racism or heterosexism that differentially affect racially and ethnically diverse women. Discrimination is a powerful socialization experience that conveys messages about one’s social acceptability, resulting in a distinctive experience of the self-objectification process. Moradi’s (2010) extended theory has been used to conceptualize disordered eating within populations of racial minority women, including Asian American women (Cheng et al., 2017) and Latinas (Velez et al., 2015).

As Moradi’s (2010) model emphasizes the impact of racial discrimination in the process of objectification, it is logical that discrimination based on other identities might impact the outcome of disordered eating, as well. One way of defining discrimination, perceived everyday discrimination (PED), refers to perception of subtle, everyday actions resulting from a negative judgment associated with group membership, that can be either real or expected (Essed, 1991; Pascoe & Richman, 2009; Pieterse et al., 2012). PED has not only been associated with increased stress, but also a decrease in health-related behaviors (i.e., eating, exercising, and resting) that can similarly influence adverse health outcomes (Pascoe & Richman, 2009). Even when controlling for economic factors, gender and race-based PED have been empirically linked to poor food-related decision making, which was hypothesized to be due to the exhausting nature of the experience of discrimination and, thus, inhibited self-regulation when making food-related decisions (Pascoe & Richman, 2011). Receiving multiple negative messages about one’s group is likely to enhance the self-objectification process. As such, PED might be expected to strengthen the relationship between self-survey and subsequent body shame that leads to disordered eating. Thus, in this study, PED was examined as a potential moderator of the self-survey – body shame relationship in the objectification model. Accounting for the moderating role of PED in the development of disordered eating symptomology will be valuable in extending the
literature base on objectification and disordered eating in STS, who are likely exposed to higher rates of PED than the general population given the marginalized identities that many STS maintain.

**Purpose of the Present Study**

Little literature connects the occurrence of disordered eating with the experience of being sex trafficked, despite research that highlights the abundant health disparities experienced by STS (Clawson et al., 2009; Le et al., 2018; Muftić & Finn, 2013; Ottisova et al., 2016; Rajaram & Tidball, 2018; Stockman et al., 2015; Zimmerman et al., 2011). Given the high rates of trauma to which STS are exposed (Ioannou & Oostinga, 2015; Sukach et al., 2018), and empirical support for the connection between trauma and disordered eating (Bartlett et al., 2018; Holmes et al., 2019; Kimber et al., 2017; Lacey et al., 2015), it is expected that this population is at heightened risk for disordered eating. This study examined disordered eating in STS through the lens of objectification theory (Fredrickson & Roberts, 1997), and more specifically, through an extended objectification theory framework that also considered compounding discrimination (Moradi, 2010). As the majority of individuals who are trafficked are women and objectification, as assessed in the current study, is applicable to only women, participation in this study was limited to individuals who identified as women.

First, this study assessed the occurrence of disordered eating in a sample of STS, something that has not previously been demonstrated. This question was descriptive in nature and identified the number of STS participants that scored at or above an empirically-derived indicator score (2.3) on the Eating Disorder Examination Questionnaire. Second, the relationship between trafficking status and disordered eating via self-surveillance and body shame was examined. Figure 1 shows the hypothesized moderated mediation model. Specifically, we
hypothesized the following:

H1: Trafficking status will be positively associated with self-surveillance and body shame.

H2: Self-surveillance will be positively associated with body shame and disordered eating.

H3: PED will moderate the association between self-surveillance and body shame such that experiencing more PED will strengthen the relationship between self-surveillance and body shame.

H4: Body shame will be positively associated with disordered eating.

H5: Controlling for the experience of general trauma on disordered eating, trafficking status will be directly related to disordered eating symptomology and indirectly associated with disordered eating symptomology via self-surveillance and body shame.
Figure 1

Model of the Moderated Mediation Analysis for Trafficking Status, Self-Surveillance, Perceived Everyday Discrimination, Body Shame, and Disordered Eating, controlling for General Trauma on Disordered Eating
Method

Sample

Participants included 180 women who were not trafficked and 113 women who were trafficked, for a total sample of 293 women. Information on the racial composition of both non-trafficked and trafficked participants is displayed in Table 1. The sample of non-trafficked women was composed of only cisgender females, with ages ranging from 19 to 73 (\( M = 32.4, SD = 11.0 \)). Non-trafficked participants reported income levels ranging from less than $10,000 to over $100,000, with the greatest percentage of participants (17.2%) earning between $50,001 and $60,000. On a measure of subjective socioeconomic status ranging from 1 (low) to 10 (high), the largest percentage of non-trafficked participants ranked themselves as 7 (28.3%; \( M = 6.27, SD = 1.59 \)). The majority (85.5%) of non-trafficked women reported their highest level of education as either a bachelor’s degree or a graduate degree.

The sample of STS consisted of 98.2% cisgender females and 1.8% transgender females, with ages ranging from 18 to 66 (\( M = 34.3, SD = 11.1 \)). Length of time since being trafficked ranged from less than 1 month ago (2.7%) to greater than 10 years (2.7%), with the majority (40.7%) indicating between 1-5 years since being trafficked. Reported income levels for STS ranged from less than $10,000 to greater than $100,000, with the equal percentages (14.2%) earning between $0-$10,000, $30,001-$40,000, and $60,001-$70,000. On the measure of subjective socioeconomic status, the largest percentage of trafficked participants ranked themselves as 6 (16.8%; \( M = 6.42, SD = 2.44 \)). The majority (76%) of STS reported their highest level of education as either a bachelor’s degree or a graduate degree. Additional sample demographics are presented in Table 1.
Table 1

Demographic Characteristics of Participants (N = 293)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Trafficked (n = 113)</th>
<th>Non-Trafficked (n = 180)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cisgender female</td>
<td>111</td>
<td>98.2</td>
</tr>
<tr>
<td>Transgender female</td>
<td>2</td>
<td>1.8</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>2</td>
<td>1.8</td>
</tr>
<tr>
<td>Black</td>
<td>17</td>
<td>15</td>
</tr>
<tr>
<td>Latinx</td>
<td>1</td>
<td>0.9</td>
</tr>
<tr>
<td>Multiracial</td>
<td>2</td>
<td>1.8</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>White</td>
<td>91</td>
<td>80.5</td>
</tr>
<tr>
<td>Education level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some high school or lower</td>
<td>5</td>
<td>4.5</td>
</tr>
<tr>
<td>High school diploma or GED</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Vocational/Technical degree</td>
<td>3</td>
<td>3.7</td>
</tr>
<tr>
<td>Associate’s degree</td>
<td>2</td>
<td>1.8</td>
</tr>
<tr>
<td>Some college</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>Bachelor’s degree</td>
<td>65</td>
<td>57.5</td>
</tr>
<tr>
<td>Graduate degree</td>
<td>21</td>
<td>18.6</td>
</tr>
</tbody>
</table>
Table 1 (Continued)

Demographic Characteristics of Participants (N = 293)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Trafficked (n = 113)</th>
<th>Non-Trafficked (n = 180)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Household Income</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than $10,000</td>
<td>16</td>
<td>14.2</td>
</tr>
<tr>
<td>$10,001-20,000</td>
<td>11</td>
<td>9.7</td>
</tr>
<tr>
<td>$20,001-30,000</td>
<td>10</td>
<td>8.8</td>
</tr>
<tr>
<td>$30,001-40,000</td>
<td>16</td>
<td>14.2</td>
</tr>
<tr>
<td>$40,001-50,000</td>
<td>8</td>
<td>7.1</td>
</tr>
<tr>
<td>$50,001-60,000</td>
<td>13</td>
<td>11.5</td>
</tr>
<tr>
<td>$60,001-70,000</td>
<td>16</td>
<td>14.2</td>
</tr>
<tr>
<td>$70,001-80,000</td>
<td>12</td>
<td>10.6</td>
</tr>
<tr>
<td>$80,001-90,000</td>
<td>6</td>
<td>5.3</td>
</tr>
<tr>
<td>$90,001-100,000</td>
<td>4</td>
<td>3.5</td>
</tr>
<tr>
<td>Greater than $100,000</td>
<td>1</td>
<td>0.9</td>
</tr>
<tr>
<td>Health Insurance Coverage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>97</td>
<td>85.8</td>
</tr>
<tr>
<td>No</td>
<td>11</td>
<td>9.7</td>
</tr>
</tbody>
</table>
Instruments

**Sex Trafficking Status**

Sex trafficking survivor status was assessed through a series of questions based on the definition of sex trafficking put forth by the U.S. Department of State in the Victims of Trafficking and Violence Protection Act of 2000. The questions include: “Has an employer, boyfriend, pimp, family member or any other person ever forced or pressured you to: a) Put your photo on the Internet to find clients to trade sex/sexual acts for money, favors, or anything else of value? b) Engage in sex/sexual acts with family, friends, or business associates for money, favors, or anything else of value? c) Do sexual acts or have sex, including taking sexual photos or videos, for money, favors, or anything else of value? d) Trade sex/sexual acts for money, shelter, food, or anything else of value through online websites, escort services, street prostitution, informal arrangements, brothels, fake massage businesses or strip clubs?” An affirmative response to any of these questions indicated the participant had been sex trafficked and, thus, the participant was included in the STS sample. Trafficked status was coded as 1 and non-trafficked status was coded as 0.

**Eating Disorder Examination Questionnaire (EDE-Q)**

The EDE-Q is a 28-item self-report measure to assess disordered eating cognitions and behaviors from the past 28 days (Fairburn & Beglin, 1994). The scale consists of four subscales, including: dietary restraint (e.g., “Have you gone for long periods of time (8 waking hours or more) without eating anything at all in order to influence your shape or weight?”), eating concern (e.g., “Has thinking about food, eating or calories made it very difficult to concentrate on things you are interested in (for example, working, following a conversation, or reading)?”), shape concern (e.g., “How dissatisfied have you been with your shape?”), and weight concern (e.g.,
“Has your weight influenced how you think about (judge) yourself as a person?”). Participants rate items on a Likert-type scale ranging from 0 (no days/not at all/none of the times) to 6 (every day/markedly/every time). Relevant items are averaged to form the four subscales and subscale scores are averaged to produce a Global Score, with higher scores indicative of greater levels of disordered eating symptomology. Some items (those that are not answered on the Likert scales) do not contribute to any subscales or the global score, and were excluded from the survey.

Based on Mond et al.’s (2004) findings within a community sample of women, a global score of 2.3 or greater indicates the presence of disordered eating. Scores on all four subscales of the EDE-Q demonstrated exceptional test-retest reliability over a two-week time period among female undergraduate students, with correlations ranging from .81 to .94. Further, Cronbach’s alphas demonstrated satisfactory internal consistency for time 1, with scores ranging from .78 to .93, and for time 2, with scores ranging from .81 to .92 (Luce & Crowther, 1999). In a review (Berg et al., 2012), EDE-Q subscale scores exhibited Cronbach’s alphas for internal consistency in the following ranges in populations such as undergraduate women and a community sample of Black and White women: dietary restraint (.70-.85), eating concern (.73-.86), shape concern (.83-.93), and weight concern (.72-.89). Global and subscale scores on this measure demonstrate consistently sound reliability and validity with diverse samples, including Black and Hispanic women (Franko et al., 2012; Kelly et al., 2012; Lydecker et al., 2016; Schaefer et al., 2018). Cronbach’s coefficients for the EDE-Q and other study measures are presented in Table 2.

**Objectified Body Consciousness Scale (OBC)**

The OBC assesses self-objectification constructs and consists of three subscales, the body surveillance subscale (referred to as self-surveillance in this study), body shame subscale, and appearance control beliefs subscale (McKinley & Hyde, 1996). The self-surveillance
subscale is an 8-item scale that assesses how much a woman considers how her body looks, as opposed to how it feels (e.g., “During the day, I think about how I look many times.”). The body shame subscale is an 8-item scale that measures whether a woman believes that she is bad when she does not achieve cultural standards of beauty (e.g., “I feel like I must be a bad person when I don’t look as good as I could.”). The appearance control beliefs subscale has not demonstrated empirical utility and is suggested to have significantly less predictive validity for self-objectification than originally theorized (Moradi & Varnes, 2017); as such, this subscale was not administered in this study. Each subscale utilizes a Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree). Items on the subscales are averaged, with higher subscale scores indicating greater presence of the relevant construct. Cronbach’s alphas for scores on the self-surveillance and body shame subscales of the OBC all exceeded .70 in a sample of U.S. college women (Moradi & Varnes, 2017). Further, among U.S. college women, Moradi and Varnes (2017) found support for the convergent validity of scores on both the body shame and self-surveillance subscales.

**Everyday Discrimination Scale (EDS)**

The EDS is a 10-item self-report measure for assessing experiences of perceived everyday discrimination (Williams et al., 1997). The first nine items measure the frequency that participants experience unfair treatment that is routine, chronic, and relatively minor. An example item includes, “People act as if they think you are not smart.” Items are scored on a 6-point Likert-type scale ranging from 1 (almost every day) to 6 (never). To calculate the sum, items are reverse scored, with higher total scores indicating more frequent experiences of PED. The last item instructs participants to report what they perceive to be the primary reason or reasons (i.e., race/ethnicity, gender, socioeconomic status) for the perceived discrimination. The
EDS has been utilized with diverse samples, and findings indicate factorial invariance of scores across various racial/ethnic groups (Kim et al., 2014). Additionally, Michaels et al. (2019) found a Cronbach’s alpha of .95 utilizing the EDS with a sample of African American women, demonstrating internal reliability for the nine-item EDS scale. EDS scores also demonstrate good construct validity as evidenced by moderate to strong associations with consequential symptoms of perceived discrimination among Black adolescents (Clark et al., 2004) and with other measures that are expected to assess similar constructs among a sample of Black, Latino, and White adults aged 25-64 (Krieger et al., 2005).

**Life Events Checklist for DSM-5 (LEC-5)**

The LEC-5 is a 17-item self-report questionnaire designed to assess lifetime traumatic exposure to potentially traumatic life events known to result in PTSD or distress (Weathers et al., 2013). This questionnaire aligns with diagnostic Criterion A for posttraumatic stress disorder in the DSM-5. Examples of events included on this questionnaire are: “fire or explosion” and “assault with a weapon (for example, being shot, stabbed, threatened with a knife, gun, bomb).” Participants respond to items by selecting all of the following that apply to them: Happened to me, Witnessed it, Learned about it, Part of my job, Not sure, or Doesn’t apply. For this study, the following modified instructions were included: “For the purposes of these questions, respond to items considering your entire life (growing up as well as adulthood), except during times you were being sex trafficked (if applicable).” Responses that reflected endorsement of any degree of exposure (i.e., happened to me, witnessed it, learned about it, part of my job) to a traumatic life event were scored as a 1 and totaled. Scores on this measure can range from 0 to 17 with higher scores indicating greater exposure to trauma. Although updated psychometrics are not available for the most recent version of LEC, the original LEC demonstrated adequate psychometric
properties and there have been only minimal changes between the original and current versions. Specifically, the LEC demonstrates satisfactory convergent validity with measures assessing exposure to traumatic events and psychopathology known to result from traumatic exposure (i.e., PTSD Checklist for DSM-5). Further, test-retest reliability, at both the item and total scale levels, has been established as reasonably stable over a 7-day period (Gray et al., 2004). This measure served as an indicator of general trauma, separate from trauma related to trafficking, which was controlled for in the analysis.

**Procedure**

Following institutional review board approval, several data collection methodologies were employed. In part, the sample of STSs was a nonrandom, convenience sample acquired through partnerships with anti-trafficking agencies in the southern U.S. The various partner agencies, which provide a spectrum of services to STSs, offered clients the opportunity to take the surveys in order to further research and improve services available to this population. Participants were invited to participate in the research study when engaging with representatives of organizations at events and when receiving services at the organization. Representatives made it clear to prospective participants that their participation did not affect their ability to receive services through the partnership organizations. Data were gathered using both online and paper surveys \((n = 31)\), in order to accommodate participants who do not have online access. A total of 600 participants, both trafficked and non-trafficked, accessed the online survey, however, 295 participants did not complete the survey and their data were removed. Initially, 234 participants completed the online survey, with 19 of those participants identifying as trafficking survivors. To supplement collection of data from women who had been trafficked, a random sample of STS was collected via Amazon Mechanical Turk (MTurk), wherein participants \((n = 366)\) were
screened for inclusion criteria (e.g., citizenship, age, and sex trafficking experiences) prior to receiving the survey. Non-trafficked women learned about the study and accessed the survey via social media (e.g., Facebook) and snowball sampling in which participants were asked to share the study information. For individuals in both samples who indicated interest in participation, informed consent was obtained, and the 15-20-minute survey was administered. After survey completion, all participants, other than those solicited via MTurk, had the opportunity to enter their email address to win an incentive (e.g., gift card) for their participation. MTurk participants who met inclusion criteria and completed the survey were paid $2 for their time. Due to the nature of the questions being asked, mental health resources, specifically for trauma and disordered eating, were provided to participants.
Results

Data Preparation

Prior to conducting the statistical analyses, we assessed for incomplete and inattentive responding and excluded participants who had completed the study, but were missing more than 15% of data on any one scale. Data sets for 10 participants were removed for incomplete responses. Also, as a second measure of carelessness, we included attention check items (i.e., instructing participants to leave certain items blank) and deleted cases (n = 38) in which participants answered incorrectly on those items. Next, we assessed for outliers in the data set. Univariate outliers, or unusual scores on one particular variable, were investigated by converting each variable to z-standard scores, where scores greater than or equal to a standard z score of 3.29 are considered to be outliers. Multivariate outliers, or unusual scores with respect to several variables simultaneously, were evaluated by calculating the Mahalanobis distance and Cook’s distance for each participant and cutoffs were determined using methods recommended by Chatterjee and Hadi (2013). Based on these criteria, five participants were removed from the sample, resulting in the final sample of 293.

We tested the assumptions for an ordinary least squares regression model, which include linearity of relationship between variables, normality of regression residuals, homoscedasticity, and lack of multicollinearity. To test linearity of the relationship between variables, visual inspection of the scatterplots between the predictor variables of surveillance, shame, and general trauma (excluding the dichotomous variable of trafficking status) and the criterion variable was completed and screened for any non-linear associations between variables. To test normality of regression residuals, we visually examined Q-Q plots of residuals and those indicated normality.
A scatterplot of the residual versus fitted values and yielded no evidence of heteroscedasticity. Finally, examination of correlations suggested low likelihood of multicollinearity.

**Preliminary Data Analysis**

Before conducting tests of the hypotheses, we examined differences between the sources of data (paper, online) on the study variables. A Levene’s Test of Equality of Error Variances revealed that the assumption of equality of variances for the disordered eating, self-surveillance, and body shame variables was not violated. An independent samples t-test indicated a significant difference on disordered eating ($t_{291} = 3.60$, $p < .001$) and body shame ($t_{291} = 2.76$, $p < .01$) between paper versus online data. There was no significant difference on self-surveillance ($t_{291} = -0.06$, $p = .954$) between paper and online data. The significant findings are likely explained by the disproportionate number of trafficked participants comprising the paper data as most of the individuals accessing the paper version were receiving services from agencies serving STS.

Next, a series of $t$-tests and chi-square analyses examined differences between trafficked and non-trafficked participants on the demographic variables of age, annual income, education level, and subjective socioeconomic status, and study variables of discrimination, trauma exposure, and disordered eating. The Levene’s Test of Equality of Error Variances for the demographic variables age and annual income, in addition to the study variables of disordered eating, self-surveillance, discrimination, and trauma exposure, were non-significant indicating the assumption of equality of variances was not violated. Findings suggest that there were no significant differences between trafficked and non-trafficked participants on age ($t_{287} = -1.44$, $p = .152$) and annual income ($t_{291} = 0.34$, $p = .736$). Examination of the $t$-tests for study variables revealed significant differences between the two groups on disordered eating ($t_{291} = -5.94$, $p < .001$), self-surveillance ($t_{291} = 8.66$, $p < .001$), and trauma exposure ($t_{291} = -9.11$, $p < .001$). The
Levene’s Test of Equality of Error Variances for the remaining variables, including education level, subjective socioeconomic status, body shame, and discrimination, were significant. Thus, the $t$ statistic for equal variances not assumed was used to examine differences between groups on these variables. There were significant differences in education level ($\chi^2(2) = 20.83, p = < .001$) and subjective socioeconomic status ($t_{169.91} = -0.59, p < .001$) between trafficked and non-trafficked participants. Likewise, there was a significant difference between scores on body shame ($t_{279.75} = -3.57, p < .001$) and discrimination ($t_{202.24} = -6.65, p < .001$) between the two groups of participants. Preliminary analyses indicated significant differences between groups on education level and subjective socioeconomic status, indicating the need to include a measure of economic resources in the model as a control. The education and subjective socioeconomic status variables are moderately positively correlated $r(292) = .44, p < .001$, thus, we elected to control for only subjective socioeconomic status (SSES) in the main analysis. Table 2 displays the correlations among study variables and scale Cronbach’s alpha coefficients while Table 3 presents the results of the preliminary $t$-tests. All scale internal consistencies were acceptable. All trauma, discrimination and objectified body consciousness scales were significantly correlated with the measure of disordered eating in the expected directions.
### Table 2

**Internal Consistencies for and Correlations Between Global Eating Pathology, Self-Surveillance, Body Shame, Discrimination, and Trauma Exposure**

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. EDE-Q-Global</td>
<td>.95</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. OBC-Surveillance</td>
<td>.15*</td>
<td>.84</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. OBC-Shame</td>
<td>.70**</td>
<td>.35**</td>
<td>.80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. EDS</td>
<td>.24**</td>
<td>-.10</td>
<td>.23**</td>
<td>.90</td>
<td></td>
</tr>
<tr>
<td>5. LEC</td>
<td>.28**</td>
<td>-.30**</td>
<td>.17**</td>
<td>.35**</td>
<td>.90</td>
</tr>
</tbody>
</table>

*Note. N = 293. Numbers in parentheses on the diagonal represent Cronbach’s alphas. EDE-Q-Global = Eating Disorder Examination Questionnaire Global scale; OBC = Objectified Body Consciousness Scale; OBC-Surveillance = OBC Self-Surveillance subscale; OBC-Shame = OBC Body Shame subscale; EDS = Everyday Discrimination Scale; LEC = Life Events Checklist for DSM-5.

*p < .05. **p < .01.
Table 3

Means, Standard Deviations, and t-Test Comparisons Between Trafficked (n = 113) and Non-Trafficked (n = 180) Participants

<table>
<thead>
<tr>
<th>Variable</th>
<th>Trafficked</th>
<th>Non-Trafficked</th>
<th>t-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>34.32</td>
<td>32.40</td>
<td>-1.44</td>
</tr>
<tr>
<td>Annual Income</td>
<td>4.98</td>
<td>5.09</td>
<td>0.34</td>
</tr>
<tr>
<td>Education Level</td>
<td>7.39</td>
<td>8.07</td>
<td>3.35***</td>
</tr>
<tr>
<td>Subjective Socioeconomic Status</td>
<td>6.42</td>
<td>6.27</td>
<td>-0.59***</td>
</tr>
<tr>
<td>EDE-Q-Global</td>
<td>3.15</td>
<td>2.23</td>
<td>-5.94***</td>
</tr>
<tr>
<td>OCB-Surveillance</td>
<td>3.70</td>
<td>4.79</td>
<td>8.66***</td>
</tr>
<tr>
<td>OBC-Shame</td>
<td>4.28</td>
<td>3.83</td>
<td>-3.57***</td>
</tr>
<tr>
<td>Everyday Discrimination Scale</td>
<td>25.07</td>
<td>18.76</td>
<td>-6.65***</td>
</tr>
<tr>
<td>Life Event Checklist</td>
<td>12.96</td>
<td>8.23</td>
<td>-9.11***</td>
</tr>
</tbody>
</table>

Note. EDE-Q = Eating Disorder Examination Questionnaire; Global = Global Scale; OBC = Objectified Body Consciousness; Surveillance = Self-Surveillance subscale; Shame = Body Shame subscale.

***p < .001.

Main Analyses

The first question regarding the occurrence of disordered eating in a sample of STS was addressed through chi-square analyses to determine whether there was a statistical difference in eating pathology between non-trafficked women and STS. A value of 2.3 or greater on the EDE-Q Global Scale is suggestive of an eating disorder (Mond et al., 2004). Regarding the occurrence of disordered eating amongst STS participants, descriptive statistics revealed that 74.3% of STS participants scored greater than or equal to 2.3 on the EDE-Q global scale. This is compared to 46.7% of non-trafficked participants who scored greater than or equal to 2.3 on the EDE-Q
global scale. The chi-square analysis yielded a significant $X^2$ value ($X^2(2) = 21.72, p < .001$), suggesting that STS have higher rates of eating pathology than non-trafficked women.

The next hypotheses proposed associations between trafficking status and disordered eating by considering variables related to self-objectification (e.g., self-surveillance, body shame), and everyday discrimination experiences while controlling for general trauma and subjective socioeconomic status. To test these hypotheses, we used ordinary least squares regressions, calculated using the Hayes (2018) PROCESS model specifying serial mediation with one moderated path (Model 91, see Figure 1) and the addition of the control variables. Hayes’s (2018) PROCESS macro for SPSS calculates ordinary least squares regressions and provides information on the direct, indirect, and total effects of trafficking status and self-objectification (self-surveillance, body shame) on disordered eating, while controlling for general trauma and SSES. PROCESS uses an empirically derived representation of the sampling distribution of the indirect effect in order to create a bias-corrected bootstrap interval (5,000 bootstrap samples) (Preacher & Hayes, 2008). The examined effects (total, direct, indirect) are considered statistically significant if zero is not included in the computed bias-corrected bootstrap interval. The test for moderation produces the index of moderated mediation, indicating whether the indirect effect is conditional on the level of the moderator (everyday discrimination).

Although the model was significant and indicated mediation, the everyday discrimination variable did not have a significant moderating effect on the indirect effect (index of moderated mediation = 1.01, bootstrap 95% Confidence Interval -.02, .00), so we opted to exclude it and tested a model that only specified serial mediation (Model 6, see Figure 2) with covariates of general trauma and subjective socioeconomic status. Due to how the PROCESS macro is written,
covariates are included in all tested equations, not just the regression equation for disordered eating.

Similar to Model 91, Model 6 provides information on the direct, indirect, and total effects of trafficking status and self-objectification (self-surveillance, body shame) on disordered eating, while controlling for general trauma and SSES. Overall, the regression model was significant, with trafficking status, self-surveillance, and body shame explaining 56% of the variance in disordered eating. Trafficking status was significantly negatively associated with self-surveillance, $t(288) = -6.98$, $p < .001$ while trafficking status was significantly positively associated with body shame when controlling for self-surveillance, $t(287) = 6.39$, $p < .001$, supporting Hypothesis 1. Although the significant relationship between trafficking status and self-surveillance was expected, the fact that it was a negative relationship was not. The constructs of self-surveillance and body shame were significantly positively associated, $t(287) = 10.25$, $p < .001$, partially supporting Hypothesis 2. Also as expected, there was a significant direct effect from body shame to disordered eating, $t(286) = 13.17$, $p < .001$ (supporting Hypothesis 4), however, self-surveillance was not positively associated with disordered eating, $t(286) = 1.54$, $p = .124$, which did not support Hypothesis 2. The direct effect of trafficking status on disordered eating remained significant even when accounting for the mediator and control variables, $t(285) = 3.87$, $p < .001$. Trafficking status also had a significant indirect effect through the mediator variable of body shame (partially standardized effect = .49, 95% bootstrap CI = .34, .67) and the combined variables of self-surveillance and body shame (partially standardized indirect effect = -.30, 95% bootstrap CI = -.44, -.19), but not through self-surveillance alone (partially standardized indirect effect = -.06, 95% bootstrap CI = -.18, .03). Thus, while trafficking status was directly related to self-objectification and disordered eating, it
is also indirectly related to disordered eating via objectification, especially body shame.

Hypothesis 5 was supported. Figure 2 displays the standardized regression coefficients from the model.

**Figure 2**

*Standardized Regression Coefficients for the Mediation Analysis for Trafficking Status, Body Surveillance, Body Shame, and Disordered Eating, controlling for General Trauma and Subjective Socioeconomic Status (SSES)*

*Note. *p < .05. **p < .01. ***p < .001.*
Discussion

Despite inconsistent data regarding the exact extent of sex trafficking, there are large numbers of people suspected to be survivors of sex trafficking within the United States. Substantial evidence demonstrates the physical, mental, and social health disparities experienced by these STS due to the extreme trauma survivors are subjected to when being trafficked. A gap in the literature related to STS health disparities is the exploration of disordered eating symptoms; this gap is especially notable considering the supported link between exposure to trauma and disordered eating. As such, the purpose of this research was to document the occurrence of disordered eating in a sample of sex trafficking survivors, something that has not been demonstrated. Following that, the study explored the unique effect of the sex trafficking experience, separate from other traumas, in explaining disordered eating directly and through facets of self-objectification, including self-surveillance and body shame.

The findings from this study contribute to the extant literature related to sex trafficking, eating pathology, and objectification theory. On a fundamental level, these data offer additional descriptive information about the population of STS in the U.S. that has received limited attention. Demographics of study participants indicated trafficked and non-trafficked participants were similar across demographics variables of age and annual income, which suggests similarities between STS and women in the general population. This is important as it is a contradiction to the current literature, which emphasizes differences between these groups and creates an othering effect. Further, while non-trafficked participants reported significantly higher levels of educational attainment, the majority of trafficked participants reported a bachelor’s or graduate degree, which is a notable contradiction to data that suggests STS have limited educational attainment (Clawson et al., 2009). Although there were, proportionately, more
Black/African American women in the trafficked sample, the number of racial/ethnic minority participants in the entire sample was too small to conduct analyses testing group differences.

Regarding the occurrence of disordered eating among STS, the findings suggest that the majority (74.3%) of STS reported significant patterns of disordered eating. The average score on the EDE-Q for trafficked participants ($M = 3.15$), but not non-trafficked participants ($M = 2.23$), was above the cutoff identified by Mond et al. (2004). Based on that cut-off score, STS endorsed significantly higher rates of disordered eating when compared to non-trafficked women. This aligns with current literature examining disordered eating in parallel populations, such as women who have experienced sexual victimization (Holmes & Johnson, 2017) and adolescents who have been victims of peer sexual harassment (Petersen & Hyde, 2013). Further, these findings establish disordered eating as a clinical condition that warrants attention within this community, something that had not previously been done.

The experience of objectification is considered traumatic (Fredrickson & Roberts, 1997) and has been consistently empirically linked with both the onset and maintenance of disordered eating (Dakanalis et al., 2017; for review see Shaefer & Thompson, 2018). Moreover, as evident in Sukach et al.’s (2018) account of some of the horrendous experiences that STS undergo while being trafficked, STS are likely to experience extreme objectification, which includes more direct and intense forms of objectifying experiences above and beyond everyday objectification (e.g., leering, unwanted sexual comments; Holmes & Johnson, 2017). Given the limited available research applying objectification theory (Fredrickson & Roberts, 1997) to individuals who have undergone extreme objectification, the application of this theory to STS in this study is a valuable extension of the current literature. Findings indicate that trafficking status was directly and strongly related to disordered eating, even after controlling for self-surveillance and body...
shame, general trauma, and socioeconomic status. Additionally, trafficking status had a significant indirect effect on disordered eating through the combination of both self-surveillance and body shame, again controlling for general trauma and subjective socioeconomic status, with body shame as the more critical mediating variable.

These findings lend support to the utility of objectification theory (Fredrickson & Roberts, 1997) with STS, however, particular attention should be given to the unique roles of body shame and self-surveillance with this population. As proposed in the original theory, the construct of body shame was a strong predictor of disordered eating, particularly for trafficked women. This is logical given nature of trafficking, which is characterized by dehumanization; STS are conditioned by their traffickers to believe they are no more than objects, treated with no respect or dignity, and merely something to exploit for financial gain (Ioannou & Oostinga, 2015; Sukach et al., 2018). The association between some extreme forms of objectification (i.e., sexual victimization) and body shame have been explained as an internalization of perpetrator’s beliefs and/or misattribution of blame for the sexual victimization (for review see Holmes & Johnson, 2017).

While body shame and self-surveillance were highly correlated, the unique role of self-surveillance deviated from that which would be expected, as this construct did not mediate the relationship between trafficking status and disordered eating separate from body shame. This compounds Holmes and Johnson’s (2017) findings that when controlling for everyday objectification, self-surveillance is no longer significant in the association between sexual victimization and disordered eating. The direction of the relationship between trafficking status and self-surveillance was another unexpected finding. Even though self-surveillance was not directly related to disordered eating, it was still significantly related to trafficking status – but in
the opposite direction than hypothesized. Trafficking status was expected to be associated with more self-surveillance rather than less. Trauma literature suggests that survivors of interpersonal traumas, such as sexual victimization, employ dissociative symptoms as one way to cope with distress resulting from their traumatic experiences (Loewenstein, 2001; van der Kolk, et al., 2005). This phenomenon might explain why self-surveillance scores might be lower in populations that experience extreme objectification, like STS.

Moradi’s (2010) extended objectification theory emphasizes the compounding nature of racial discrimination in the objectification process and experiencing discrimination has been empirically linked to poor food-related decision making (Pascoe & Richman, 2011). Thus, this theory suggests discrimination may contribute to higher rates of disordered eating symptomology in populations that experience more discrimination across a variety of situations. Given estimates that STS in the U.S. are likely to maintain at least one marginalized identity (Banks & Kyckelhahn, 2011; Hopper & Gonzalez, 2018; Meshkovska et al., 2015), perceived discrimination was examined as a moderator in the relationship between trafficking status and disordered eating. Although perceived discrimination was significantly correlated with disordered eating and trafficked participants reported significantly more experiences of discrimination, this construct did not predict disordered eating when accounting for other variables in the model, nor did it strengthen the relationship between self-surveillance and shame. Based on this initial finding it was excluded from the main analysis. The absence of significant findings may be explained by the inability to separate the impact of discrimination from other types of traumas, including trauma related to trafficking and body shame. Alternatively, given that Moradi’s model exclusively focuses on the impact of racial
discrimination, the lack of diversity in the present sample may have inhibited fully exploring the role of discrimination as a moderating variable in this study.

**Limitations**

Although this study demonstrated several strengths, some limitations should be acknowledged. First, all data were self-report, and participants were asked to self-select into the respective sample (trafficked versus non-trafficked) by responding to four questions used to assess sex trafficking status. The series of questions was developed based on the definition of sex trafficking put forth by the U.S. Department of State in the Victims of Trafficking and Violence Protection Act of 2000, but it is possible that the language used in these questions may not be relatable for all people, or that some individuals were reluctant to acknowledge trafficking experiences, which could have resulted in miscategorized participants. Despite this risk, the series of questions developed are also a strength of this study, as a standardized method for identifying STS has not been previously documented in the literature.

Second, our sample does not reflect the diversity of STS in the U.S. that has been documented in previous literature. Although current data on incidence rates shows variability, STS in the U.S. generally identify as racial/ethnic minority, female or transgender, and young. However, the majority of STS in this study identified as White, cisgender females with an average age of 34 years old. While it is critical to remember that STS can be any age, gender, nationality, or race, the STS in this study may not be representative of the broader STS population in the U.S. Therefore, caution should be exercised generalizing the findings from this study to all trafficking survivors. However, it is also possible that a more diverse sample might have even fewer educational or economic resources, strengthening an already significant relationship between being trafficked, self-objectification, and disordered eating.
A third limitation of this research is that the cross-sectional, rather than longitudinal, data, does not allow for conclusions about the causality of disordered eating among STS. However, the absence of a direct causal link between trafficking and disordered eating does not negate the finding that rates of disordered eating were higher among this sample of STS compared to women who have not been trafficked. As such, there is clear need for interventions aimed at addressing disordered eating in this population.

**Implications for Research**

This study contributes to the extant literature by supporting the utility of objectification theory with women who have experienced extreme forms of sexual objectification and trauma. Future research should further explore the construct of self-surveillance as a mediator in the relationship between trafficking and disordered eating and whether self-surveillance as typically defined in objectification theory (e.g., concern about body appearance as opposed to body function) is overshadowed by trauma responses, such as dissociation.

In addition to theoretical advancements, this study offers evidence to substantiate disordered eating as a clinical condition that warrants attention among STS. Building on this, future research should explore nuances of disordered eating pathology among STS and the interaction between time since being trafficked and symptomatology. This study broadly explores pathology related to dietary restraint, eating concern, shape concern, and weight concern within the past 28 days. While this approach assesses cumulative disordered eating, it would be advantageous to disaggregate specific concerns measured by the EDE-Q. Additionally, the focus on current pathology could miss past eating issues related to trafficking and trauma experiences that have resolved, thus, gathering historical as well as current information may be beneficial. Examining nuances in disordered eating presentations could contribute to a more
refined understanding of these variables that would be useful in the development of specific interventions.

Also, researchers should strive for greater sample diversity when examining the associations of these variables in STS, as that may help to elucidate the impact of experiences of discrimination as a moderator in the relationship between self-surveillance and shame.

Last, and more broadly related to all research with STS, the series of questions used in this research to identify individuals who have been sex trafficked should be validated against other (i.e., third party, objective) data. Doing so would establish these questions as a standardized method for identifying STS, which could be utilized in research and clinical endeavors with this population.

**Implications for Practice**

Based on the findings, this study establishes the necessity for assessment of disordered eating at agencies serving this population and the development of interventions specific to the population. For example, interventions aimed at mitigating body shame could be particularly relevant. Fostering self-compassion through the use of meditations (Neff, 2019) has been empirically supported as a means by which to decrease body shame and improve body image in women (Albertson et al., 2015). Expansion of services offered through agencies working with STS will require additional funding to support acquisition of training for staff and materials (i.e., treatment protocols). Thus, this research may be beneficial in grant writing to support this recommended expansion of services. In addition to specific clinical interventions, findings from this research further demonstrate the need for increasing the number of mental health professionals who have competencies in both trauma and disordered eating treatment to serve this population.
Conclusion

This study provided clear support for the high incidence of disordered eating among STS and examined the unique effect of the sex trafficking experience, separate from other traumas, in explaining disordered eating through self-objectification. Trafficked women reported higher rates of disordered eating than their non-trafficked counterparts. Additionally, when controlling for general trauma and subjective socioeconomic status, trafficking status indirectly predicted disordered eating through the self-objectification mechanisms of self-surveillance and body shame, with body shame as the strong mechanism related to both trafficking and disordered eating. These conclusions have implications for future research and clinical work with STS, which will be instrumental in mitigating the impact of the sex trafficking epidemic plaguing women in the U.S.
References


[http://dx.doi.org/10.1002/eat.20979](http://dx.doi.org/10.1002/eat.20979)


https://selfcompassion.org/category/exercises/


https://humantraffickinghotline.org/states


