PREDICTORS OF DIFFERENT TYPES OF VICTIM-TRAFFICKER RELATIONSHIPS: AN INTERSECTIONALITY-INFORMED ANALYSIS

by

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Dedication

To my incredible husband, Danny,

and to my daughters, Gabrielle Elise and Hannah Lior:

You have taught me that my strength and vulnerability can move mountains.

Thank you, for everything.

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I cannot pretend that my path towards becoming a Ph.D. has been a long journey. From the time I decided to return to school for my doctoral degree, to the time I finished the last sentence of my dissertation, less than three years had elapsed. It was a fast and furious process of becoming. The pace of my journey, and the immense personal and professional transformation that occurred on that journey, would not have been possible without support, mentorship, and constructive criticism from the people who guided me down this pathway.

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Abstract

Predictors of Different Types of Victim-Trafficker Relationships:

An Intersectionality-Informed Analysis

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Domestic minor sex trafficking (DMST) is the commercial sexual exploitation of a minor citizen or legal resident within United States borders. The literature about the experiences of DMST victims is an amalgamation of force, exploitation, and sometimes the exercise of personal, if constrained, agency in the decision to exchange sex for money or goods. Unfortunately, federal and local policies do not make much room for the nuances of victim experience, in which multiple oppressive factors may contribute to DMST victimization, or different types of DMST victimization. Instead, officials tend to view DMST as a monolithic crime, rather than a problem that appears driven by victims' variable experiences with systemic poverty, racism, and family dysfunction. The purpose of this study is to explore how various forms of oppression and risk predict domestic minor sex trafficking (DMST) victimization, particularly within specific subcategories of DMST, such as trafficking by a family member, stranger, friend, or romantic partner.

This study utilizes the secondary case files of 242 domestic minors who were trafficked for sex in one state in Texas between 2012 and 2017. The case files were transferred to the Principal Investigator for coding following data de-identification. After establishing inter-rater reliability, the Principal Investigator coded the case files for the presence of intersectionality-informed variables, such as race, child welfare involvement, juvenile justice involvement,

poverty, and more. Keeping with intersectionality theory, the Principal Investigator then employed statistical procedures, such as chi squares, logistic regressions, and path analyses, to explore the multiplicative nature of risk factors in their prediction of different types of victim-trafficker relationships. The results of logistic regression analyses demonstrate that various risk factors interact differently to predict different types of victim-trafficker relationships.

The results of this intersectionality-informed study suggest that DMST victimization is not a monolithic phenomenon, in which all victims share the same experiences of oppression and powerlessness. There appears to be variations between the forms of oppression and risk experienced by victims prior to entering specific victim-trafficker relationship dynamics. Social workers need to articulate these variations to the range of professionals who work within the systems that may prevent, identify, and remediate DMST, such as political systems, criminal justice systems, and victim aftercare systems. This study concludes with specific recommendations for counter-trafficking social workers engaged in education, practice, theory-building, and policy formation.

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Chapter 1: Introduction

The purpose of the present study is to explore how various forms of oppression and risk predict human trafficking victimization. This study is especially concerned with domestic minor sex trafficking (DMST) victimization, which is one subcategory of human trafficking. DMST is the commercial sexual exploitation of a minor citizen or legal resident within United States borders (Hardy, Compton & McPhatter, 2013). Although early research suggests that the factors that place minors at risk for victimization are systemic—like socioeconomic status, race, or sexual minority (see Chohaney, 2016; Choi, 2015)—the question of how oppressive factors coalesce to predict specific types of victimization remains largely unexplored.

In particular, scientific inquiry has not yet focused on how DMST victims' multiple experiences of oppression potentially predict the methods by which a trafficker or third-party facilitator exploits his or her victims, or how many traffickers or third-party facilitators are involved in a victim's exploitation. This study will specifically examine these questions. Prior to reviewing literature relevant to DMST, its risk factors, and victims' relationships with their traffickers, however, it is important to understand how the phenomenon fits into the broader category of human trafficking. This introduction will define human trafficking, articulate the importance of approaching human trafficking research and advocacy from a human rights and social work perspective, and finally expand the definition and discussion of DMST introduced above.

Human Trafficking: Definition and Scope

Human trafficking is a complex social problem that spans the entire globe. The International Labour Organization (2014) estimates that human trafficking in its many diverse forms generates up to $150 billion in revenue and claims as many as 20.9 million victims each

year. Although some have challenged the methodologies that underlie such high prevalence rates estimates (United Nations Office on Drugs and Crime [UNODC], 2017a; Weitzer, 2011), there remains compelling evidence that human trafficking exists within and between countries and claims many victims (United States Department of State, 2016). For instance, the UNODC's (2014) Global Report on Trafficking in Persons states that between 2010 and 2012, trafficking victims were identified in 124 different countries, and hailed from 152 different nationalities. These numbers do not begin to approximate the number of unidentified victims, because current methodologies are unable to accurately estimate those victims who remain hidden (UNODC, 2017a). Nevertheless, the number and diversity of identified trafficking victims hints at the sprawling nature of the problem.

The UNODC (2017b) defined human trafficking in the year 2000 with its Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children, which is also called the Palermo Protocol. The Palermo Protocol (although it is only one of the three protocols that collectively comprise the Palermo Protocol), was written to supplement the UN Convention against Transnational Crime. To date, the protocol has been signed and ratified by 117 nations, including the United States (United Nations Treaty Collection, 2017), each of which has bound with their signatures that they will uphold the tenets of the protocol and implement national policies to prevent, suppress, and punish trafficking in persons based upon the recommendations of the United Nations (UN). This document replaced the UN Convention for the Suppression of the Traffic in Persons and the Exploitation of the Prostitution of Others, which had been developed in 1949 (Bromfield, 2016). This 1949 UN Convention was not the first international law related to trafficking and prostitution. It was preceded by the 1921 League of Nations' International Convention for the Suppression of the Traffic in Women and Children,

which had replaced the 1904 International Agreement for the Suppression of the White Slave Trade (Bromfield, 2016).

> According to the Palermo Protocol, human trafficking is today defined as:
>
> the recruitment, transportation, transfer, harbouring or receipt of persons, by the means of threat or use of force or other forms of coercion, of abduction, of fraud, of deception, of the abuse of power or of a position of vulnerability or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the purpose of exploitation. (para. 1)

This definition encompasses varied forms of labor and sexual exploitation, including forced labor, debt bondage, domestic servitude, forced child labor, unlawful recruitment and use of child soldiers, sex trafficking, and child sex trafficking (United States Department of State, 2016). Although the circumstances surrounding each of these trafficking subcategories vary, human trafficking experts contend that it is systemic socioeconomic oppression, and victims' socioeconomic vulnerability, that unites these trafficking subcategories into one overarching concept.

At this juncture, it is important to note that despite the above-stated role of oppression in causing and maintaining the human trafficking problem, there is a risk that the terms "oppression", "oppressed identities" or "oppressive/risk factors"—which are regularly mentioned throughout the forthcoming literature review and the rest of this study—may be semantically problematic if attempting to approach human trafficking from a victims' strengths-based perspective. Social work is committed to enhancing client empowerment, as both an outcome and a process, and empowering language is important when advocating for individuals or groups who experience themselves as marginalized and disenfranchised (Greene, Lee &

Hoffpauir, 2005). As a result, this study will discuss oppression as a constellation of legitimate challenges faced by vulnerable populations, but not the sole characteristic that defines their lives and entire trajectories into and out of human trafficking.

Vulnerability and Oppression: The Root of Human Trafficking

According to Chuang (2006), trafficking is not primarily a type of violence—although it is certainly that—but is instead the consequence of fairly recent economic globalization that has placed migrants and other socioeconomically vulnerable populations at particular risk of exploitation. In its annual Trafficking in Persons (TIP) Report, the United States Department of State (2016) explains that "a common factor across all forms of modern slavery is the victims' vulnerability to exploitation" (p. 8), and cites poverty, disability, gender, ethnicity, migrant status, and community crises as the primary forms of vulnerability that may lead to victimization. However, it is not the simple existence of these vulnerabilities that causes human trafficking. The TIP Report suggests that it is nations' and communities' systemic policies and practices that lead to a collective failure to protect the vulnerable from victimization, and it is in this failure to protect that nations allow trafficking to occur (United States Department of State, 2016). As Gallagher (2002) explains, trafficking takes place because of an international inability to effectively manage migration, policymakers' lack of attention to wealthy nations' demands for inexpensive labor and sex, and a "lack of human security and gross inequalities within and between countries" (p. 28).

In this formulation, it is both the existence of vulnerability and the politically unchecked capacity of wealthy nations to exploit workers from poor nations—or for wealthy citizens to exploit impoverished workers within their own country, intentionally or not—that perpetuates the human trafficking phenomenon. Unfortunately, however, this formulation is often glossed

over by the general public, who instead tend to blame human trafficking on depravity, consumers' individual choices, sexual sin, and more (Bernstein, 2010; Bielo, 2014). Oppression and systemic inequality, meanwhile, are seldom mentioned as root causes of human trafficking by media and advocacy groups (Bernstein & Shih, 2014; Bielo, 2014).

State Interests, Human Rights Interests, and the Unique Role of Social Work

Although international legislative bodies like the UN have more willingly grappled with the complex forces that drive human trafficking than the general public has, legislation has tended to side with State interests rather than human rights interests when implementing mechanisms to address the issue (Gallagher, 2001; Ollus, 2015). As Jordan (2002) explains, "the impetus for developing [the Palermo Protocol] arose out of the desire of governments to create a tool to combat the enormous growth of transnational organized crime" and that "the drafters created a strong law enforcement tool with comparatively weak language on human rights protections and victim assistance" (p. 2-3). Their goal was not to enhance the wellbeing of trafficking survivors or those at-risk of trafficking, but rather to address transnational crime, migration, and the economic consequences of these activities.

This overarching goal was criticized at the time of the Palermo Protocol's ratification, and continues to be a source of critique from those who believe more should be done to identify and rehabilitate victims (Heinrich, 2010; Wijers, 2015). Federal and state legislation within the United States has likewise failed to name or address systemic oppression as a key contributor to human trafficking. Instead, legislation (as opposed to gray literature, like the TIP Report) has tended to position the issue primarily as a criminal justice system concern—a problem to be

extinguished by finding and punishing traffickers—rather than a concern that the nation's economic, educational, welfare systems, or communities can preventatively remediate[1].

Despite this political focus on State interests, the existence of human trafficking remains a major human rights concern, as the circumstances and conditions faced by trafficking victims are a violation of their basic human rights as outlined by The United Nations' (1948/2017) Universal Declaration of Human Rights. This document is viewed as the foundation of international human rights law. In 30 articles that define human rights, the document upholds that all humans are born equal and free, that they have the right to freedom and security, that they should not be subjected to arbitrary arrest or exile, cruelty, slavery, servitude, or torture, and much more. Instead of enjoying the basic human rights afforded to all persons, though, trafficking victims "are bound by mental, physical, and financial coercion and manipulation by traffickers who exploit their vulnerabilities for profit" (United States Department of State, 2016, p. 7), often with negative consequences for their psychological (Le, 2014), physical, and social wellbeing (Goldenberg, Silverman, Engstrom, Bojorquez-Chapela, Usita, Rolon, & Strathdee, 2015). Moreover, the ongoing existence of DMST, specifically, is a violation of the UN Convention on the Rights of the Child (United Nations Office of the High Commissioner [UNOHC], 1989/2017). Although the United States is the only nation that has not ratified this treaty (Mehta, 2015, September), the document states that "childhood is entitled to special care and assistance" (UNOHC, 1989/2017, para. 5), and it contains many articles that are pertinent to effective DMST prevention strategies and aftercare services. For instance, Article 34 specifically requires that parties take action to prevent "the inducement or coercion of a child to engage in

[1] See the Victims of Trafficking and Violence Protection Act (2000); this thought will be further expanded in the Literature Review of this study.

any unlawful sexual activity; the exploitative use of children in prostitution or other unlawful sexual practices; the exploitative use of children in pornographic performances and materials" (UNOHC, 1989/2017, para. 86). In failing to ratify this treaty, the United States has missed an important opportunity to confirm that it is willing to back its official stance on DMST with legislation that complies with internationally agreed-upon standards for the protection of child rights, which are an important consideration within a larger consideration of human rights.

Even a human rights approach to human trafficking prevention and intervention, however, may have serious limitations because of the mechanisms through which human rights are defined and protected. Social work scholars Jim Ife and Sonia Tascón (2016) have written extensively on human rights and the social work profession, arguing that "conventional views of human rights…have been dominated by legal world views" (p. 27), and that these legal world views on human rights are essentially guaranteed only through regulations, laws, and bureaucratic procedures. In this construction, the responsibility for protecting human rights falls upon governmental and legal bodies (Ife & Fiske, 2006), which are limited in profound ways. While acknowledging that legislative bodies like the UN have made progress towards a noble goal of universal human rights, Ife and Tascón (2016) argue that modern human rights laws were written by and for Western European men and thus are biased towards a Western European male understanding of human rights and the means by which they ought to be protected. Furthermore, they state that a legal approach to human rights necessarily precludes those human rights that cannot be protected by the law, such that "a legal approach privileges civil and political rights and devalues economic, social and cultural rights, and collective rights," (Ife & Tascón, 2016, p. 27-28). This approach presupposes that human rights are doled out by powerful and benevolent leaders for the benefit of the masses, circumventing that the masses' inability to define and claim

their own human rights is perhaps the ultimate example of a human rights violation (Ife & Tascón, 2016). In this way, social workers may view human rights laws as both progressive and conservative. Ife (2016) argues that the "progressive potential of human rights has been significant in informing social work", but the constraints noted above "can limit and restrict social work from its transformative potential" (p. 4).

Ife and Fiske (2006) suggest that human rights are more appropriately understood as codes of moral responsibility that ought to guide relationships at individual, group, and collective levels. Humans cannot trust that legal bodies will protect human rights if the responsibility to protect human rights is not first distributed to individuals, groups, and communities. Ife (2001) further argues that professional social work values demand that social workers serve as human rights workers at all levels of practice, from research to advocacy and intervention. When Ife's (2000) arguments are applied to the issue of human trafficking and corresponding laws to prevent and control it, his reasoning suggests that the counter-trafficking community is unlikely to understand nor effectively intervene in human trafficking when it is considered a problem best managed by criminal justice or legal systems alone. Instead, his arguments suggest that human trafficking is best understood as a social and human rights problem best addressed by individuals and groups reforming the social systems that underlie systemic inequality, oppression, and the unequal distribution of human rights to individuals and groups that are systemically oppressed.

Domestic Minor Sex Trafficking and the Social Work Profession

The social work profession is potentially positioned to draw the counter-trafficking community and other stakeholders into this dialogue about human trafficking as a human rights abuse that tends to follow sharp stratifications between the powerful and the powerless. After all, social workers are ethically committed to social justice and the dignity and worth of all persons

(National Association of Social Workers [NASW], 2008), and thus, are trained to consider human trafficking through a more nuanced social paradigm than is afforded by a criminal justice system or legal framework alone. The social work profession can play a vital role in the counter-trafficking community by ensuring that paradigms for human trafficking advocacy and inquiry correspond with the profession's highest ideals, which have at their core the human rights and human needs of victims, and a sharp repudiation of oppression and the systems that allow it to occur.

One of the human trafficking subcategories that would benefit from social work involvement—in both advocacy and research—is domestic minor sex trafficking (DMST). Although often understood as a female problem, DMST is a problem that affects victims of all genders (see Salisbury, Dabney & Russell, 2014). The literature about the experiences of DMST victims is a murky amalgamation of force, exploitation, and sometimes the exercise of personal, if constrained, agency in the decision to exchange sex for money or goods (Musto, 2013). Unfortunately, federal and local policies do not make much room for the nuances of victim experience, in which multiple oppressive factors may contribute to DMST victimization, often preferring to view DMST as a crime alone, rather than a distressing consequence of systemic poverty, racism, and family dysfunction.

It is vital that DMST scholarship—particularly human rights-focused social work scholarship—attend to the systemic oppressions identified by both survivors and the emerging literature, rather than DMST as a one-dimensional phenomenon that is best addressed by policing and prosecution (or a solely legal approach to human rights protection). The literature, however, is largely dominated by criminological and psychological research. These perspectives have their place within the conversation about how to combat DMST, but there is relatively little

research on the systemic oppression and risk undergirding DMST, and its role in both creating and exploiting vulnerability. Social work researchers, meanwhile, are trained to scrutinize a social problem like DMST, which social workers may understand as a byproduct of systemic oppression and risk, such that they may recommend interventions and preventative measures to reduce its prevalence within the United States.

Domestic Minor Sex Trafficking: Definition and Scope

Recall that DMST is the commercial sexual exploitation of a minor citizen or legal resident within United States borders (Hardy, Compton & McPhatter, 2013). The federal definition of DMST in the United States diverges from international understandings of human trafficking, in general, in that victims do not actually have to be moved across any geographic borders, nor do they have to be forced or coerced into sex work, nor do they have to work for or with a third-party facilitator like a trafficker or pimp[2] to be considered a victim. They must be simply a minor induced to perform a sex act in exchange for money or goods (TVPA, 2000). Because of this deviation from how human trafficking is broadly understood, some scholars refer to DMST as the commercial sexual exploitation of children (CSEC) or the commercial sexual exploitation of youth (CSEY) (Sapiro, Johnson, Postmus & Simmel, 2016).

In many ways, these terms are a better representation of the type of victimization these minors have endured than the term "domestic minor sex trafficking" suggests, because they may not have been geographically trafficked nor coerced or forced into sex work in the ways people would normally think of coercion or force. Nevertheless, the laws that prohibit minors from

[2] For the purposes of this study, traffickers are individuals who use force, fraud, or coercion to exploit their victims, or otherwise facilitate a minor selling sex for money. A pimp who facilitates a minor selling sex—whether or not force, fraud, or coercion is used—is considered a trafficker by federal definition. Pimps are not always traffickers, however, such as when they facilitate an adult selling sex, as long as they do not use force, fraud, or coercion.

selling sex—and position them as victims of a crime rather than agents of one—are federally housed within anti-trafficking laws (Kotrla, 2010). Under federal law, coercion or force is not considered a necessary condition for trafficking to have occurred if the victim in question is a minor. From this perspective, minors do not have the personal agency to consent to sex in exchange for money or goods (Marcus, Riggs, Horning, Rivera, Curtis & Thompson, 2012). This was not always the case. Prior to the passage of the TVPA in 2000, minors who exchanged sex for money or goods could be charged with juvenile prostitution in all 50 states (Barnert, Abrams, Azzi, Ryan, Brook, & Chung, 2016).

DMST is perhaps the most common form of trafficking in the United States, with the federal government indicating that 300,000 teenagers are at-risk for this form of trafficking each year (Office of Justice Programs, 2011)—although it should be noted that this number is contested in the literature (see Weitzer, 2011). The 300,000 number was based upon data that is now nearly 20 years old and whose legitimacy the original authors now question (Estes & Weiner, 2001; Kessler, 2015). As Weitzer (2011) notes in his critique of trafficking research in general, "many of those writing about sex trafficking…recapitulate potentially bogus claims regarding the scale of the phenomenon, uncritically accepting figures that should be questioned" (p. 1347). Indeed, the literature is full of speculation, with limited or buried disclaimers about the reliability of estimated DMST prevalence rates. In a literature review by Kotrla (2010), for instance, the author quotes Estes and Weiner's (2001) estimate of 300,000 youth at-risk for sex trafficking while noting that other research indicates that there are no reliable estimates of DMST prevalence (Stransky & Finkelhor, cited in Kotrla, 2010). To date, there have not been additional studies that attempt to estimate United States DMST prevalence rates.

A critical examination of DMST is important, not only because it is a human rights violation as a result of its categorization underneath human trafficking, but also because it constitutes a form of child abuse. Indeed, federal and state laws not only identify DMST victims as human trafficking victims, but also as victims of sexual abuse (Reid & Jones, 2011; Roby & Vincent, 2017; Trafficking Victims Protection Reauthorization Act of 2013). Social workers, child welfare advocates, and anyone invested in preventing the negative consequences of DMST-type child abuse across the lifespan, therefore, ought to ask serious questions about how systemic oppression may allow the crime to occur.

Purpose of the Present Study

As stated previously, the purpose of the present study is to explore how various forms of oppression and risk predict DMST victimization, particularly specific subcategories of DMST victimization by traffickers who are family members, friends, romantic partners, or some other type of unknown or untrusted offender (or, in some cases, when a trafficker is not involved at all). This study fills an important gap in the literature by examining how oppression and risk factors predict both how DMST victims are exploited by traffickers and facilitators, and how frequently the latter are involved in the exploitation. Recommendations will point towards strategies that may interrupt specific patterns of victim-trafficker relationships and the ongoing relational dynamics of victims, traffickers, and any other facilitators who may be involved in the victim's exploitation.

This study utilizes intersectionality theory and extant DMST literature to examine the experiences of DMST victims contained within 245 victim case files in one statewide sample. These case files were collected by one anti-trafficking non-profit advocacy organization in a Texas (mostly north Texas), and were de-identified for use in this study. The results of this study

may offer helpful and targeted interventions for specific subpopulations of youth who may be identified as at-risk for DMST. Additionally, study results may reveal the systemic, oppressive nature of the phenomenon, and equip social workers, child welfare workers, criminal justice professionals, and human rights advocates with information about how to prevent and intervene in the crime, as well as information needed to lobby policymakers to exact necessary systemic changes. The study begins with a) a literature review of the key concepts discussed and included in this study, b) an overview of human trafficking theoretical applications, DMST-specific theoretical applications, and intersectionality theory and the DMST-specific variables that the theory suggests are important for analysis, and c) a description of study methods, including an overview of research questions and hypotheses, secondary data sources, data transfer procedures, and the statistical methods selected for data analyses. After results are presented, the study will conclude with a discussion of the results, and an analysis of the study's implications for theory, policy, practice, and social work education.

Chapter 2: Literature Review

The purpose of the present chapter is to review DMST literature that is pertinent to this study. As a result, the primary focus of this literature review is to describe a) what is currently known about the oppressive factors that push and pull DMST victims into exploitation, and b) the victim experience of DMST with traffickers and/or facilitators. This overview will specifically describe the variables that the Principal Investigator chose for analysis within the study; other oppressive and risk factors, and victim experiences that are beyond the scope of the present study will also be discussed.

Prior to examining victims' oppressive factors and experiences with trafficking, however, it is important to provide additional context to the discussion. This context is important, because the United States' long history of using criminal justice apparatuses to control prostitution, sex work, and sex trafficking contains dimensions of socioeconomic, racial, and gender oppression (Pliley, 2014). In light of this political and legal history, it is important that any theory chosen to examine DMST, and any recommendations that emanate from the present study, be made with a thoughtful consideration of how State systems may be culpable in further oppressing vulnerable groups. As such, this chapter begins with a brief overview of the history of sex trafficking and the policies designed to control it, and then describes what is known about the consequences of DMST to victims and society.

To better understand DMST as a social phenomenon, it is necessary to begin with a review the political history of the United States' federal anti-trafficking laws. This discussion includes an historical overview of both policy and ideology, because in the case of sex trafficking and DMST, a discussion of one necessarily includes a discussion of the other. This

historical review begins in the Progressive era and then moves through pertinent ideology and policy before concluding with an overview of modern laws.

Sex Work as Sexual Trafficking: The Making of a Moral Panic

A historical analysis by Bromfield (2016) rightly notes that although sex trafficking—often called "modern slavery" or "sexual slavery" (Leary, 2015)—has received a large amount of attention in the past 20 years, the politically charged concept of sexual slavery first emerged during the Progressive era. During this period, politicians were concerned about changing perspectives on sexuality and gender norms, and sought to enact legislative protections against what they saw as the growth of debauchery and the diminishment of traditional family values (Bromfield, 2016; Pliley, 2014). In 1910, Congress passed the Mann Act, also known as The White Slave Traffic Act (1910), which criminalized the interstate transport of women and girls for prostitution and sexual immorality. According to Langum (1994), the Mann Act gave the criminal justice system the ability to prosecute a man for sex trafficking for simply crossing state lines with a woman who was not his wife. (In addition to the problems this posed to men charged with trafficking under this law, it also discriminated against women, who had to be married to a man in order to move around freely with him.) It also gave governing bodies wide latitude to prosecute what they saw as sexually licentious behavior, and to control groups that were seen as troublesome or sexually dangerous, such as sex workers and racial minority groups (Bromfield, 2016).

The congressional decision to conflate *sex work* with *sex trafficking* or *sexual slavery* ought not be viewed as accidental. Through the law, sex workers were imagined as innocent white women who were victimized by racial minority groups and forced into sexual slavery against their wills. The name of this sexual slavery, although exceptionally rare in its imagined

sense, was white slavery (Zimmerman, 2011). According to historian David Pivar (2002), interviews with over 6,000 prostitutes working during the Progressive Era revealed that only about 7% of them cited force or coercion as the reasons they were involved in sex work. Nevertheless, the Mann Act positioned prostitutes as passive actors within a criminal network that sought to move them within and between states for the sexual consumption of males of minority race, and this positioning was quite effective at inciting a moral and social panic (Bromfield, 2016). According to Zimmerman (2011), "most historians acknowledge that 'white slavery' more accurately expressed a particular constellation of white, middle-class social fears than it did an actual social reality" (p. 571). And as is often the case when moral or social fears ensue (Clapton, Cree & Smith, 2013; Mitchell, 2016), the public responded by allowing law enforcement and other government agencies to increase its surveillance of oppressed groups, or groups of lower socioeconomic status (Foucault, 1973/2015), and individuals whose behavior fell outside of what was considered traditional and moral (Bromfield, 2016).

In its early days, the Mann Act was most often applied to prosecute sex workers and madams—who were considered both victims of sexual exploitation and perpetrators of sexually immoral behavior (madams were considered perpetrators alone) (Pliley, 2016). It was also used to prosecute men from racial minority groups, like Eastern European Jews or African Americans, whose offenses could most accurately be described as romantic or sexual involvement with white women (Bromfield, 2016). One need not dig too far into this history to find hints of Foucault (1973/2015): "In short, we have a moralization of penality; a distribution of the classes on both sides of this penal morality; and State control of the instruments of the latter" (p. 108). According to Foucault (1973/2015), this formulation of law and order distributes advantage to upper classes (in the United States, middle- to upper-class White communities) by applying

coercive State control and surveillance to lower classes. The Mann Act continued to be used by law enforcement to prosecute sex trafficking cases until it was replaced by modern anti-trafficking laws in 2000 (Bromfield, 2016).

The Influence of Feminist Ideology in Policy Formation

Between the passage of the Mann Act and the passage of modern anti-trafficking laws, there were a number of ideological debates that occurred around the concepts of sex work, sex trafficking, and sexual slavery. The passage of the Mann Act itself was precipitated by the social hygiene movement of the Progressive Era. This movement was comprised of a hodgepodge of social workers, Christian groups, and feminists, and core to their belief system was the idea that "all sex work was sexual exploitation of women by more powerful men" (Bromfield, 2016, p. 131). While this perspective helped usher in the Mann Act, other feminist ideologies relevant to sex work began to emerge in the 1960s, and continue to shape the discourse surrounding sex work and sex trafficking (Bromfield & Capous-Desyallas, 2012)[3].

Feminist thinking about sex work and sex trafficking can be seen as a continuum between two opposite feminist ideologies. In recent years, however, some feminist views on sex work and sex trafficking have emerged to fall between the two extremes (Chuang, 2010; Musto, 2013). On one end of the continuum are abolitionist feminists. These feminists view all sex work—even the work done by adults in the absence of force, fraud, or coercion—as inherently exploitative and thus a form of trafficking (Weitzer, 2010). The feminists who were involved in the social hygiene movement over 100 years ago fall into this category of thinking. (The abolitionist

[3] Although researchers now know that sex trafficking affects victims of all genders, its original conceptualization as an issue affecting only females has meant that feminist ideology has historically dominated sex trafficking scholarship (Weitzer, 2014), and thus must be discussed at length.

perspective is still a popular position in sex trafficking discourse—it is now called neo-abolitionism; see Bernstein & Shih, 2014). Even the thinkers on the abolitionist end of the spectrum who do not conflate sex work with trafficking still believe that female sex work, by its very nature, is abusive and primes women for victimization through trafficking (Miriam, 2005). As MacKinnon (2005) explains, "women in prostitution are denied every imaginable civil right in every imaginable and unimaginable way, such that it makes sense to understand prostitution as consisting in the denial of women's humanity, no matter how humanity is defined" (p. 151). Abolitionist thinkers believe that the existence of sex work is such an egregious violation of a woman's humanity, that her choice (if choice exists) is so constrained by her circumstances as a female that it ought not be considered a choice at all. And, the thinking goes, if no choice exists, then commercial sex work of any kind ought to be considered trafficking or exploitation. It is this very type of thinking that positions DMST victims as criminally exploited youth, rather than juvenile prostitutes, because federal law stipulates that minors do not have the personal agency nor authority to choose to exchange sexual services for money or goods.

Radical feminists, on the other hand, strongly oppose collapsing sex work and sex trafficking into the same construct. They state that people of all genders—not just women—can and do consent to sex work or prostitution without being trafficked, and that the conflation of the two concepts may give governments the ability to unjustly restrict and monitor the activities of people engaged in legal sex work or consensual sexual activity (Doezema, 2002; Doezema, 2005), just like the Mann Act did. For these thinkers, the claim that sex work and sex trafficking are one in the same is an insult to the intelligence and the personal agency of people of all genders who willingly participate in sex work (Huschke, 2017).

Authors Heath, Braimoh and Gouweloos (2016) simplify the abolitionist and radical perspectives by calling one the "danger stance" and the other the "choice stance". The danger stance is one that believes sex work is a social justice issue, in which less powerful women are forced into selling their bodies to powerful men in exchange for their survival. Male or trans victims are typically not considered within this framing. There is some literature to back the danger stance; authors have found that sex workers, who are primarily female, often come from socioeconomically oppressed groups and have histories of sexual or physical abuse, and incur grave danger while employed as sex workers (Deering, Amin, Shovellar, Garcia-Moreno, Duff, Argento & Shannon, 2014; Lazarus, Chettiar, Deering, Nabess & Shannon, 2011; Potter, Martin & Romans, 1999). The choice stance, however, is typified by a belief that sex work is not inherently unjust, but that the policies that criminalize it are oppressive to the male, female, and trans individuals who choose to participate in sex work. There is also literature to back the choice stance. Authors have found that some sex workers have chosen their line of work, resist the abolitionist groups that try to "rescue" them, and have some measure of gratification in their work (Bernstein & Shih, 2014; Govindan, 2013). The ideological distance between the danger stance and the choice stance has resulted in decades of contentious debate about female sexuality. These debates—known as the Sex Wars (Duggan, 2004)—have influenced modern anti-trafficking policy, but have also influenced social and political perspectives on polygamy, pornography, prostitution, and more (Heath, Braimoh & Gouweloos, 2016).

Clearly, to step into the debate about whether sex work is synonymous with sex trafficking is to lose oneself in an argument about agency and oppression (Sloan & Wahab, 2000). Both abolitionist and radical feminist ideologies likely have something important to add to the sex trafficking dialectic, no matter how irreconcilable the positions are with one another.

However, it must be noted that some scholars have stepped out of human trafficking scholarship at large and into DMST-specific research in order to remove themselves from the debate about whether an individual would choose to be a sex worker if she had a real choice (Musto, 2013). The presumption underlying this move is that juveniles cannot consent to commercial sex work so, following the federal definition of trafficking, they are trafficking victims.

The result of this approach to scholarship is that very few studies make ideological space for DMST survivors to provide insight into their own lives and whether or not they believe they were trafficked. Instead, DMST survivors are imagined as child victims in need of services and law enforcement protection (which, it should be noted, is a substantial improvement over past imaginings of DMST survivors as criminal "juvenile prostitutes" (Duger, 2015)).

Several groundbreaking studies that gathered data from DMST victims themselves, however, questioned the assumption that DMST victims are little more than passive victims of all-powerful traffickers. Horning (2013) states that although the luring of an innocent youth into sex trafficking exists, her ethnography of pimps and juvenile sex workers suggests that many DMST victims around the ages of 16 to 18 actually understand their work as consensual. She explains, "Many of the meetings between to-be pimps and sex workers started in high school or with neighborhood friends. The venues for selling sex were teen clubs, high school stairwells, roving sex parties, Facebook, Backpage and traphouses…the clients were generally other teens and some young adults in their early twenties" (Horning, 2013, p. 299-300). A mixed methods study conducted in several cities found that even though oppressive dynamics can exist within minor sex worker and pimp relationships, minor sex workers may demonstrate some personal agency in their endeavors. The authors of this study did not differentiate between the ages of the

minors in their sample; they were only identified as under the age of 18 (Marcus, Horning, Curtis, Sanson & Thompson, 2014).

If nothing else, these studies suggest that scholars cannot avoid the ideological battles that surround sex work and sex trafficking by stepping into research about DMST victims and their experiences. As Horning (2013) again explains, "the discourse on domestically trafficked minors tends to conjure images of adult males preying on at-risk youth who are sold to pedophilic men, and while this reality surely exists, the onion of domestically trafficked minors has barely been peeled" (p. 300). Questions and debates about oppression and agency, and the dynamics within various victim-trafficker relationships, still remain within DMST-specific scholarship, but few besides the authors noted above have tackled these questions and debates.

There are several words of caution, though. Debates about oppression and agency are not appropriate for situations in which victims are not able to appraise their circumstances and then act to achieve a personal benefit, as doing so would be objectionable from a child development standpoint. Children and young adolescents lack maturity in their decision-making skills (Blakemore & Robbins, 2012); older teenagers, however, may have the ability to make some rational (or at least more rational) decisions. Consider, for instance, the decisions made by a 16-year-old adolescent female who makes an arrangement with her 18-year-old boyfriend to turn tricks for cash. In exchange for his protection, she offers him a percentage of the profits. If she sells sexual services for cash in this arrangement, federal law defines her as a DMST victim and her boyfriend could be tried for human trafficking and sentenced to up to 20 years in prison (Trafficking Victims Reauthorization Act of 2008). She is certainly exploited by the johns who purchase sex from her, as well as the circumstances that drive her to participate in sex work. And yet, this scenario suggests that she did exercise some decision-making capacity prior to her

victimization. Other scenarios suggest, however, that many minors do not exercise mature decision-making prior to their victimization. Consider the experience of a 13-year-old girl who is raped by her mother's ex-boyfriend. She is aware of the trauma that occurred to her, but unaware that her mother intentionally made the arrangement, without her daughter's awareness or consent, in exchange for drugs. This, too, is considered DMST by federal law, but the dynamics surrounding the exploitation appear quite different.

It is not possible to state with certainty at what age an adolescent gains the ability to rationally appraise her or his circumstances, because each individual and her or his circumstances are unique (Fischhoff, 2008). And no matter the circumstances, neuroscience suggests that the adolescent brain is predisposed to make decisions based upon social and emotional factors rather than a fully rational assessment of the facts (Blakemore & Robbins, 2012). Nevertheless, society gives adolescents increasing control over their own decisions as they approach adulthood. The age of consent for sexual activity, for instance, is 16-years-old (Age of consent, 2015). Moreover, in some circumstances, juvenile offenders as young as 15 can be tried as adults (Redding, 2010). These legal realities hint at adolescent liminality (see Ocen, 2015)—the uncomfortable reality that adolescents are neither fully adults nor fully children, and thus defy a black-and-white understanding of personal agency. Adolescent liminality is a topic of heated debate in other fields in which adolescent decision-making is of great importance. Salter (2017), for instance, outlines how bioethicists from different schools of thought use the same neuroscience to either support or oppose adolescent healthcare decision-making. She concludes with the fitting assertion that decision-making capacity should not be confused with decision-making authority. In other words, adolescents naturally gain decision-making capacity along a

continuum as they approach adulthood, but this does not mean that they should have ultimate authority over their decision-making.

Modern Anti-Trafficking Policies

Modern international and federal anti-trafficking policies emerged following the decades of ideological debates between the abolitionist feminists—who aligned themselves with conservative religious groups (Bernstein, 2010)—and radical feminists (Bromfield & Capous-Desyllas, 2012). These debates occurred between the 1960s and 1990s, a period of time in which the more liberal "choice stance" emerged in feminist scholarship. The neo-abolitionist perspective, or "danger stance", ultimately prevailed within modern anti-trafficking policy (Bromfield & Capous-Desyllas, 2012; O'Brien, 2015). One can still see abolitionist language within the counter-trafficking movement, in which both government policy and advocacy groups use the language of slavery to describe sex work and sex trafficking, and in which groups regularly collapse these definitions into one construct (Moore, 2015). This is a simple mistake to make—and some would argue not even a mistake—particularly within the subcategory of DMST: The TVPA (2000) defines all minor sex workers as sex trafficking victims.

Modern anti-trafficking policy began to materialize in the year 2000 with the passage of the UN's Palermo Protocol. The United States ratified the Palermo Protocol in 2005 (United Nations Treaty Collection, 2017), but the nation adopted its first comprehensive anti-trafficking policy in 2000 with the passage of the Trafficking Victims Protection Act (TVPA, 2000), which was originally named the Victims of Trafficking and Violence Protection Act (2000). Feminist debates about oppression and choice helped shape the policy, and it decidedly adheres to the abolitionist perspective (Bromfield, 2016). This law replaced the Mann Act as the law through which to federally prosecute trafficking in persons. The nation's anti-trafficking policies have

gone through multiple iterations with the passage of various reauthorizations (Trafficking Victims Reauthorization Act, 2013). However, the initial passage of the TVPA (2000) represented a shift in how federal law conceptualized human trafficking. Notably, through the TVPA (2000), federal law recognized that DMST was a crime against adolescents and children, rather than a crime that law enforcement officials could arrest adolescents or children for committing (Barnert, Abrams, Azzi, Ryan, Brook & Chung, 2016).

The TVPA (2000) provided budget and trafficking oversight responsibilities to the State Department for cases involving international trafficking and the policing of the world's response to human trafficking (United States Department of State, 2017a). Additionally, it established the President's Interagency Task Force to Monitor and Combat Trafficking in Persons (United States Department of State, 2017b). This task force is responsible for coordinating the United States government's human trafficking response at both international and domestic levels (United States Department of State, 2017c). It is comprised of fifteen government agencies, most of which are primarily concerned with labor laws and law enforcement.

Carceral Feminism

While language about empowerment and human rights certainly exists within the TVPA (2000), the government groups that are tasked by the law with addressing human trafficking are most often law enforcement agencies or the courts. For example, the Survivors of Human Trafficking Empowerment Act (2015), which is an amendment to the original TVPA (2000), affords budget to the Department of Justice so that the Attorney General may offer block grants to "develop, improve, or expand domestic human trafficking deterrence programs that assist law enforcement officers, prosecutors, judicial officials, and qualified victims' services organizations in collaborating to rescue and restore the lives of victims, while investigating and prosecuting

offenses involving child human trafficking" (S.178-5). The emphasis on the criminal justice system as the preferred mechanism through which to understand and intervene in all forms of human trafficking cannot easily be missed.

Since the United States' ratification of the Palermo Protocol and the adoption of the TVPA (2000), a brand of feminist ideology has emerged to stress criminal justice system approaches to trafficking prevention and suppression. Sociologist Elizabeth Bernstein (2010) calls it "carceral feminism", and one of its underlying assumptions is that human trafficking is best controlled, mitigated, and reduced by the carceral state, with a central focus on prosecution as a means of trafficking prevention. Carceral feminists tend to see sex trafficking (and often sex work, when their definitions are collapsed) as a crime to be eradicated—like extreme abolitionists did more than a century ago—and view the criminal justice system as the way to abolish it. Carceral feminists are particularly concerned with protecting the interests of girls and women, rather than victims of all genders, through criminal justice systems.

Law (2014, October) defines carceral feminism as "an approach that sees increased policing, prosecution, and imprisonment as the primary solution to violence against women" (para. 4). She states that this form of feminism ignores the ways that multiple oppressive experiences place individuals of all genders at an increased risk of violence, and that increased policing and prosecution of violence against women fails to effectively reduce violence, while placing oppressed individuals at risk of violence by the state. The prosecutions that stemmed from the Mann Act, in which authorities targeted minorities and oppressed groups for increased surveillance and prosecution, are examples of how carceral activism may ultimately damage those it seeks to help. Of course, the criminal justice system certainly has a role to play in stopping human trafficking. The only way to protect legally-endowed human rights, after all, are

through systems that enforce those laws (Ife & Tascón, 2016). According to Ife and Fiske (2006), however, social workers should not be satisfied with solely a criminal justice system response to human rights abuses, but should instead advocate for a shared communal response to abuses when they occur. A shared responsibility for addressing human rights abuses within the context of DMST might include micro-, mezzo-, and macro-level efforts to prevent the crime, protect victims, and punish traffickers; these efforts ought to include professional and laypeople alike.

Although Bernstein (2010) notes that carceral feminism first appeared in the 1990s, it was not until the adoption of the Palermo Protocol that it emerged as a preferred typology of feminist thought in human trafficking inquiry and advocacy. Its compatibility with abolitionist ideologies in the sex trafficking and sex work debate is important for understanding how and why DMST victims are treated as they are by the State. Indeed, it is common for DMST victims to be prosecuted for crimes they commit while they are commercially sexually exploited because police officers and the courts want to protect the victims from their pimps, the streets, and themselves, and they often provide this protection by criminally detaining the victims (Annitto, 2011; Godsoe, 2015). Despite numerous states' passage of so-called Safe Harbor laws (Duger, 2015)—through which underage sex work is decriminalized and victims are diverted from detention centers into child welfare systems and victim-centered treatment—a lack of appropriate funding means that law enforcement officials still regularly bring charges against DMST victims so that they may be placed within juvenile detention centers for safe keeping (Barnert et al., 2016). The counter-trafficking community is uncertain where else law enforcement could safely place them (Reid, 2010).

Consequences of DMST

Federal policy and prevailing ideology have positioned those who have survived DMST as both victims and criminals; in need of both protection and prosecution; oppressed by sexual depravity but not by social systems or the State. Behind these ideological and political positions, however, remain the consequences of DMST, for both victims and society itself. Research on the consequences of DMST is still relatively scarce, in part because DMST research is an emerging field of study (McCoy, 2017; Twis & Shelton, 2018). When researchers examine the consequences of DMST, they typically do so at the micro level of research (such as consequences to victims' health), because macro level consequences, such as economic consequences or trends in public health, are far more difficult to quantify and measure when sex trafficking victims are themselves difficult to locate (Edwards & Mika, 2017). In addition, the difficulties of successfully identifying youth involved in DMST remains a major barrier to aftercare service provision, much less effective research about the problem and its societal consequences (Reid, 2010).

Nevertheless, the larger body of research on human trafficking, as opposed to the subcategory of DMST, suggests that there are economic, social, and human rights consequences when trafficking occurs in society. As the UNODC (2008) explains, "The cost of crime is essentially a measure of the impact of that crime on society. The costs of trafficking include the value of all resources devoted to its prevention, the treatment and support of victims and the apprehension and prosecution of offenders" (p. 93). However, the UNODC (2008) does not attempt to quantify the specific economic impact of human trafficking on society, except to state that the social costs associated with human rights violations, public health crises, and lost resources and remittances are potentially enormous. Similarly, research on DMST has not

attempted to enumerate the specific societal costs associated with the domestic sex trafficking of minors, although an understanding of micro level consequences may inform prevention and victim intervention services in the aggregate.

Fortunately, research into the consequences of DMST on victims is more fully developed than research into its societal consequences. Karlsson (2013) states that sex trafficking victims (not specifically DMST victims) must contend with several serious repercussions during and following their victimization. These consequences include threats to their mental health, exposure to sexually transmitted diseases, and challenges with accessing necessary healthcare services (Karlsson, 2013). DMST survivor research provides credibility to many of these broad assertions about the consequences of sex trafficking. In addition, the literature suggests that DMST survivors must contend with threats to their general health and wellbeing. Other authors note that adolescents and children who sell sex also face serious legal problems following their victimization, which may dovetail into problems with securing jobs and safe housing (Conner, 2015).

Threats to mental health. Several authors note that complex post-traumatic stress disorder (PTSD) is a serious concern for DMST victims, as is the potential comorbidity of substance use disorders (Hardy, Compton & McPhatter, 2013). O'Brien, White and Rizo (2017) found that DMST victims are more likely than other child welfare-involved youth to have problems with substance abuse and externalizing behaviors. Cecchet and Thoburn (2014) further note that mental health problems sometimes precipitate youth involvement in DMST, and that an adolescent's exit from DMST may result when the victim grows increasingly troubled by her or his negative mental health symptoms. A systematic review further adds that sex trafficking victims frequently report anxiety, depression, and symptoms associated with PTSD (Oram,

Stöckl, Busza, Howard & Zimmerman, 2012). Finally, Williamson and Prior (2009) describe victims' trauma responses and symptoms as a serious concern for service providers. Combined, these studies suggest that DMST victims have mental health problems before, during, and after their victimization, and that this burden may include difficulties related to depression, substance use and other behavioral health concerns, and PTSD.

Exposure to sexually transmitted diseases. Given the nature of DMST, it is little surprise that exposure to sexually transmitted diseases is a major consequence of the crime. The risks of sexually transmitted diseases and infections are well documented for sex workers and individuals trafficked for sex internationally (Lang, Salazar, DiClemente & Markosyan, 2013; Sarkar, Bal, Mukherjee, Chakraborty, Saha, Ghosh & Parsons, 2008). While the research on exposure to sexually transmitted diseases among DMST victims is not as well established, one study of domestically trafficked sex workers found that over half of the adult respondents indicated having at least one sexually transmitted infection over the course of their involvement in the sex trade (Muftić & Finn, 2013). A qualitative study of domestically trafficked and formerly trafficked sex workers found that they used condoms inconsistently and that sexually transmitted diseases and unintended pregnancies were cited as major reasons for seeking healthcare services (Ravi, Pfeiffer, Rosner & Shea, 2017).

General health concerns. In addition to problems with mental and reproductive health, DMST victims are at risk for poor overall health. According to a systematic review by Oram et al. (2012), sex trafficking is associated with chronic health problems like headache, abdominal pain, memory problems, and back pain. In one retrospective study of medical presentation, DMST victims often sought medical treatment for abdominal or back pain, or physical injury (Goldberg, Moore, Houck, Kaplan & Barron, 2017). Healthcare providers may be the only

service providers to interact with DMST or human trafficking victims while traffickers are exploiting them (Ernewein & Nieves, 2015); however, it is not uncommon for healthcare providers to fail to identify DMST victims when they are seen (Shandro et al., 2016). In a study of hospital physicians, Barron, Moore and Goldberg (2013) found that the majority of participants had never received DMST training, had not screened patients for DMST, and did not feel comfortable treating this population. Even if their conditions are treated, the challenges associated with identifying victims may mean that DMST victims are not offered the healthcare and social services they require to return to a state of health.

Legal Problems. Safe Harbor laws have not stopped DMST victims from accruing criminal charges as a result of their victimization. As noted previously, it is common for law enforcement officials to arrest adolescent victims of DMST in an effort to keep them safe from the street (Godsoe, 2015). In the process of arrest, these victims are often charged with crimes associated with DMST (Musto, 2013). One qualitative study by Perkins and Ruiz (2017), for instance, investigated pathways in and out of sex trafficking by interviewing 40 adolescents who were residing in a juvenile detention center as a result of their involvement in trafficking. Although the results of the study are important, just as noteworthy is the sampling frame for the study. Perkins and Ruiz (2017) explained their juvenile detention sampling frame by stating, "youth who are admitted into the [juvenile detention center] aid in the development of an individualized treatment plan that will assist them in developing coping skills for the issues that have led to their incarceration" (p. 174). This is problematic, because as Godsoe (2015) explains, DMST-related arrests are a significant pathway into the criminal justice system for girls, and that girls (as opposed to adult women) "are frequently prosecuted and incarcerated for lengthy periods on prostitution or related charges" (p. 1327). Criminal records, in turn, follow DMST

victims back into society. There, DMST victims' criminal records increase their stigmatization within their families and communities (Counts, 2014), and decrease their ability to obtain safe housing and legal employment (Ispa-Landa & Loeffler, 2016). Even though some states expunge criminal convictions incurred as a result of trafficking, these types of allowances tend to be underutilized (Barnard, 2014).

Macro Level Research on DMST Consequences

Further research must be done to investigate the macro level effects of these micro level consequences to DMST victims. Given the state of the research, it is not possible to accurately estimate the specific social and economic costs associated with the phenomenon. Nevertheless, the negative health and criminal justice system consequences of the crime for DMST victims ought to concern social workers and social justice advocates. Human trafficking of all kinds is a violation of human rights, irrespective of the specific consequences faced by victims. But DMST victims are children, and these children experience very real consequences to their mental health, reproductive health, overall health, and their legal standing; these first-order consequences also carry additional consequences of their own. As a result, DMST victims deserve well-reasoned policy and practice responses to their experiences.

Reasonable policy and practice responses, however, are unlikely to emerge from the ideological viewpoints that have driven much anti-trafficking policy and practice in the United States since the turn of the twentieth century. The dominant neo-abolitionist perspectives have unfortunately positioned victims inside a victim-criminal paradigm, albeit unintentionally. These perspectives may likewise unintentionally exclude male and trans victims from consideration. Meanwhile, a radical feminist perspective is a difficult position to defend given the constrained agency of minors involved in sex work.

The available data provide strong evidence, however, that DMST is a consequence of systemic oppressions and cumulative risk. These systemic oppressions tend to occur most often within groups of people in the United States who are at-risk for multiple discriminations, such as female youth who are also African American and disabled. While it may be difficult to entirely avoid bias in research, it is important that bias not be driven by ideology, but rather by the availability of evidence to support a specific lens for research. This is especially important in human trafficking research, which has long been guided by disparate ideologies like radical and abolitionist feminisms (Weitzer, 2011).

The lens of oppression is important within the present study, since the available literature regularly points to the dynamics of oppression as root causes of human trafficking and DMST. As a result, the next portion of this literature review will dissect the risk factors, of which many may be viewed as oppressive factors at the macro-level, felt by DMST victims at the micro-level. This section also addresses the victim experience of DMST within victim-trafficker relationships.

DMST Risk Factors

Researchers have not yet examined how various risk factors covary together to predict DMST victimization (McCoy, 2017), but themes about specific risk factors have begun to crystallize from various quantitative and qualitative studies. Some of these risk factors are not unique to the negative outcome of DMST; these risk factors, in one combination or another, are widely regarded as predictive of varied negative outcomes like developmental disruption, mental health problems, increased utilization of healthcare, and risk-taking behaviors (see, for instance, a systematic review of the health consequences of adverse childhood experiences, Kalmakis & Chandler, 2015). Like the adverse childhood experiences literature, in which risk factors are

considered in terms of dosage, and a higher dosage of risk is predictive of a negative outcome in adulthood, the risk factors mentioned herein may be an issue of dosage rather than covariation.

Regardless, researchers have not yet determined precisely how the following risk factors work together to predict DMST victimization. These risk factors can be organized underneath the categories of a) child abuse or neglect and child welfare involvement b) juvenile justice involvement, c) chaotic home life, d) substance use or abuse and psychiatric concerns, e) age of entry to sex work, f) race, g) homelessness, poverty and unmet basic needs. The final risk factor—homelessness, poverty, and unmet basic needs—is perhaps the thread that ties together the other risk factors, and thus the Principal Investigator covers it in its own section. Many of these risk factors will become important variables within this study.

And, though researchers may quantify each of the above risk factors at the micro-level, all except age have implications at the macro-level as well. Child welfare involvement, for instance, is quantifiable at the micro-level, but evidence suggests that impoverished children from racial minority groups are more likely to be involved in the child welfare system (see Drake, Jolley, Lanier, Fluke & Barth, 2011), indicating that advocates ought to see micro-level risk factors as part of a macro-level tapestry of risk and vulnerability. Indeed, many of these risk factors are structural and perhaps multiplicative in nature. In an exploratory model, Reid (2011) found, for instance, that child maltreatment increased with caregiver strain; that child maltreatment was associated with youth running away from home; and that running away from home was associated with earlier substance use and abuse and the sexual denigration of self and others. Caregiver strain, in turn, is associated with structural concerns, such as single parenting and a lack of social support (Anderson, 2008).

Although the literature does not yet suggest specifically how risk factors predict victimization[4], an educated hypothesis is that an increased number of risk factors may exponentially increase a child or adolescent's vulnerability to DMST. Since an increased number of risk factors may be able to predict victimization, and since many of these risk factors are structural in nature, the following overview of known DMST risk factors is presented as though these risk factors are, in fact, correlated and jointly predict victimization.

Child abuse or neglect, and child welfare involvement. Child abuse or neglect and child welfare involvement are closely related categories, since one necessarily precedes the other. Child abuse or neglect is often cited in the literature as one of the risk factors experienced by DMST victims before, or concurrent with, their victimization (Countryman-Rowsurm & Bolin, 2014; Goldberg et al., 2017; Reid, 2010). Countryman-Rowsurm and Bolin (2014) found, for instance, that 61% of their study participants had been pushed, shoved, or grabbed in anger by a caregiver; 83% also reported that they had been slapped in the face or head by a caregiver. Goldberg et al. (2017) meanwhile found that 90% of the DMST victims who presented to a medical facility for care had been exposed to child maltreatment. The type of child maltreatment varied, with sexual abuse reported by 57% of the victims, physical abuse reported by 30% of the victims, neglect reported by 24% of victims, and emotional abuse reported by 5% of the victims. Many of the victims experienced more than one type of child abuse. These findings align with the results presented in a qualitative dissertation of adult DMST survivors by Cavazos (2016), in which the author found that many had experienced childhood sexual abuse, psychological abuse, physical abuse, and neglect. In fact, each of the study's participants had experienced at least one form of child maltreatment in their home.

[4] To date, the closest effort was undertaken by Chohaney (2016).

Other studies link child sexual abuse or childhood sexual assault with DMST. Cecchet and Thoburn (2014) found that adult survivors of DMST cited their childhood sexual abuse as an important factor in their victimization. Although their study utilized a small sample with retrospective data, each study participant stated that they had experienced child sexual abuse, the absence of a father, or both, and that they viewed their early sexualization as creating "an underlying vulnerability to engaging in unhealthy sexual relationships" (p. 486). Childhood sexual abuse is largely understood by service providers as a predisposing factor for DMST victimization: A quantitative study of 577 mandated reporters found that childhood sexual assault or abuse, and sexual assault by a family member, were common occurrences in victims' lives, and that service providers viewed childhood sexual abuse as a significant risk factor for DMST victimization (Hartinger-Saunders, Trouteaud & Matos Johnson, 2016).

And though child abuse and child welfare involvement are related categories, it is important to note that child welfare involvement in and of itself is noted in the literature as a potential factor in DMST victimization. Child abuse may occur without child welfare involvement, after all, if the abuse occurs in the home but goes unreported, so there may be a slight differentiation between the two phenomena. Countryman-Rowsurm and Bolin (2014) included a child's residence in a group or foster home as a potential predictor of victimization; 61% of their respondents had been in State custody at some point, and 70% reported that they had stayed in a shelter or group home. (Their predictive tool has not yet been validated.)

Often, the abuse or injuries experienced by DMST victims result in a referral to child protective services. However, the child welfare system may be ill-equipped to meet the specific needs of DMST victims, such as their proclivity to run away, engage in crime, or return to their traffickers (Brittle, 2008). Fong and Berger Cardoso (2010) note that "few treatment and social

service programs are equipped to address the complex needs of children who may have experienced torture, rape, drug abuse, trafficking and physical abuse" (p. 315).

Juvenile justice involvement. It is a common practice for law enforcement officials to arrest and charge youth DMST victims with crimes they commit while exploited (Annitto, 2011). The complex needs of DMST victims cited by Fong and Berger Cardoso (2010) above provide some insight into why DMST victims may display the delinquent behavior that precipitates their juvenile justice involvement. Children who have survived child abuse—even child abuse not otherwise associated with DMST—are more likely than other children to display aggression, engage in criminal behavior, and abuse alcohol (Taillieu & Brownridge, 2015).

In addition, a study of juvenile justice involved DMST victims and their peers found that juvenile justice involved DMST victims were more likely than other juvenile justice involved youth to engage in problematic externalizing behaviors following victimization, like truancy, running away, substance use, and aggression (O'Brien, White & Rizo, 2017). It is well-documented that youth with externalizing behaviors, including youth not victimized by DMST, are at increased risk of child welfare system placement disruption (see Smith, Stormshak, Chamberlain & Bridges Whaley, 2001); their placement within the juvenile justice system may be the result of chaotic home environments and displacements within the systems designed to protect them from abusive homes.

Juvenile justice involvement, however, may be more than a simple result of DMST victimization. Godsoe (2015) contends that juvenile justice involvement may be a predictor of ongoing DMST victimization—even for individuals who have not yet been victimized—because detention centers and jails are a major entry point for lifelong criminal activity, or for the kindling of behaviors or relationships that may contribute to future exploitation. Numerous legal

papers critique this state of affairs from a human rights and victim-centered perspective (see Ocen, 2015; Souther, 2014).

It must also be noted that beyond the legal critiques of these policies, emerging research literature has linked juvenile justice involvement with DMST victimization. One quantitative study of sex workers in Ohio found that youth spending time in juvenile detention centers is a significant predictor of DMST victimization, even when the youth had not been placed in juvenile detention centers as a result of their involvement in DMST (Chohaney, 2016). An additional quantitative study found that juvenile delinquency was considered a risk factor for DMST by a large group of mandated reporters (Hartinger-Saunders, Trouteaud & Matos Johnson, 2016). The study included a sample of 577 mandated reports, such as social workers, school personnel, and medical professionals; roughly 63% of the sampled mandated reporters identified juvenile delinquency as a risk factor. Juvenile delinquency, in fact, was the most frequently identified risk factor among the sample.

Chaotic home life. A systematic review by Choi (2015) analyzed a number of potential DMST risk factors, and found that a dysfunctional or unsafe family environment was strongly associated with DMST victimization across studies. Some of the studies included in Choi's (2015) systematic review were dated from before the year 2000, when juvenile prostitution was reframed as DMST by the federal government. Newer studies, however, support Choi's (2015) assertions and the findings that she included in her review.

Frequently, the literature does not strictly differentiate child maltreatment from a chaotic home environment. Goldberg et al. (2017), for instance, cite witnessing domestic violence and parental substance abuse as forms of child maltreatment when, in fact, they could just as easily be conceptualized as components of a chaotic home life. In their study of DMST victims who

presented to a facility for medical treatment, the authors found that 30% had been exposed to domestic violence in their homes and 60% had a caregiver who abused substances (Goldberg et al., 2017). Following qualitative interviews with adult survivors of DMST, Cavazos (2016) likewise concluded that many of her research participants described domestic violence between their parents or caregivers as precipitating their commercial sexual exploitation.

Sometimes, however, a chaotic home life was not closely linked to a specific form of child maltreatment, but was instead described as general family dysfunction. Adult survivors of DMST recalled a chaotic home life as precipitating their exploitation, which they described as parental divorce and remarriage, or a lack of parental supervision and discipline (Cavazos, 2016). Other authors cited not getting along with parents as a predictor of future DMST victimization (Chohaney, 2016). Still other authors cited growing up in a home with an absent father or unmarried parents as potentially predictive of DMST victimization (Cecchet & Thoburn, 2014; Countryman-Rowsurm & Bolin, 2014). Countryman-Rowsurm and Bolin (2014) found, for instance, that 87% of their study participants grew up in a home with unmarried parents. This finding was strong enough that it led to the authors including "unmarried parents" as a variable in their DMST risk assessment. In Cecchet and Thoburn's (2014) qualitative study of adult survivors of DMST, meanwhile, the authors noted that "all participants described a deeply rooted desire to be loved that likely stemmed from their childhood experiences of sexual abuse and an absent father figure" (p. 487).

Substance use or abuse, and mental health concerns. Some studies suggest that youth substance use and abuse is a predictor of DMST victimization. A study by Reid and Piquero (2014) found that the degree to which youth reported substance abuse symptoms was associated with DMST victimization. Other studies point to substance use as a consequence that follows

DMST victimization—for instance, when a youth feels the urge to use a substance to numb the ache of victimization (Cole, Sprang, Lee & Cohen, 2016). Cole et al. (2016) found that DMST victims were significantly more likely to report substance use disorders than their peers. They explain that "youth who are involved in commercial sex often use alcohol or drugs to cope with the emotional pain of working in commercial sex" (Cole et al., 2016, p. 138). Still others suggest that drug or alcohol addictions that begin following victimization—such as when a youth uses a substance to numb herself or himself—hold youth and adult sex workers in a pattern of exploitation (Perkins & Ruiz, 2017). In their study of adjudicated DMST victims, Perkins and Ruiz (2017) found that over half reported substance use or abuse problems; they also found that a third of their participants had traded sex for drugs at least one time. One 16-year-old in their mixed methods study explained, "'Yes I did, for alcohol and drugs…every now and then. I didn't realize what I was doing' (p. 177)". In other words, perhaps youth keep returning to substances to numb themselves, but the only way to pay for the desired substance is through exchanging sex for money or the drug itself. Psychiatric concerns are also noted in the literature as a potential predictor (Reid & Piquero, 2014) and outcome of DMST victimization (Cole, Sprang, Lee & Cohen, 2016). For instance, Reid and Piquero (2014) found that psychoticism was significantly associated with an early onset of DMST among DMST victims.

While neither substance use and abuse nor mental health concerns were mentioned in Choi's (2015) systematic review as strongly associated with DMST victimization, several authors have nonetheless positioned them as relevant to a discussion of DMST prediction. Countryman-Rowsurm and Bolin (2014) found in their study, for instance, that over half of the sampled runaway or homeless youth reported self-harm ideation; roughly three-quarters reported drug or alcohol abuse. Goldberg et al. (2017) likewise state that adolescent psychiatric diagnosis

or admission to a psychiatric hospital, substance use and abuse, suicidal ideation, and self-harming behaviors can all cue medical providers that an adolescent is at-risk for DMST victimization.

Mental health outcomes following DMST have not been mapped as clearly in the literature, but research suggests that negative mental health outcomes are in the very least associated with DMST and sex trafficking victimization (Muftić & Finn, 2013). More research must be done to map DMST victimization into mental health outcomes; it is not entirely clear whether mental health symptoms precede or follow victimization.

Age of entry into sex work. In and of itself, age should not be considered a risk factor for DMST. Absent other risk factors, age is just a number on a child's pathway to adulthood. However, age is important within the analyses that will occur in this study because it may be predictive of specific types of exploitation when combined with other risk factors.

According to Bergquist (2015), the DMST literature often cites 12-14 as the average age of entry to DMST, but "the accuracy and actual source of that statistic are difficult to verify" (p. 315). Moreover, it appears as though age of DMST entry is predicated on a youth's specific presentation of risk factors. In a study that compared the presentation of adult survivors of DMST and sex workers who began working as adults, the author found that DMST victims were first commercially sexually exploited, on average, at just over 14 years of age (Roe-Sepowitz, 2012). The author also found that the presence of childhood emotional abuse significantly predicted an earlier age of entry to sex work from roughly 25 years of age to 21 years of age (Roe-Sepowitz, 2012); notably, the average age of entry to sex work was not an age that would fall within the category of DMST. However, while comparing juvenile entry to sex work with adult entry to sex work, the author did find that the juvenile group reported running away,

emotional abuse, exchanging sex for protection, and dissociative symptoms more often than the adult starters (Roe-Sepowitz, 2012).

In a novel study of age-graded DMST risk, Reid and Piquero (2014) developed several odds ratio models to predict early onset of DMST, late onset of DMST, and no onset of DMST. In this study, early onset of DMST was linked with parental substance use, earlier age of first sexual experience; males who had survived rape and had a substance abuse disorder were also at risk for early onset of DMST (Reid & Piquero, 2014). Meanwhile, late onset of DMST was linked with low levels of educational attainment (Reid & Piquero, 2014). Psychotic symptoms were associated with both early and late onset of DMST (Reid & Piquero, 2014). These findings suggest that earlier age of onset may be associated with a higher degree of risk factors. Indeed, authors Cronley, Cimino, Hohn, Davis and Madden (2016) found that a history of youth homelessness predicted an earlier age of entry to street prostitution (from 25 to 18). This finding further suggests that the presence of a risk factor like homelessness may predict earlier age of entry to sex work or DMST.

Race. Numerous scholars have commented on the disproportionate representation of minority races among known DMST victims. To begin, Choi (2015) identifies minority race as a factor associated with predicting DMST victimization, but she suggests that race is less of a potential predictor for DMST than other variables like trauma, behavioral health concerns, or a dysfunctional home environment. She explains, "minority race was supported as a risk factor by the studies representing higher level of evidence…it is likely that all races are at risk for DMST and that race…is less important than other nondemographic risk factors" (Choi, 2015, p. 68). Though not conclusive, Chohaney's (2016) robust study of DMST victims and sex workers also found that minorities of mixed racial background are at significantly greater risk of victimization

than their peers. However, a study by Reid and Piquero (2014) suggested that girls of all races share similar risk profiles; African American boys were significantly more likely to be victimized than boys of other races.

The studies that suggest race as a predictive factor of DMST are supported by legal and policy discussions. Butler (2015) states, for instance, that over half of the known DMST victims in the United States are African American, and that "policymakers have ignored the connection between race and other root factors that push minority and poor youth into America's commercial sex trade" (p. 1467). Her assertion is supported by several studies in which African American girls are disproportionately represented in the sampling. For instance, African American girls comprised nearly 40 percent of the study participants in a study by Perkins and Ruiz (2017). Butler (2015) argues that DMST is an extension of the "racialized sexual exploitation of Black women", and that to ignore race in a discussion of DMST vulnerability is to ignore the foundation of the problem. Phillips (2015) adds that due to structural inequalities like poverty, African American youth may feel forced to participate in survival sex to meet their needs. In turn, African American youth are scrutinized heavily by law enforcement officers who have become the de facto service providers for vulnerable and exploited adolescents within the community (Ocen, 2015; Phillips, 2015). Of note, Butler (2015), Ocen (2015), and Phillips (2015) call on DMST researchers to engage in intersectional analyses to draw attention to the disproportionate and multiplicative oppressions, like poverty and juvenile justice involvement, faced by adolescents and children from racial minority groups. Perhaps intersectional analyses may shed additional light on the intersection of race with the other nondemographic factors mentioned by Choi (2015) as more salient to DMST prediction.

Homelessness, Poverty, and Unmet Basic Needs

It is common for many of the risk factors included in the overview above to occur simultaneously with one another. And, it is poverty and unmet basic needs—often occurring within the context of homelessness or running away—that appear to link the risk factors to one another.

For instance, many young people living in abusive or chaotic home environments run away from their family or foster homes. In a Canadian study of nearly 4000 females, Andres-Lemay, Jamieson and MacMillan (2005) found that study participants who reported physical abuse only, sexual abuse only, or a mixture of both forms of abuse were two to four times more likely than other participants to report runaway behavior prior to the age of 16. From there, runaway youth may be criminally detained for running away, or for participating in the activities that assure their survival on the street (Ennett, Bailey & Federman, 1999; Moskowitz, Stein & Lightfoot, 2013). Survival sex—a term used in reference to a common survival strategy for runaway, throwaway, or homeless youth (Roe-Sepowitz, 2012), in which a youth trades sex for shelter, food, or another basic need—is both an example of one form of DMST, and a predictor of future DMST victimization. Chohaney (2016) found, for instance, that a youth with just one runaway episode, in which the youth had to engage in survival sex to meet her or his basic needs, was 2.6 times more likely to be victimized in the future than a youth without the same history.

Youth who run away from home often do so to escape conditions in which their basic needs are ignored. In turn, they may rely on survival sex strategies to meet their own basic needs on the streets (Roe-Sepowitz, 2012; Warf, Clark, Desai, Rabinovitz, Agahi, Calvo, & Hoffmann, 2013). Survival sex strategies are then associated with future DMST victimization; Chohaney (2016) found that engaging in survival sex one time was more strongly predictive of DMST

victimization than any other factor. Cronley et al. (2016) also found that youth homelessness was the most significant factor predicting age of entry into sex work. Cavazos' (2016) qualitative dissertation of adult survivors of DMST further identified that a major reason youth enter sex work is to meet their unmet basic needs, whether it is a need for shelter, food, clothing, or hygiene products. Indeed, Choi's (2015) systematic review found that homelessness and running away from home were strongly associated with commercial sexual exploitation. Hartinger-Saunders, Trouteaud and Matos Johnson (2016) also found that helping professionals were especially sensitive to child homelessness as potentially associated with victimization.

Certainly, basic needs may go unmet when the family of origin is in financial distress or poverty. As the studies above demonstrate, a youth may also experience an unmet basic need when he or she runs away from home and then lacks access to the resources needed to meet her or his basic needs. In this way, perhaps homeless, runaway, or throwaway status may serve as an excellent proxy for unmet basic needs, as it is difficult to conceive of a scenario more bereft of met needs than a child living on the street.

This understanding of poverty or unmet basic needs (often occurring in the context of homelessness) as a predictor of DMST aligns closely with the other risk factors introduced thus far, and with scholarship about traffickers' source of power over victims (Preble, 2016). For instance, a study by Preble (2016) used socioeconomic status—the complex web of an individual's occupation, education, and income—to examine how traffickers recruit both labor and sex trafficking victims, and maintain power over them. The majority of her study's participants with a history of sex trafficking victimization reported financial strain prior to their victimization (Preble, 2016).

Although there is a lack of research literature on the precise relationship between poverty and DMST victimization, researchers have identified poverty as a major contributor to human trafficking, in general (Gallagher, 2002; Wheaton, Schauer & Galli, 2010). Based upon the totality of human trafficking literature, it is reasonable to assume that poverty or unmet basic needs may be a predictor of DMST, as well. Moreover, poverty and unmet basic needs may be the unspoken thread between all the heretofore mentioned risk factors. As Preble (2016) explains in her study of both labor and sex trafficking victims, "the kind of power the trafficker may use at various stages, and certainly at the recruitment phase, of the trafficking experience is calculated such to maximize the inequities their victims already experience within their identity" (p. 101).

Importantly, many of the above-mentioned categories hold closely to the predictive factors employed in the recently-validated Commercial Sexual Exploitation—Identification Tool (CSE-IT) (Westcoast Children's Clinic, 2017a), which is the first measurement tool of its kind capable of positively identifying domestically sex trafficked youth (Westcoast Children's Clinic, 2017b). The ability to identify youth involved in DMST is related—but not synonymous to—the quantification of risk factors, and the relationship between these risk factors and ongoing vulnerability to DMST in an adolescent's life. In identifying DMST victimization, the CSE-IT includes the factors of housing and caregiving (or lack thereof), prior or current abuse or trauma, physical health and appearance, environment and exposure, relationships and personal belongings, and evidence of coercion or exploitation. Many of the questions on the scale relate to child welfare involvement, juvenile justice involvement, chaotic home life, runaway or homeless status, substance use or abuse, and poverty or unmet basic needs. Neither race nor age are considered predictive factors in this tool (Westcoast Children's Clinic, 2017a); perhaps this is

because race is so highly correlated with poverty and child maltreatment that it does not need its own category in the tool.

Victim Experience of Traffickers and Facilitators within DMST

According to Marcus, Horning, Curtis, Sanson and Thompson (2014), questions about the relationships between DMST victims and traffickers[5]—both at entry to trafficking and on an ongoing basis—are almost entirely unexplored in the literature. Furthermore, they state that the very few studies focused on victim-trafficker relationships are inherently biased because they take place ex situ, thus drawing "conclusions from retrospective accounts by individuals for whom renunciation of their previous experiences is the precondition for their current survival" (p. 225).

These authors state that the predominant narrative in both scholarly and popular media accounts of trafficking is that the relationship between DMST victims and their traffickers is similar to the relationship between a slave and owner, in which victims are rendered devoid of decision-making capacity before being brutalized and exploited for another's financial gain (Marcus et al., 2014). They give the example of a personal account by Rachel Lloyd, a counter-trafficking advocate in New York City who was once a DMST victim herself. In her popular book *Girls Like Us* (Lloyd, 2011), she advances her own history of adolescent vulnerability and brutalization by a pimp as though it is representative of all domestically sex trafficked youth. They also cite a study by Reid (2010), which found significant barriers to service provision for youth identified as DMST victims. Reid (2010) introduces her study by citing dated scholarly

[5] Of note, this study uses the term "trafficker" to describe all manner of individuals involved in a DMST victim's exploitation. A trafficker may be a pimp, a friend, a family member, or some other acquaintance who is directly involved in a minor selling sex for something of value. By federal law, anyone involved in practices related to a minor selling sex may be federally charged with human trafficking (United States Department of Justice, 2015).

and government publications[6], and concludes by stating that "sex traffickers who entrap minors in prostitution are predatory, possibly psychopathic, offenders skilled at coordinating their movements to maximize the likelihood of success in recruiting and manipulating the victim" (p. 147). While Marcus et al. (2014) do not discount the potential validity of Lloyd's (2011) and Reid's (2010) perspectives, they suggest that they do not represent the variability in victim experience of traffickers while exploited within DMST.

The authors themselves found in an in situ ethnography that, "stereotypical pimps are far less common and important to street sex markets than would be expected, given the popular discourse and the priorities of contemporary anti-trafficking institutions" (Marcus et al., 2014, p. 231). Fewer than 20% of the respondents in their study had been recruited into sexual exploitation by a trafficker or pimp. Those who had been recruited by a trafficker or pimp were the most likely of all the categories to describe the situation as deeply exploitative (Marcus et al., 2014). These traffickers, pimps, or facilitators typically fall within the subcategories of friend, romantic partner, family member, or exploitative other. A brief summary of these subcategories will follow. Then the discussion will turn to a subcategory of victim who does not have an outside trafficker involved in her or his exploitation. However, it must be noted that the literature on these victim-trafficker subcategories is so sparse that very little is known about the relationship dynamics that occur within them. More work must be done to identify the patterns that lead into specific victim-trafficker relationship subcategories, and the relationship dynamics that mark these specific subcategories.

[6] For instance, Reid (2010) cites a study by Estes and Weiner (2001) to support her conclusions about the relationship between DMST victims and pimps. Estes and Weiner (2001) have since questioned the validity of their own study's findings (see Kessler, 2015 May 28).

Friend. Marcus et al. (2014) describe friend-type relationships more than the other types of relationship dynamics that may emerge between victims and traffickers. They use the phrase "mutual recruitment" to describe these friend-type relationships, in which a pimp or facilitator seeks out minor or adult sex workers to work for him or her, and in which the sex workers mutually recruit their pimps to offer them protection and companionship (Marcus et al., 2014). These types of relationships may precede the trafficking of the victim, or they may begin upon the mutual recruitment of one another (Horning, 2013; Marcus et al., 2014). For the purposes of this study, a friend victim-trafficker relationship would not be marked by extreme force or coercion, but instead by the mutuality of the partnership, whether or not the victim and trafficker were friends prior to the victimization; it is also likely that a friend-type relationship may include victims and traffickers who are close in age to one another (Horning, 2013; Musto, 2013).

Romantic partner. DMST victims commonly report that their boyfriends recruit them into sex work (see Raphael, Reichert & Powers, 2010). Sometimes, boyfriends only make romantic gestures as a form of coercion, with the intention to groom and manipulate the victim (Reid, 2010). These types of relationships may be marked by patterns of exploitation similar to those experienced by domestic violence victims, such as a rapid progression from a friendly relationship to a sexual one, and then onto physical, psychological, emotional, and financial abuse tactics that are deployed in an effort to control the victim (Hammond & McGlone, 2014; Reid, 2010). Other times, romantic relationships resemble the friend-type relationships described above, in which both partners agree to pursue the arrangement for mutual benefit (Marcus et al., 2014). Perkins and Ruiz (2016) found that urban youth were more likely to report entry to DMST via a romantic partner than youth from rural or suburban areas.

Family member. One study by Reid, Huard and Haskell (2014) found that victim-trafficker relationships within a family are marked by a younger age of onset, and more experience with child abuse, than may occur within other victim-trafficker relationship types. In this type of relationship, it is common for the victim's mother to traffic her child in exchange for money or drugs, for a family member to groom the child for the business, or for a father to pimp out his daughter to friends in exchange for money (Perkins & Ruiz, 2016). The Reid, Huard and Haskell (2014) study also found that the victim was more likely to be used for the trafficker's financial gain than for any type of mutual economic benefit, as might be the case within other relationship types. This finding suggests, perhaps, that family victim-trafficker relationships are marked by a greater degree of cumulative exploitation and risk than may occur within other relationship types. Additionally, a study by Perkins and Ruiz (2016) found that rural youth were more likely to report a family member introducing them to DMST than urban youth.

Previously unknown or untrusted trafficker. There may be instances in which DMST victims are exploited by other individuals not previously described in this overview of victim-trafficker relationships. This type of relationship may be marked by the descriptors Reid (2010) uses to describe the typical DMST trafficker: predatory, psychopathic, manipulative, and skilled. While it is certainly possible that these descriptors may be applied to other victim-trafficker subcategories, this particular relationship exists only when the victim does not otherwise know or trust the trafficker as a friend, romantic partner, or family member. According to Marcus et al. (2014), this type of victim-trafficker relationship attracts the majority of the anti-trafficking community's awareness and advocacy attention, but is exceptionally rare in actuality.

No outside trafficker. Despite these specific categorizations organized underneath the trafficker-victim relationship umbrella, Marcus et al. (2014) found that the majority of their

respondents did not have a trafficker, pimp, or other third-party facilitator involved in their exploitation at all. These victims had no *person* outside of the johns[7] who purchased sex from them holding them in a position of commercial sexual exploitation. Those youth who are commercially sexually exploited, but without a specific trafficker identified, may share similarities with the youth who engage in the survival sex strategies described earlier in this literature review. Survival sex is when an individual exchanges a sex act for food, drugs, housing, or some other necessity; it is an act that is often associated with unaccompanied childhood homelessness (Cronley et al., 2016; Purer, Mowbray & O'Shields, 2017). These victims may be understood as oppressed by life circumstances, but perhaps not by a third party outside of the johns who purchase sex from them. Reid and Piquero (2014) suggest that these youth may be the late onset DMST victims who are constrained by low educational attainment and diminishing employment opportunities, perhaps due to ongoing poverty, rather than the severe family dysfunction that may mark the other DMST victim-trafficker relationship categories. Perhaps surprisingly, one participant in a study by Perkins and Ruiz (2016) went so far as to "insist that she made the choice to engage in 'prostitution' because it was 'easy' and she made 'lots of money' (p. 178)."

DMST victims who report no outside trafficker are perhaps more likely to view their work as consensual and empowering than victims exploited within the other subcategories described in this review. Still, each type of exploitation is considered a human rights abuse and a form of child abuse. But, if risk factor profiles vary between victim-trafficker relationship types, these variations must be uncovered in order to better mitigate the problem.

[7] "John" is a term used to describe the client of sex worker.

Based upon the review of these findings, there are two main categories of DMST victim-trafficker relationships. These categories include 1) commercial sexual exploitation of a child, trafficker identified, and 2) commercial sexual exploitation of a child, no trafficker identified. Within the "commercial sexual exploitation of a child, trafficker identified" category, the subcategories of victim-trafficker relationships are friend, romantic partner, family member, and previously unknown or untrusted trafficker. To this author's knowledge, there have not been any additional studies beyond the Marcus et al. (2014) study investigating the general relationship types referenced above. Similarly, there have not been any studies that investigate these specific victim-trafficker relationship subcategories beyond the ones mentioned above. These studies did not explore how risk factors may predict entry into a specific victim-trafficker relationship type. This is an important line of inquiry, if indeed there is variability in risk factor profiles for specific types of victim-trafficker relationships. Advocates involved in prevention and remediation need to be aware of variability in risk factor profiles by victim-trafficker relationship types so that they can tailor prevention efforts and interventions accordingly.

Finally, it is important to note the number of relationships that victims have with traffickers over time. To date, there has not been research on how many different relationships DMST victims have with various traffickers or facilitators over the course of their exploitation. However, Hammond and McGlone (2014) note in their review of the literature that sex trafficking victims may be exploited for a longer period of time when they do not recognize an exit from their victim-trafficker relationships. They state that there are individual, relational, structural, and societal barriers to victims' exit from the sex trade, and that the greater the number of barriers to exit, the longer the victim will remain in an exploited position. Barriers to exit include familiar obstacles like criminal justice involvement, unmet basic needs,

homelessness, and more (Hammond & McGlone, 2014). These barriers are familiar because they share many similarities with the very risk factors that may predict DMST victimization in the first place. Moreover, in Zimmerman, Hossein and Watts' (2011) conceptual model of human trafficking victimization, the authors suggest that the re-trafficking of victims is common within human trafficking, and that it is more likely to occur to victims the longer they are exploited. As a result of these conceptual models, it may be reasonable to hypothesize that the greater a victim's exploitation prior to trafficking, the longer she or he will remain in an exploited position, and the greater the number of traffickers or facilitators involved in their exploitation over time. Perhaps, too, the number of traffickers or facilitators involved in a victim's exploitation may be predictive of the type of victim-trafficker relationship dynamics that led to the initial trafficking.

Of note, research has also not yet investigated how many traffickers are typically involved in a DMST victim's exploitation, nor how victims relate to these traffickers on an ongoing basis, nor how the risk factors in a DMST victim's life may be related to the number of traffickers involved in her or his ongoing exploitation. The present study fills an important gap in the literature by investigating a) DMST victims' experienced risk factors, b) the relationship between risk factors and victim-trafficker relationship categories and subcategories, c) how many traffickers or facilitators are involved in victims' ongoing exploitation, and d) how the number of traffickers or facilitators involved is related to other risk factors and victim-trafficker relationship subcategories.

This literature review examines relevant historical information that ought to be considered by researchers who conduct DMST inquiry, including a discussion of the policies that have been used to address DMST, and the feminist debates that have occurred around the issue.

From there, the review pivots to describe what is presently known about the consequences of DMST, the risk factors that push and pull DMST victims into exploitation, and the victim experiences of traffickers and/or facilitators. The risk factors and victim relationship dynamics factor heavily into the study methodology. Prior to introducing the study methodology, however, the Principal Investigator will introduce the theoretical lens for the study's methods and presentation of results.

Chapter 3: Theory

This chapter begins with an overview of the human behavior theories that researchers have used in DMST inquiry, and an evaluation of the advantages and limitations of these theoretical approaches. Then, the chapter will pivot into an overview of intersectionality theory and recommendations for how social work and other anti-trafficking researchers may apply intersectionality theory to overcome noted limitations in DMST theoretical applications. Specifically, the discussion of intersectionality theory will point to how specific variables (e.g. risk factors) reviewed in the literature may be applied to the present research study.

Theoretical Applications Within DMST Research

General human trafficking inquiry, when it adheres to a theory at all (Weitzer, 2011), has tended to cluster around theories that explain criminal behavior or economic decision-making over anything else. The human trafficking research field has struggled to apply human behavior theory to trafficking inquiry. Only recently have authors within the field begun to comment on this shortcoming, and to back up their commentary with systematic reviews that demonstrate just how limited theory and empiricism are within the field (Weitzer, 2014; Zhang, 2012). The DMST subfield, however, has not yet progressed to the point in which scholars have even offered this level of commentary. Twis and Shelton's (2018) systematic review of DMST literature is the first of its kind to enumerate how often theory is applied to DMST inquiry. The results of this systematic review indicate that of the very small number of published articles that examine DMST or commercial sexual exploitation of children, less than one-third applied a theory to inquiry at all, and even fewer did so with stringent standards.

It is difficult to come by theory-driven DMST articles, and likewise difficult to make sense of how and why the particular theories were selected for inquiry. A review of the literature

relevant to this study suggests that the types of human behavior theory applied to DMST inquiry can be loosely clustered into a) criminological or sociological theories, and b) psychological theories. Many others are atheoretical, but tend to collect around the concept of trauma. The following analysis of these theory groups (and the atheoretical literature) will offer an overview of how and why authors selected these particular theories, as well as an assessment of their advantages and limitations for DMST inquiry.

Criminological or Sociological Theories

The criminological or sociological theories that scholars have used in DMST research include social learning theory, routine activities theory, social constructivism, and ecological systems theory. These theoretical applications were used in three separate publications. Non-empirical literature also suggests displacement theory as a potential model through which to understand DMST.

Routine activities theory and social learning theory. Stone's (2016) dissertation utilizes both routine activities theory and social learning theory to explain the increases he observed in DMST victimization. According to Stone (2016) and the routine activities theorists he cites, it is changes in individuals' daily activities that account for increases in criminal activity. Original theorists Cohen and Felson (1979) state that for criminal activity to occur, there must be a motivated offender, a vulnerable target, and the lack of an adequate caregiver. It is assumed, then, that if all three of these factors are present, the target may be criminally exploited. Of late, the theory has been used to explain cybercrime (Leukfeldt & Yar, 2016), like Internet fraud (Pratt, Holtfreter & Reisig, 2010), cyberbulling (Hawdon, Costello, Ratliff, Hall & Middleton, 2017), and identity theft (Reyns, 2013). Stone (2016) suggests that adolescents' increased use of social networking sites—a change in daily activity—has removed them from

adequate parental caregiving, and placed them in a vulnerable position to be exploited by a motivated offender. Vulnerability, however, is not considered through a lens of socioeconomic vulnerability, which the literature suggests is important for understanding the source of the problem. Given the theory's ability to explain and explore online crime, and traffickers' use of the internet to advertise victims' sexual services (DeLateur, 2016), routine activities theory may have obvious applications for DMST inquiry that is focused on online versions of the crime.

Stone (2016) also references social learning theory as relevant to DMST inquiry. Social learning theory suggests that just like positive behaviors can be learned through exposure to positive role models, so too can criminal behaviors be learned through exposure to criminal role models (Akers & Jensen, 2003). Stone (2016) argues that the behaviors of traffickers and pimps, and the behaviors that expose DMST victims to exploitation, are learned by peer groups and rap music. There is certainly some merit to his first contention. Evidence suggests that exposure to prostitution in a neighborhood or family is positively associated with DMST victimization (Cecchet & Thoburn, 2014). Stone's rap music assertion is less defensible—he states that it is his "opinion that the misogynistic themes found in rap music play an important role in DMST" (p. 35)—although he does make a case that adolescents are highly impressionable and thus music that glorifies "pimps" and "hoes" may prime teenagers for negative or criminal behavior. To his credit, Stone (2015) cites research by Miranda and Claes that rap listeners' lifestyle choices are correlated with themes evident in rap lyrics. Despite Stone's assertion, and the prominence of social learning theory within criminology, a meta-analysis by Pratt et al. (2010) found that variables related to criminal imitation do not have strong empirical backing, undercutting the plausibility of social imitation as an explanation of DMST.

There are benefits and drawbacks to both of these theories. Perhaps the greatest benefit of viewing DMST through the lenses of routine activities theory and social learning theory is that these theories make some intuitive sense when applied to the phenomenon. When routine activities change, such that parental caregiving is limited and criminals have access to a potential target, of course it makes sense that exploitation might occur. Likewise, when potential buyers learn from the larger culture that it is acceptable to purchase sex, it follows that they might then purchase sex from a minor.

Of course, the drawback of both of these theories is that they make intuitive sense within a criminological framework, and a criminological framework is unable to adequately attend to the macro factors that underlie the theories' variables. For instance, routine activities theorists state that it is the lack of an adequate caregiver that exposes a vulnerable target to exploitation by a criminal (Cohen & Felson, 1979). Instead of simply noting the absence of a caregiver, though, a DMST researcher—particularly one from a social work or social justice background—ought to ask the question, "why is the caregiver absent?" Perhaps the absence of a caregiver hints at a structural problem instead of a parental one. Social learning theory, too, does little to explain the structural factors that make certain people more likely to learn negative behaviors from negative role models. Stone (2016) rightly notes in his dissertation that DMST victims are more likely than non-victims to have a family member who has worked as a prostitute (Cecchet & Thoburn, 2014). If social learning theory is applied to this finding, there is an implicit assumption that DMST may just be a matter of family members or peers learning from each other how to meet their basic needs by selling sex (Warf et al., 2013). However, it does not seek to answer why it is that certain families or peer groups are so impoverished that they must resort to selling sex as a renewable resource that structural inequality cannot take from them. A core assumption of the

present research study is that systemic oppression ought to be attended to within the inquiry. After all, the literature suggests that the problem is a structural one, and a human rights approach demands that variables related to vulnerability and oppression ought to be considered. Neither routine activities theory nor social learning theory, due to their criminological emphasis, are designed to examine oppressive factors thoroughly. While it may not be surprising that society views social problems as individual rather than structural, the human behavior theories selected to guide social problem analyses ought to be more adept at considering macro systems rather than micro systems alone.

Social constructivism. One conference paper utilized social constructivism to understand how and why police officers viewed DMST victims as child abuse victims, juvenile prostitutes, or both (Halter, 2007). This same author went on to publish her finding that nearly 40% of the surveyed police officers mislabeled DMST victims as offenders, but her publication did not cite social constructivism in the study design or reporting of results (Halter, 2010).

Social constructivism is a sociological theory that suggests that individuals learn their reality based upon social interactions with other individuals and groups (Gergen, 1999). In other words, reality is not an objective fact that may be discovered, but is instead the product of an individual's and his or her social group's own making. Kukla (2000) notes that historically, social constructivists have maintained that social interactions are responsible for creating individuals' belief systems. He goes on to explain that social constructivism is unique in its ability to shape discussions about both ontology—what is known, and epistemology—how realities may yet be discovered.

Unfortunately, Halter's (2007) study findings were not included in the conference paper abstract, so it is not clear whether the author found substantial evidence to support the theory, or

if she only uses the theory to structure the research questions and design. Although Halter's (2010) publication did not refer to social constructivism, it did report findings that were able to answer the research question posed in her conference abstract. The author found that DMST victims who were more cooperative, had a greater number of exploitation identifiers, had no criminal record, and were discovered as a result of a filed report were more likely to be correctly identified as victims by police (Halter, 2010). If indeed social constructivism can explain these findings, it may be that police officers construct an image of a DMST victim based upon the perceived cooperation and innocence of the identified victim.

Although it is challenging to comment on how social constructivism might be applied to future DMST research (after all, the field is so limited that there is only one explicit example of social constructivism applied to DMST inquiry at all), it is difficult to imagine how it might be applied without primarily examining how particular groups *perceive* DMST victims. This is what occurred in the Halter (2010) study. And, research questions about *perception* may be problematic within DMST inquiry. As Wilson and O'Brien (2016) note, a great deal of political clout within the counter-trafficking community is already given to the caricature of an "ideal victim" or "perfect victim", whose identity has been preserved by official government documents that portray victims as weak and blameless, when their lived realities may be much more complex.

Studies about perception do little to unmask the real identities of victims, all the while making it appear as though the research field knows more about DMST victims than it actually does. In general, the human trafficking literature is overrun by scholars sharing their perceptions—often without empirical backing (Twis & Shelton, 2018)—of trafficking victims' motivations, relationships, and belief systems (Weitzer, 2011). Non-empirical DMST literature

also contains numerous publications that are essentially opinion pieces about who the victims are and how they are perceived by the broader society.[8]

These think-pieces are interesting, but they are not able to advance the state of knowledge in a holistic manner in and of themselves. Moreover, they are already more represented in published DMST literature than studies that examine the firsthand experiences of DMST victims (Twis & Shelton, 2018). Instead of focusing on how DMST victims might be perceived by others in society, when possible the DMST research field ought to be asking victims themselves about their priorities, their experiences, and how they experience the perception of others. It is in these lines of inquiry that the types of data that advance the human rights of victims are more likely to be gathered.

Ecological systems theory. One dissertation included in this overview uses Bronfenbrenner's (1979) ecological systems theory to examine service delivery models used by domestic sex trafficking rehabilitation centers (Twigg, 2012). The author also used Macy and John's (2011) framework for sex trafficking rehabilitation services—which was developed from Bronfenbrenner's (1979) model—to aid in her analysis. This framework is not specific to minor victims. Macy and John's (2011) framework acknowledges the importance of basic needs, safe housing, physical and mental healthcare, legal advocacy, substance abuse services, and life and job skills training for DMST victim rehabilitation. The authors then conceptualize these needs within micro-, mezzo-, macro-, exo-, and cronosystems, in line with Bronfenbrenner's (1979) approach to assessing a person in their environment. Twigg (2012) then borrows this framework to assess how well United States domestic sex trafficking rehabilitation centers met each of these needs within their service delivery models.

[8] See, for instance, the introduction to Kubasek & Herrera's (2015) legal review.

There is a reason that ecological systems theory—and its predecessors and derivatives—is one of the most common human behavior theories applied to social work research and practice (Payne, 2002; Robbins, Chatterjee, & Canda, 2011). The theory provides an effective framework for explaining multiple system layers, and their influence on human behavior. In turn, it also provides an explanation for how human beings may influence the environments within which they reside. Like an ecosystem, it is presumed that a social system is able to function when it maintains homeostasis, in which all of its parts work together to maintain its balance. Sometimes, microsystems or mezzo systems within the larger ecosystem may suffer to maintain homeostasis. This indicates a lack of fit. It is only through the disruption of the homeostasis that subsystems may find a new balance and establish a goodness of fit. In assisting a person to influence his or her environment, a social worker may improve that individual's goodness of fit within the system (Germain, 1973; Siporin, 1980).

When applied to DMST inquiry, ecological systems theory and other ecological perspectives may have utility. In these theories, the victim is at the center of inquiry, and all of her or his relationships are then examined within a model that allows for micro-, mezzo-, and macro-level circumstances to press in on the individual, thus creating or maintaining the social phenomenon under study. The focus on the victim is in line with social work value of the dignity and worth of all persons, and the theoretical emphasis on relationships likewise aligns with the social work value of the importance of human relationships (NASW, 2008). The theory is also quite flexible, in that it allows for any of the paradigms or systemic variables selected by the researcher to be inserted into the inquiry. If the researcher is rightly interested in how economics, crime, family dynamics, or even psychological issues factor into the victim's access to basic human rights, the theory is flexible enough to accommodate each of them. The theory is

positioned to view social problems as the complex issues that they are, rather than isolating them into a simple problem with a clear and one-dimensional cause and effect.

However, the flexibility that allows for this unconstrained approach to inquiry is also one of the great shortcomings of the theory. When a theory is as fluid as ecological systems theory, it may not be able to do all that a human behavior theory ought to do. Human behavior theory is used, in part, to guide research studies and contextualize findings within a larger tapestry of observed human behaviors. It is also used to anticipate final outcomes or identify causal chains. Authors like Tudge, Payir, Mercon-Vargas, Cao, Liang, Li and O'brien (2016) have suggested that ecological systems theory is not able to identify causal chains or predict final outcomes because it is contextual in nature (explaining the environment) rather than mechanical in nature (predicting a cause and effect). In other words, the theory may be valuable for explaining what is occurring within a DMST victim's life, but perhaps not helpful in predicting how system changes may improve the victim's life. This is what often occurs when a theoretical model looks more like a web than a chain, and it should cause DMST researchers to pause before applying the theory to DMST out of force of habit. While ecological systems theory may be useful for developing an understanding of DMST, it is likely less useful for generating results that inform system interventions intended to drive down prevalence rates. The web-like model necessitated by ecological systems theory makes it difficult to control for variables or develop a causal pathway.

Just as problematic, Dybicz (2009) states in his critique of ecological systems theory that no other theory has as little empirical backing as it does. He notes that the theory "does not base its validity claims on its own empirical research but rather (ultimately) on the empirical research supporting [systems theory and ecology]" (Dybicz, 2009, p. 168). This is problematic for social

workers and other social justice researchers who want to generate findings that may be contextualized within an empirically strong theory.

Displacement theory. Finally, one conceptual publication by Heil and Nichols (2014) suggests that displacement theory ought to be applied to police department policies related to law enforcement activities online. This particular piece is not an empirical study, but the suggestion that displacement theory could be used to better understand and explain the effects of law enforcement activities on DMST is innovative. Displacement theory asserts that when a crime prevention effort occurs, criminals simply displace their planned criminal activities to another time or place, or take a different approach to complete the same crime (Guerette & Bowers, 2009). The authors argue that with the increased surveillance of the Craigslist and Backpage adult services sections, law enforcement only succeeded in driving DMST and other forms of trafficking deeper into the web, thus making it more difficult to locate victims (Heil & Nicholls, 2014).

This theory may have some merits for researchers who are primarily interested in DMST inquiry from a criminological perspective. The criminological paradigm has some value for DMST inquiry, because DMST is, in fact, a crime and researchers may very well be interested in how law enforcement activities attenuate prevalence rates. Displacement theory is perhaps well-positioned for this purpose. Empirical backing for the theory, however, is not as consistent as one might assume. A study by Weisburd, Wyckoff, Ready, Eck, Hinkle and Gajewski (2006) found that when crime control efforts are focused, crime control benefits are felt in neighboring communities, thus suggesting that crime is not simply displaced to a nearby location with increased patrolling. Interestingly, a meta-analysis of multiple displacement theory studies found that even when crime displacement did occur following increased policing, the rate of

displacement was still less than the crime control benefits achieved through the policing (Guerrette & Bowers, 2009). Available literature has not yet paid close attention to the concern raised by Heil and Nichols (2014) that increased online surveillance may drive online crime deeper into the web.

The theory itself hints at a problem with the criminal justice paradigm in the first place: Criminal activities do not always stop when law enforcement activities are increased. They may be merely displaced. On the whole, displacement theory is unable to account for how structural changes may drive DMST prevalence rates up and down, nor is there place within the theory for the victim experience to matter. So, while displacement theory may be useful for limited lines of DMST inquiry, it cannot overcome the inherent shortcomings of a criminological paradigm applied to a human rights issue.

Psychological Development and Decision-Making Theories

Studies related to psychological development or psychological decision-making processes are also popular within the DMST literature. This is slightly surprising, given that a psychological perspective is not implicit within broad DMST paradigms or policies. Perhaps one way to explain scholarly interest in the psychological processes of DMST victims and stakeholders is that when federal law shifted these young people from the position of a criminal into the position of a victim (Duger, 2015), there needed to be a collective shift in how DMST victim behavior was understood. When the TVPA (2000) became law, commercially sexually exploited young people were rightly named as victims rather than criminals. However, the law and some of the victim mythology surrounding the law made little space for the reality that many DMST victims have, indeed, engaged in criminal activities and may not want to leave the sex industry when given a chance (Fichtelman, 2014). Even if a minor victim (or an adult who was

first trafficked as a minor) avoids a prostitution charge, it is common for these victims to accrue numerous criminal charges over time (Barnard, 2014). For example, a victim might have a criminal record that includes charges like truancy, drug possession, DUI, theft, ID fraud, and child endangerment, if she has children. When applied, psychological theories are adept at explaining and exploring the internal processes underlying the confounding victim behaviors that could easily be interpreted as criminal. However, only one study explicitly named a psychological theory in its design. This study applied attribution theory. Several other authors hinted around psychological theories in their study designs, but because they did not explicitly mention a psychological human behavior theory, they will be reviewed in a forthcoming section that covers atheoretical literature.

In one author's dissertation, attribution theory was used to assess how and why police officers make judgments of DMST victims based upon their behavior (Belin, 2015). Attribution theory suggests that individuals observe others' behaviors, and use their observations to judge the intentionality of the behavior, and then to judge whether the behavior can be attributed to the person's intrinsic characteristics (Shaver, 2016). Ultimately, these observations and judgments factor into whether an individual is perceived as morally good or bad. Weiner (2008) notes that attribution theory was honed more than fifty years ago, but retains some prominence in psychological inquiry due to its simplicity. It is based upon the premise that individuals want to know why a particular event occurs, and they will often make sense of an event by attributing certain qualities to the individual involved in the event.

Belin (2015) applies attribution theory to police officer interactions with DMST victims because when a police officer interacts with a victim he or she necessarily makes quick decisions about how the crime occurred and whether the victim was at all culpable. She found that all of

the vice police officers in her study believed that prostituted youth were victims, but that some made decisions to arrest and detain DMST victims to protect them from their pimps or as an "intervention to immediately connect youth to a community advocate" (Belin, 2015, p. 168). According to the author, hers was the first study of its kind to use attribution theory to examine police officer perceptions of DMST victims. Although the case could be made that this particular theory was used from a criminological perspective, attribution theory was developed from an interest in the psychological processes that produce moral judgments, thus placing it within a psychological paradigm.

Earlier, it was argued that social constructivism was not particularly useful for DMST inquiry because of its focus on examining the perceptions people have of victims, which is already well-represented in the literature, rather than examining victim experience itself. Attribution theory has the same weakness as social constructivism, in that when it is applied to DMST inquiry, it is necessarily focused on how others attribute good or bad qualities to DMST victims based upon their quick judgments. It is also limited by its focus on internal psychological processes rather than processes that occur at a systems level.

Applying attribution theory like Belin (2015) did in her study, however, may prove useful to DMST researchers. Law enforcement officials have great influence over whether DMST victims are provided services or charged with a crime (Reid, 2010). In this instance, their perceptions matter greatly, and in an immediate sense. Attribution theory may not be appropriate for many lines of DMST inquiry for the same reasons that social constructivism is not, but it may prove helpful for examining the attributions made by key DMST decision-makers. For instance, advocates know that DMST victims are often shuffled through multiple state-run systems, in which perception runs the risk of becoming reality. When police officers view DMST victims as

criminal, they may not be charged with juvenile prostitution (to do so would be in violation of federal law), but they may very well be charged with some other crime that occurred alongside their DMST victimization (Perkins & Ruiz, 2017). Attribution theory may provide insight into why police officers, and other adults who hold great sway over DMST victims' futures, attribute good or bad qualities to these children. When the source of attribution is illuminated, it is possible that advocates could develop educational materials to address these biases. For this reason, attribution theory may be appropriate for examining the perceptions of groups that have power over DMST victims, like law enforcement officials, social service providers, and legislators. However, it cannot be considered an adequate meta-theory for exploring and explaining DMST as a phenomenon, because its use ought to be limited to examining powerful DMST stakeholders for the reasons outlined above.

Atheoretical Literature: Focus on Trauma

The Principal Investigator previously noted that a number of studies focused on psychological development, processes, and decision-making do not explicitly mention a human behavior theory. However, many of these atheoretical articles highlight trauma as an important consideration within DMST inquiry. For instance, Crowell's (2009) dissertation sought to explain how the trauma experienced by DMST victims compares to the trauma of child sexual abuse survivors. She found that DMST victims had higher scores on a Trauma Content Index than child sexual abuse survivors (Crowell, 2009).

Similarly, Drobney's (2013) dissertation examines the relationship between child prostitution exposure, betrayal trauma, and complex trauma symptoms. Again, this author did not explicitly name a human behavior theory in her approach, but the focus on trauma, particularly childhood trauma, suggests that she believed the internal processes that follow trauma are

important for working with the DMST population, or somehow shed light on the phenomenon itself. Indeed, she contextualized her findings by stating that DMST victims need "rehabilitation and support rather than blame" for appropriate assistance in their recovery (Drobney, 2013, p. 3-4). Essentially, she situated DMST victim presentation within a trauma perspective, thereby suggesting that trauma is a reasonable explanation for victim presentation. There is certainly strong empirical support for the assertion that trauma ought to be a consideration for direct service providers. Other authors have also hinted at the centrality of trauma for both explaining victim entry to DMST, and the difficulties victims may encounter while trying to exit DMST. Victims' difficulty in exiting DMST is often linked to internal psychological processes, like denial of victimization or the emotional bond they have with their traffickers (Reid, 2010).

The Adverse Childhood Experiences (ACEs) framework has allowed researchers to better understand how trauma and adversity in childhood relates to health and mental health outcomes in adulthood (Felitti et al., 1998). Examples of ACEs include sexual or physical abuse, witnessing domestic violence, or growing up in a home where a parent has a substance use disorder (Hughes, Lowey, Quigg & Bellis, 2016). Because research using the ACEs framework has linked adverse childhood events to poor health and mental health outcomes in adulthood, the ACEs framework is often applied to public health inquiry (Centers for Disease Control, 2016). However, ACEs themselves can be categorized as traumatic events, and the very hypothesis that childhood's traumatic events may impact physical and psychological outcomes in adulthood hints at an underlying assumption of the framework: That trauma, in its many forms, makes a difference in psychological and physical development. For this reason, it is appropriate to categorize the application of an ACEs framework to DMST inquiry as the application of a trauma perspective to the phenomenon. Research linking ACEs to DMST victimization is

limited, but Reid et al. (2017) found that adverse childhood events were more common among trafficked youth than other youth, and that childhood sexual abuse was the strongest studied predictor of DMST victimization.

All of these findings are important, particularly for service providers who want to tailor treatments to elicit a desired change in DMST victims. The desired change may be behavioral or psychological—such as a reduction in trauma-related psychological symptoms or a commitment to not return to a pimp—but all of the desired changes necessarily emanate from an internal process. The assumption of a trauma perspective is that when trauma-informed care is appropriately provided, the trauma symptoms that perpetuate the problem are diminished. These perspectives are important and appropriate when examining the relationship between various treatments and desired client outcomes. They are also important because they help explain why DMST victims may engage in troublesome behaviors, like running away from shelters, or returning to a pimp. The relationship between childhood trauma and socially undesirable behavior is, after all, well-documented (D'Andrea, Ford, Stolbach, Spinazzola, van der Kolk & Bessel, 2012).

An empathetic approach to victim presentation is both important within individual treatment, and also within the anti-trafficking movement's attempts to humanize the issue and to bring victim voices and experiences to the forefront of advocacy and inquiry. In this way, a trauma-related approach to DMST inquiry is appropriate and aligned with social work ethics like the dignity and worth of all humans (NASW, 2008). The findings yielded by trauma-informed approaches may even be used in advocating for more compassionate victim services at the systems level.

However, trauma-centric, atheoretical research has several important limitations when applied to DMST inquiry. Namely, the results these studies are likely to produce are most readily applied to 1) micro-level interventions, and 2) interventions that are designed to occur following victimization. While it is true that findings may encourage macro-level systems to offer trauma-informed services, trauma-informed approaches do not involve macro-level systems in an explanation of why victimization occurs in the first place. Examining internal processes leading up to DMST victimization does little to explain the external systems that may also contribute to victimization before it occurs, unless these internal processes are situated within a larger ecological approach to inquiry. As a result, trauma-related approaches to inquiry are simply not well-suited, in and of themselves, for exploring the social phenomenon beyond the micro level. They are also not appropriate for the present study, given the study's emphasis on exploring systems, oppression, and risk.

Summary of DMST Theoretical Applications

Currently, criminological, sociological, and psychological perspectives tend to dominate the DMST research field. When studies are atheoretical, many investigate the role of trauma in victims' lives. Most of the human behavior theories presented in the preceding overview have some benefits when applied to DMST analysis. No one can reasonably deny that DMST has criminal, sociological, and psychological dimensions to it, so it is appropriate, at times, to apply these fields' relevant theories to scientific inquiry about the problem.

However, each of these theoretical perspectives also have major shortcomings when applied to DMST inquiry. Criminological perspectives cement DMST as an issue that is primarily a concern to be managed by the criminal justice system, but DMST cannot remain in this paradigm if the field is truly committed to preventing it through multidisciplinary efforts.

Indeed, each of the criminological theories applied to DMST research—routine activities theory, social learning theory, and displacement theory—were applied with criminal behavior at the forefront of the inquiry. It would be difficult to apply criminological theories to inquiry focused primarily on the human rights of victims, given that criminology is primarily focused on crime perpetration, criminal decision-making, and penal treatment rather than victims' human rights that are enshrined in the law (see Criminology, 2017). Sociological theories like ecological systems theory, meanwhile, are relevant for understanding how systems interact with one another to create lack of fit for an individual, but these theories are not readily testable nor do they delineate causal pathways. Finally, atheoretical, trauma-informed studies rightfully mention trauma but ignore the economic and system determinants of DMST. And, in their current state, they do not ascribe to a specific human behavior theory

As a result of these shortcomings, it is necessary to consider different theoretical applications—applications that focus on the human rights of victims and the systemic, oppressive nature of the problem—in order to build the DMST knowledge base in a sound and thorough manner. Perhaps it is not possible for a single human behavior theory to accomplish this lofty goal, particularly given the ontological conflicts that arise between positivists and constructivists when theory is translated into methodology. But whether a researcher prefers quantitative, qualitative, or mixed methods, it remains that the anti-trafficking field as a whole ought to give precedence to theoretical applications that leave space for victims' human rights, victims' systemic oppression, and victims' experience, at the forefront of inquiry.

An application ought to be able to address DMST as the complex issue that it is. A theoretical application should be able to accommodate variables that align with the following

statements about DMST, derived from the preceding discussion of DMST in this study's introduction, literature review, and overview of theory:

1. That DMST is considered a crime—an offense that may be punished by law. It has been deemed a crime because of a) general criminalization of sex work inside the United States, b) the assertion that minors are unable to consent to sex work, and, to a lesser extent, c) federal restrictions on child labor.
2. That it is more than a crime, because it represents the commercial exploitation of children and adolescents who often hail from oppressed and vulnerable populations. For this reason, DMST may be considered a human rights violation. Although the United States is the only country that has not ratified the United Nations Convention on the Rights of the Child (Mehta, 2015, September), DMST can still be considered a violation of human rights under the United Nations (1948/2017) Universal Declaration of Human Rights. This document upholds individuals' right to "life, liberty and security of person" (Article 3), the right to not be subjected to "inhuman or degrading treatment" (Article 5), and the right to "equal protection against any discrimination" (Article 7). Additional articles may apply to DMST victims, dependent on the particulars of a victim's circumstances.
3. That oppression within the context of DMST is usually related to the confluence of multiple risk factors (Choi, 2015), including micro-level risk factors and macro-level risk factors.

These statements are important for determining how best to approach DMST through a theoretical framework. And, these statements suggest that applications that stress oppression may be well-suited to explore the problem, explain its etiology, and predict its occurrence. Moreover, since DMST is a human rights concern, any exploration of oppression through a theoretical

application must place victims' human rights as the primary focus of inquiry, and must address the variables of concern within an oppression framework. In the very least, any DMST theoretical application ought to produce study results that are appropriate to discuss through a human rights and structural lens. Intersectionality theory, in particular, may prove adept for exploring the oppressive, systemic, and socioeconomic dimensions of DMST as a human rights violation. Intersectionality is fitting for an examination of systems and oppression, and is able to do so in a way that places victim experiences and outcomes as the focus of inquiry.

Application of Intersectionality to DMST Inquiry

Intersectionality is one human behavior theory that has been applied to the general study of human trafficking (Makkonen, 2002). Intersectionality was developed from feminist theory in the 1980s, and it arose out of a concern that feminist thought was far too focused on the challenges experienced by White women, rather than the challenges experienced by women with diverse social identities (Hill Collins & Bilge, 2016; Hancock, 2016). The term was originally coined by Black feminist scholar Kimberlé Crenshaw, who believed that the predominantly White feminist concept of "sisterhood" failed to make room for the oppressed experiences of Black women who bore the discriminatory burden of being both Black and female (Crenshaw, 2011; Gordon, 2016). Critics suggested that feminist theory was unable to adequately explore and address the oppression faced by individuals with more than one oppressed identity (Cho, Crenshaw & McCall, 2013). For instance, Crenshaw (1991) made the point that the oppression faced by White, heterosexual women was wholly different, and perhaps less extreme, than the oppression faced by lesbian women of color.

Intersectional authors suggest that individuals with several oppressed identities, such as women who are also members of a racial minority group, may find themselves in a "double-

bind…asked to choose between the greater of two evils, racism and sexism, or asked to choose between loyalty to one's gender versus one's racial group" (Ho, 2010, p. 193). The juncture of race and gender described by Ho and other intersectional theorists contends that it is at the intersection of these and other oppressed identities that oppression ought to be explored. Although early intersectional theorists focus heavily on the intersection of race and gender, others rightly note that the efforts of intersectional feminists "are simultaneously embedded and woven into their efforts against racism, classism, and other threats to their access to equal opportunities and social justice" (Samuels & Ross-Sheriff, 2008, p. 5). Thus, race and gender are only the beginning of the variables that may be explored from an intersectional framework. The identities human beings inherit from their social class, sexual orientation, immigration status, language, religion, and more, and how these identities interact with one another to create unique identities, may all be explored with an intersectional lens.

Although Gordon (2016) notes that the emergence of intersectionality did not represent a wholly new way of understanding sexism and racism—she cites socialist feminism of the 1960s and 1970s as an important precursor to intersectionality, in which socialist feminist scholars advanced the idea "that multiple forms of domination interact and even fuse into new forms" (p. 340)—she does contend that intersectionality offers important applications for addressing discrimination in the public sphere. Crenshaw (1988) illustrates her point about multiple oppressed identities by citing case law, in which federal courts failed to protect Black women from acquiring better jobs at General Motors, because General Motors had hired both Black men and White women. At the time, the federal courts did not understand that the hiring of Black men and White women for better jobs was, perhaps, wholly different than choosing to hire Black

women for those same jobs. It was this case that set a precedent for intersectionality theorists and activists to address unique discriminations through legal advocacy.

Intersectionality theorists also make the case that multiple oppressed identities cannot simply be added together to create an easily-understood picture of oppression (Bowleg, 2008; Carbin & Edenheim, 2013). Instead, oppressed identities have a way of multiplying one on top of the other, such that the oppression experienced by a woman with several oppressed identities may be exponentially greater than that of a woman securely placed within the majority culture (Bowleg, 2012). These considerations are quite fitting for human trafficking inquiry, because available evidence suggests that people who are most vulnerable to trafficking are those belonging to one or more oppressed groups (Jani, 2009). And though research on DMST is less developed than research into human trafficking, available literature suggests that the existence of multiple oppressed identities is likewise associated with DMST victimization (Choi, 2015).

It is intersectionality theorists' insight into oppression, and how multiple oppressed identities may influence decision-making, that positions the theory as an excellent way to explore and explain DMST. Whereas criminological and economic theories often fail to address the complexity and nuance of multiple social identities and oppression, intersectionality is primarily interested in an examination of precisely these variables. Indeed, intersectionality theorists contend that "the relationships among multiple modalities of social relations and subject formations" are important for analysis in and of themselves (McCall, 2005, p. 1771). A consideration of these relationships and social factors is one way to insert human complexity, and victim vulnerability and oppression, into inquiry that attempts to answer questions about crime, economics, motivations, victim psychology, and more.

Moreover, answers to these questions, even when they point to micro-level influences, are naturally situated within a macro-level explanation of the problem. As Else-Quest and Hyde (2016a) explain, the primary objectives of intersectionality are to "give voice to marginalized perspectives, to promote the well-being of those who are marginalized, and to understand how inequality, embedded within simultaneous memberships in multiple social categories, shapes our experiences" (p. 162). Intersectionality, after all, emerged from feminist thought, and feminist thought has long held that the personal is political (Hanisch, 1969). Where micro-level experiences occur, they ought to be considered within the larger tapestry of society. Intersectionality is adept at considering both the micro-level experiences and the macro-level structures within which these experiences are allowed to occur.

While criminological and economic human behavior theories can be criticized for their rather cold approach to victim inquiry, intersectionality explores human behavior and experience in a way that can be described as compassionate towards the individuals who are at the center of the science. After all, it is a theoretical approach that emerged from feminism and feminist standpoint theory, and feminist standpoint theory is clear that research participants always ought to be approached by the researcher with respect and mutual understanding (Harding, 1987). When applied to DMST, victims would not be approached as the passionless, faceless individuals that other theories might assume, but instead as oppressed human beings whose socioeconomic options are limited by their position in society.

For this reason, and no matter what decisions victims might make, intersectionality would encourage the researcher to construct knowledge with victims without blaming them for the challenges they inherited as a result of oppression. This approach should be heartening to the social work researcher who is committed to placing victims' experience and a consideration of

their human rights as a focus of inquiry. Although intersectionality can explore many issues, perhaps one of the major benefits of the theory when applied to DMST research is its ability to explain troubling behaviors or issues with compassionate insight, such as when researchers offer explorations into why individuals may make decisions that are ultimately linked to their exploitation (see Anthias, 2014).

The major limitation of intersectionality, in both DMST research and other lines of inquiry, is that it is so focused on multiple oppressed identities, and the nuances that exist between and within social identity groups, that it lacks clear structure for how research ought to be carried out and understood (Bowleg, 2008; Dhamoon, 2011). Indeed, scholars have noted that even the definition of intersectionality, and how it ought to be applied to ontology and epistemology, is contested in the literature[9] (Else-Quest & Hyde, 2016a). Although intersectionality is an increasingly interdisciplinary approach to inquiry (Harris, 2016), there is a real concern that researchers may not know how to position their findings when there is a lack of understanding about how findings can be interpreted as part of a larger picture. Unfortunately, intersectionality is so open to nuance that while it may be well-positioned to explore a social phenomenon, it is not always adept at predicting a social phenomenon or providing insight into how advocates ought to intervene in it.

For instance, when applied to DMST inquiry, a researcher might use intersectionality to more fully understand how and why a transgender African American boy in a deeply conservative southern state would run away from home and participate in survival sex to avoid

[9] Different intersectionality scholars suggest that the theory is a research approach (Cole, 2009), a hypothesis (Walby, Armstrong & Strid, 2012), or some combination thereof (see Else-Quest & Hyde, 2016a). Else-Quest & Hyde (2016a) state that the theory should be understood as a critical race theory, which is how the Principal Investigator applies intersectionality within the present study. Doing so attends to the power issues that are assumed to inherently exist within DMST.

sleeping on the street. The answer to this research question is important, but might not be easily compared to a research study using intersectionality to understand how and why some impoverished White mothers in Appalachia prostitute their daughters in exchange for drugs, nor would the two inquiries point to a similar intervention strategy.

The multiple oppressed identities in these examples are both specific and divergent, and difficult to position and understand within a larger tapestry of intersectionality. Some even believe that intersectionality is not a human behavior theory so much as it is a heuristic device, precisely because of its open-endedness (Davis, 2008). For this reason, intersectionality is often seen as more appropriate for qualitative inquiry (Shields, 2008), and even then it is difficult for researchers to know how to ask questions that lead to intersectional responses from research participants (Bowleg, 2008). Qualitative inquiry, meanwhile, is limited in its ability to point out causal relationships, or to generalize results beyond study participants. An inability to map causal pathways, unfortunately, means that researchers may likewise be unable to map how specific interventions influence DMST prevalence rates. Researchers may also be limited when trying to communicate study findings to decision-makers who are hesitant to accept policy and practice recommendations that have emerged from non-generalizable samples.

Intersectionality and Quantitative Methods

Else-Quest and Hyde (2016a) point out that intersectionality theory may be incorporated into quantitative methodology more readily than some scholars might assume, and that doing so with discipline may overcome the noted limitations of the theory. These authors suggest that just as much as intersectionality-informed analyses may benefit from the use of quantitative methods, so too may the theory benefit (in reputation, perceived utility, and scientific standing) by researchers' increased use of quantitative methods to buttress its assertions. They believe that

quantitative methods can be used in an iterative cycle to both enhance the quality of intersectionality-informed research, and to enhance the reputation of the theory as a research tool. For these authors, this is especially true when intersectionality is viewed as a Critical Race Theory[10], rather than a human behavior theory that is primarily concerned with producing falsifiable hypotheses. The well-designed application of intersectionality theory to a quantitative study that examines multiple oppressed identities may a) provide an intersectional context for analyzing study results, and b) provide social work and social justice researchers with additional objective data through which to urge decision-makers to consider the consequences of policies and practices on oppressed populations.

From this perspective, intersectionality provides both a grid through which to understand the results of a quantitative DMST study, and a possible framework through which to petition for systemic changes that may benefit DMST victims and those who are at-risk of victimization. In an additional conceptual piece, Else-Quest and Hyde (2016b) suggest several different research design components and quantitative methods through which an intersectionality-informed analysis may be carried out. Of particular interest to this study, the authors state that focusing on within-group variations is valuable when developing a research design, because honing in on the intersection of various identities within a group can provide new understandings of how oppression influences phenomena (Else-Hyde & Quest, 2016b). They also suggest a multiple regression or logistic regression framework for intersectional statistical analyses,

[10] Critical Race Theory can be understood as a) a way to understand how societal structures like the criminal justice system have maintained an order of oppression against minority racial groups, and b) a lens through which to produce scholarship that challenges oppressive social structures (Crenshaw, 1995).

because regressions can account for the multiplicative nature of oppressed identities in predicting a particular phenomenon.

Quantitative methods are well-suited for the overarching purpose of the study. Recall that this study is designed to examine how the multiple oppressed identities of DMST victims converge to predict patterns in victim-trafficker relationships. Following Else-Quest and Hyde's (2016b) suggestions, the present study analyzes known DMST victims for within-group variations via a logistic regression model. In order to examine how oppressive factors may influence a victim's pathway into exploitation, the study will also utilize path analysis. The variables selected for analysis are based upon the available literature about DMST risk and prevalence, as well as oppression within social categories suggested by intersectionality. Independent variables—hypothesized predictors of a specific methods of trafficking and the number of traffickers involved, in this case—include unmet basic needs, race, age, child welfare involvement, juvenile justice involvement, and substance use, while the dependent variables include victim-trafficker relationship types and the number of traffickers or facilitators involved in victims' exploitation. The Principal Investigator further discusses the specific research design and analytic framework in the forthcoming Methods chapter of this study.

Chapter 4: Methods

This chapter provides an overview of the data sources, research design, and methods selected for the present study. The chapter begins with the research questions addressed in the study, including research hypotheses, a description of specific variables, and rationale. Then, the chapter moves into a description of the secondary data used in this study, the agency that provided the data, how human subjects are protected, and the process for obtaining the data from the agency. The chapter concludes with an overview of the data analysis methods, including coding schemes, power analysis, and statistical methods selected to answer the research questions.

Research Questions

Before introducing the research questions and hypotheses for this study, it is important to comment on the variables selected for the analysis. The selection of variables was driven by literature on DMST risk factors and precursors to victimization, intersectionality theory, and the availability of data. The data are derived from archival data, so some variables that are potentially pertinent to the analyses could not be included because they were not present in the case notes.

Some of the following variables will be used in analyses for every research question, while others will only be used in analyses for one or two research questions. Nevertheless, each is introduced at this juncture in order to contextualize the forthcoming research questions. An overview of the subsequent variable information, including operational definitions and coding scheme, may be found in Table 1.

Table 1
Variable Definitions and Coding

Variable	*Type*	*Location/Background*	*Operational Definition/Categories*	*Code*
Race	Independent Categorical	Found in demographic portion of case note. Race is split into three categories for inferential analyses, including "White", "Hispanic/Asian", and "African American".	White Hispanic/Asian African American	0 1 2
Age	Independent Continuous	Found in demographic portion of case note. Age is a continuous variable.	Not applicable	Not applicable
Child welfare involvement	Independent Categorical	Found in demographic portion of case note. Child welfare involvement is split into two categories, based upon whether child welfare involvement was noted in the case note or not.	No involvement noted Involvement noted	0 1
Juvenile justice involvement	Independent Categorical	Found in demographic portion of case note. Juvenile justice involvement is split into two categories, based upon whether juvenile justice involvement was noted in the case note or not.	No involvement noted Involvement noted	0 1
Number of times involved in juvenile justice	Independent Ordinal	Found in demographic portion of case note. This variable is split into three categories, based upon how many times the victim was involved in the juvenile justice system	Not involved Involved once Involved more than once	0 1 2
Experiencing substance use	Independent	Found in narrative portion of case note. Experiencing substance use is	Substance use not identified in case note	0

	Categorical	split into two categories, based upon whether substance use experience was identified within case narrative.	Substance use identified in case note	1
Unmet basic needs: Shelter or food	Independent Categorical	Found in narrative portion of case note. Unmet basic needs is split into two categories, based upon whether the victim was identified as a) homeless or runaway, and/or b) lacking basic needs like food	Unmet basic needs not identified in case note Unmet basic needs identified in case note	0 1
Interaction term: Race and unmet basic needs	Independent Categorical	This variable is created by developing an interaction term between victim race and unmet basic needs.	Not applicable	Not applicable
Type of victim-trafficker relationship	Dependent Categorical	Found in narrative portion of case note. Method of exploitation is split into four different categories for inferential statistics. When more than one trafficker is involved, the type of relationship is identified as the first relationship a victim has with her or his trafficker.	Untrusted/unknown Friend relationship Romantic relationship Family relationship	0 1 2 3
Number of traffickers or facilitators involved in trafficking victims' exploitation	Dependent Categorical	Found in narrative portion of case note. Number of people involved in exploitation is split into three categories.	No trafficker involved in child's commercial sexual exploitation One trafficker involved in child's commercial sexual exploitation More than one trafficker involved in child's commercial sexual exploitation	0 1 2

Independent variables. The independent variables included in the analyses include race, age, child welfare involvement, juvenile justice involvement, experiencing substance use, and unmet basic needs. The Principal Investigator also experimented with the number of traffickers or facilitators involved in victims' exploitation as an independent variable, but it did not work within the models. (The number of traffickers or facilitators involved in victims' exploitation is also, of course, a dependent variable in many analyses). There is also an interaction term variable between race and unmet basic needs. Each of these variables is noted within the literature as associated with DMST risk or DMST victimization. They also align with intersectionality theory's conception of oppression and risk. Gender is not considered in the forthcoming analyses because only three of the DMST victims included in this sample are reported as male, and thus gender could not be used in statistical analyses because of potential violations of statistical assumptions; no transgender DMST victims were identified in the case notes. Additionally, some of the known risk factors mentioned in the literature review, such as psychiatric concerns and a chaotic home life, are not included within the present analyses because data related to these variables are unavailable.

Although statistical power is not a concern within this study's analyses (see p. 107), the operational definitions for several independent variables are collapsed into two and three categories in order to avoid violating statistical assumptions. For instance, aside from descriptive statistical analyses in which categories are not collapsed, race is operationalized as "White", "Hispanic/Asian", and "African American". The original data included references to Asian and biracial victims, but these categories had to be collapsed into the three categories above in order to avoid violating assumptions in inferential procedures, because there were not enough cases of each to insert them into more advanced analyses. Asian victims are collapsed into the

"Hispanic/Asian" category, and biracial victims are collapsed into the categories that were the best fit. If a case note mentioned that a victim was "Hispanic/White", for instance, the victim is coded as "Hispanic/Asian".

Experiencing substance use and unmet basic needs data are derived from the narrative portion of the case note files. Experiencing substance use is operationalized as "substance use unidentified in case note narrative", and "substance use identified in case note narrative". Unmet basic needs is operationalized as "unmet basic needs not identified in case note", and "unmet basic needs identified in case note". Unmet basic needs includes both lack of housing due to homelessness or running away, and/or lack of access to food or another basic human need like clothing. Unmet basic needs is a proxy variable for the poverty risk factor noted in the literature review, since unmet basic needs is the closest the narratives come to identifying victim poverty or socioeconomic status.

Child welfare involvement and juvenile justice involvement are operationalized as categorical variables. The categorization of child welfare involvement and juvenile justice involvement is achieved by gathering and interpreting data available in the demographic portion of the case note file. Child welfare involvement is operationalized as "child welfare involvement identified in case note file", and is assessed on two levels, including "no involvement noted" and "involvement noted". Juvenile justice involvement, meanwhile, is split into two separate variables for the purpose of analysis. The first juvenile justice variable is simply operationalized as "juvenile justice involvement identified in the case note file", and is assessed on two levels, including "no involvement noted", and "involvement noted". The second variable is focused on the quantity of juvenile justice involvement. This variable is likewise operationalized as "juvenile justice involvement identified in the case note file", and is assessed on three ordinal

levels, including “no involvement noted”, “involvement noted once”, and “involvement noted more than once”. Since these juvenile justice variables covary—their categories overlap significantly—they are never included together in statistical modeling. They are, however, analyzed separately to determine if the increased specificity of the ordinal version of the variable offered increased precision in the modeling.

The number of traffickers or facilitators involved in victims’ exploitation is also an important variable in this study, because information about differences in the ongoing nature of exploitation may inform services to survivors, as well as preventative interventions for those who are at-risk of exploitation. This variable is considered both an independent and a dependent variable in the analyses, although it only works as a dependent variable within the models. For the purposes of this study, this variable is operationalized as “no trafficker or facilitator involved in child’s commercial sexual exploitation”, “one trafficker or facilitator involved in child’s commercial sexual exploitation”, and “more than one trafficker or facilitator involved in child’s commercial sexual exploitation”. Like many of the preceding variables, data related to this variable is derived from the case note narrative. This variable is likewise important to the study because it may provide information related to the degree and severity of exploitation experienced by the victim. While case narratives are not examined for the physical, psychological, or emotional severity of the exploitation, the number of people involved in an adolescent’s exploitation may be related to the severity of exploitation experienced by the adolescent victim (see Hammond & McGlone, 2014; Zimmerman, Hossein & Watts, 2011).

Age is operationalized as the age reported by the victim and noted in the demographic portion of the case note file.

Finally, there is an interaction term between race and unmet basic needs. This interaction term is created by multiplying the victims' coded race variable (White, Hispanic/Asian, African American) by the victims' unmet basic needs variable (unmet basic needs not identified, basic needs identified). This variable is a categorical variable, although it would have been more ideal as a continuous variable.

Most of the variables above are named for the identification of the specific condition (e.g. "substance use identified in the case note"), because it is possible that each of these conditions could exist in a child's life but that the case manager does not mention it in the case note. It is important to note that the case managers who wrote the victims' case notes did not follow a standard protocol for completing the narrative portion of the case note. Case managers' primary motivation for writing these case notes was to gather data about how the victims were exploited, and how the trafficker did so, in order to pass the information along to law enforcement agencies. The case managers did not have a standard way to assess the variables found in the narrative portion of the case note. The demographic portion of the case note contains fields for race, age, child welfare involvement, juvenile justice involvement, and the number of times the victim was involved with juvenile justice. As a result, the case managers routinely filled in this information as part of their protocol. But the narrative portion of the case file did not contain any prompts or fields related to substance use experience, homelessness, running away, unmet basic needs, or number of traffickers involved in the exploitation. This lack of protocol may be a source of error in this study (see Limitations section in Discussion chapter, p. 188).

During the coding process, two raters sought to consistently identify each of these narrative variables by looking for any mention of drugs or alcohol (excluding tobacco), any mention of running away or not having a place to stay, any indication that victims did not have

access to food or clothing, and any indication about the number of people involved in exploiting the victims. Although the raters established inter-rater reliability, this study is limited by the lack of a case manager standardized protocol for completing the case note narratives, as it is possible that the case managers simply left out important information.

Variables included in mediation analysis. The independent variables mentioned above are also used as independent variables in mediated path analyses. Only victims' unmet basic needs is excluded from consideration as an independent variable within the path analysis models, because unmet basic needs is used as a path analysis mediator while mapping victims' risk factors into potential outcomes. Unmet basic needs is the mediator, rather than included as an independent variable risk factor, because the Principal Investigator previously made the case that unmet basic needs or poverty are the unspoken threads between all of the other DMST factors. It is believed that unmet basic needs may mediate the path between risk and exploitation for many youth, and it is this path that may be examined more fully by isolating the variable outside of the other risk factors and considering its indirect effects on the outcome. Moreover, isolating one oppressive variable outside of the others borrows from a major theme of intersectionality theory—the multiplicative nature of oppression—as a guide for the overall study.

Dependent variables. The dependent variables for this study include the types of relationships between victims and traffickers, and the number of traffickers or facilitators involved in victims' exploitation. The number of traffickers variable is described above; the Principal Investigator will not discuss it again at this juncture.

The relationship types experienced by the victim are important for this study, because differences in relationship dynamics may inform how individuals with varied risk factor profiles ought to be educated about DMST so that specific entries to DMST may be avoided. One of the

assumptions guiding the operationalization of this variable is that all DMST is exploitation, but that not all commercial sexual exploitation of children involves a trafficker. For this reason, the type of relationship experienced by the victim is operationalized into four main categories. When a trafficker is not identified—as in the case of survival sex—this type of exploitation is called "no trafficker involved". For statistical purposes (there were very few "no trafficker involved" cases in this sample), this category is combined into a broader category called "previously unknown or trafficker". This category captures situations in which victims did not previously know their traffickers before they were commercially sexually exploited. Other types of relationships between victims and traffickers are categorized into "friend relationship", "romantic relationship", and "family member relationship". All data related to this variable is derived from the case note narrative.

If there is more than one trafficker involved in the victims' exploitation, the victim-trafficker relationship variable is assessed as the first relationship experienced between victims and traffickers. For instance, if a victim is exploited by her father and then later exploited by a boyfriend, the victim-trafficker relationship type is assessed as a family member because this was the person who first introduced the victim to trafficking.

Research Question 1

What associations exist between the presence of risk factors in DMST victims' case files, and victims' unmet basic needs?

What associations exist between the presence of risk factors in DMST victims' case files, and the interaction term (race * unmet basic needs)?

Hypothesis 1. *Victim unmet basic needs is positively, statistically significantly associated with risk factors in DMST victims' case files. The interaction between victim unmet basic needs*

and victim race is positively, statistically significantly associated with risk factors in DMST victims' case files.

Hypothesis 1a. The identification of victim unmet basic needs is positively, statistically significantly associated with victims' minority race, victims' child welfare involvement, victims' juvenile justice involvement, and victims' experiencing substance use.

Independent Variable: Unmet basic needs

IV Operational Definition: Unmet basic needs not identified in case note, unmet basic needs identified in case note

Dependent Variables: Race, child welfare involvement, juvenile justice involvement, experiencing substance use

DV Operational Definition—Race: White, Hispanic/Asian, African American

DV Operational Definition—Child welfare involvement: No involvement noted, involvement noted

DV Operational Definition—Juvenile justice involvement: A) No involvement noted, involvement noted; B) No involvement noted, involvement noted once, involvement noted more than once

DV Operational Definition—Experiencing substance use: Substance use unidentified in case note, substance use identified in case note

Hypothesis 1b. The interaction term is positively, statistically significantly associated with the positive identification of child welfare involvement, juvenile justice involvement, and experiencing substance use.

Independent Variable: Interaction term between victims' race and unmet basic needs

IV Operational Definition: Victim race (White, Hispanic/Asian, or African American), multiplied by unmet basic needs (unmet basic needs not identified in case note, or unmet basic needs identified in case note)

Dependent Variables: Child welfare involvement, juvenile justice involvement, experiencing substance use.

IV Operational Definition—Child welfare involvement: No involvement noted, involvement noted

IV Operational Definition—Juvenile justice involvement: A) No involvement noted, involvement noted; B) No involvement noted, involvement noted once, involvement noted more than once

IV Operational Definition—Experiencing substance use: Substance use unidentified in case note, substance use identified in case note

Hypothesis 1c. Victim unmet basic needs is positively, statistically significantly associated with a later age of entry into DMST.

Independent Variable: Unmet basic needs

IV Operational Definition: Unmet basic needs not identified in case note, unmet basic needs identified in case note

Dependent Variable: Victim age

DV Operational Definition—Age: Victim age as identified in demographic portion of case note

Rationale. Victim unmet basic needs is often cited in the international sex trafficking literature as a risk factor for DMST (Barner, Okech & Camp, 2014; Russell, 2014). This research question is designed to gather information about how unmet basic needs is likewise positively

associated with other DMST risk factors noted in the literature. Examining potential interrelationships between these variables provides a foundation for more advanced statistical analyses. In Hypothesis 1a, the direction of the hypothesis suggests that the presence of a victims' risk and oppression (minority race, child welfare involvement, and more) is positively associated with the identification of victims' unmet basic needs. Because the variables included in hypothesis 1a are categorical, chi squares are the statistical tests required for hypothesis testing.

Hypothesis 1b is an extension of the line of inquiry posed in hypothesis 1a, except that it offers an interaction effect between race and unmet basic needs. The purpose of including this interaction term in statistical testing is to test two of the study's main variables—race and unmet basic needs—for intersectionality in their association with other risk factors. Given intersectionality theory, it is anticipated that race and unmet basic needs may have an enhanced association with risk factors when they are multiplied together. Since the interaction term is a categorical variable, this hypothesis is tested through chi squares.

In hypothesis 1c, the age variable is continuous. There is very little research into how unmet basic needs may be associated with a younger age of victimization. Cronley et al. (2016) established that homelessness predicts a younger age of entry to sex work, but more research needs to be done to further buttress this finding. Reid and Piquero (2014) explain in their overview of qualitative studies related to this topic that a "lack of resources to provide for basic needs, unemployment…and having dependent children were more commonly associated with later age of onset" (p. 1752). In a discussion following their own findings—which substantiated these assertions—the authors suggest that impoverished youth may realize they have diminishing opportunities for financial advancement as they begin to approach adulthood, thus marking a

path of entry into DMST. It is hypothesized that unmet basic needs is statistically significantly associated with a later age of entry into DMST. This hypothesis is tested through t-tests. ANOVAs are also used to examine the association between the age variable and other risk factors.

Research Question 2

How do risk factors predict the relationship type experienced by the victim within DMST? How does the interaction term predict the relationship type experienced by the victim within DMST?

Hypothesis 2. *The presence of risk factors statistically significantly predicts the type of relationship experienced by victims.*

Hypothesis 2a. Child welfare involvement, juvenile justice involvement, unmet basic needs, experiencing substance use, race, age, and the interaction term statistically significantly predict types of victim-trafficker relationships.

Independent Variables (used as independent variables throughout analysis for this research question): Child welfare involvement, juvenile justice involvement, unmet basic needs, experiencing substance use, race, age, and the number of traffickers involved in victims' exploitation

IV Operational Definition—Child welfare involvement: No child welfare involvement identified, child welfare involvement identified

IV Operational Definition—Juvenile justice involvement: A) No juvenile justice involvement identified, juvenile justice involvement identified, and B) No juvenile justice involvement identified, juvenile justice involvement identified once, juvenile justice involvement identified more than once

IV Operational Definition—Unmet basic needs: Basic needs identified as met in case note, unmet basic needs identified in case note

IV Operational Definition—Experiencing substance use: No substance use identified, substance use identified

IV Operational Definition—Race: White, Hispanic/Asian, African American

IV Operational Definition—Age: Continuous; victims' age at the writing of the case note

*IV Operational Definition—interaction term between race*unmet basic needs:* Interaction between the categorical variable of race (three categories) and dichotomous unmet basic needs

Hypothesis 2b. The presence of fewer risk factors statistically significantly predicts a victim-trafficker previously untrusted/unknown relationship.

Dependent Variable: Previously unknown/untrusted trafficker

DV Operational Definition: The majority of cases within this category are traffickers who did not have pre-existing relationships with victims prior to the trafficking. They were not traffickers that the victims would trust or know as a result of a pre-existing relationship. Alternatively, several cases had zero traffickers involved in the exploitation ("survival sex"), and due to issues with statistical assumptions, this category had to be collapsed into the broader category of previously unknown/untrusted traffickers.

Hypothesis 2c. The presence of fewer risk factors statistically significantly predicts a victim-trafficker friend relationship.

Independent Variables: Risk factors detailed above

Dependent Variable: Victim-trafficker friend relationship

DV Operational Definition: Trafficker identified as a friend; marked by either a non-sexual friendship or mutuality of the initial agreement between trafficker and victim

Hypothesis 2d. The presence of greater numbers of risk factors statistically significantly predicts a victim-trafficker romantic relationship.

Independent Variable: Risk factors detailed above

Dependent Variable: Victim-trafficker romantic relationship

DV Operational Definition: Trafficker identified as a romantic partner

Hypothesis 2e. The presence of greater numbers of risk factors statistically significantly predicts a victim-trafficker family member relationship.

Dependent Variable: Victim-trafficker family member relationship

DV Operational Definition: Trafficker identified as a family member

Hypothesis 2f. The interaction between minority race (Hispanic/Asian or African American) and unmet basic needs statistically significantly predicts a victim-trafficker relationship type marked by higher levels of exploitation, such as exploitation by a family member.

Rationale. It is hypothesized that the independent variable risk factors, given their foundation in the literature, may be able to predict the type of relationship experienced by the victim within DMST. There is very little research on which to base the direction of the hypotheses. However, some emerging literature exists to support the directions of two of the hypotheses included within this category. Family member type victim-trafficker relationships are associated with a greater number of risk factors in a victim's life (Reid, Huard & Haskell, 2014). Thus, it is hypothesized that a greater number of risk factors will be statistically significantly related to a family member type victim-trafficker relationship. Similarly, victim-trafficker

relationships in which no outside trafficker is identified have been associated with fewer risk factors (Perkins & Ruiz, 2016; Reid & Piquero, 2014). It is therefore hypothesized that lower composite risk factor scores may be significantly related to victim-trafficker relationships in which no outside trafficker is identified, or when the trafficker is otherwise unknown or untrusted by the victim (the Principal Investigator collapsed these two scenarios into one category in the analyses).

Although directional hypotheses for friend relationships and romantic relationships are offered above, they are more provisional than the other stated hypotheses. To the Principal Investigator's knowledge, there have not been any DMST studies to examine the relationships between risk factors and victim-trafficker friend and romantic partner relationships. However, the author's social work practice experience suggests that friend relationships might be marked by victim poverty and low educational attainment, and less by risk factors related to child abuse, juvenile delinquency, and homelessness. These markers might suggest a relatively lower number of associated risk factors. The Principal Investigator's social work practice experience also suggests that victims who are exploited by a romantic partner may have experienced child abuse—especially child sexual abuse—as well as the risk factors mentioned above. These suggest a relatively higher number of risk factors. Following this reasoning, it is hypothesized that the interaction term predicts a more exploitative victim-trafficker relationship type, such as seems to occur when victims are trafficked by family members.

Research Question 3

How does victim unmet basic needs mediate risk factors' prediction of the types of relationships between victims and their traffickers?

Hypothesis 3. *Victim unmet basic needs statistically significantly mediates risk factors' prediction of victims' relationships—including previously unknown/untrusted relationships, friend, romantic partner, and family member relationships—with their traffickers.*

Independent Variables: Child welfare involvement and juvenile justice involvement

IV Operational Definition—Child welfare involvement: No child welfare involvement identified, child welfare involvement identified

IV Operational Definition—Juvenile justice involvement: No juvenile justice involvement identified, juvenile justice involvement identified

Mediating Variable: Unmet basic needs

Mediator Definition: Unmet basic needs unidentified in case note, unmet basic needs identified in case note

Dependent Variables: Previously unknown/untrusted trafficker, victim-trafficker friend relationship, victim-trafficker romantic partner relationship, victim-trafficker family member relationship

DV Operational Definition: Trafficker identified as an individual previously unknown/untrusted by the victim, or when there is no trafficker involved; trafficker identified as a friend; trafficker identified as a romantic partner; trafficker identified as a family member

Rationale. Intersectionality theory suggests that researchers should not simply add together various oppression and risk factors to predict outcomes (Bowleg, 2008). Instead, intersectionality is interested in the interaction between risk factors. Thus, this research question is focused on exploring how victims' unmet basic needs—which is perhaps the most salient variable within the study—may mediate the relationship between risk factors and the types of relationships between victims and their traffickers. Although this question has not been explored

in the literature, the literature points to unmet basic needs as the factor that underlies the other risk factors included in this study. Furthermore, intersectionality suggests that oppressed identities (such as minority race or child welfare involvement), multiplied by other oppressed identities (such as unmet basic needs) may end up multiplying the initial effect (Bowleg, 2008). Thus, it is anticipated that the presence of unmet basic needs will indirectly effect, and positively amplify the effect, between risk factors and all of the above types of victim-trafficker relationships. Only child welfare involvement and juvenile justice involvement are included as independent variables within this research question, because they appear to be the strongest predictors in lower-level analyses.

Research Question 4

How do risk factors predict the number of traffickers or facilitators involved victims' exploitation?

Hypothesis 4. Greater numbers of risk factors are statistically significantly associated with greater numbers of traffickers or facilitators involved in victims' exploitation.

Independent Variables: Child welfare involvement, juvenile justice involvement, unmet basic needs, experiencing substance use, race, and age

IV Operational Definition—Child welfare involvement: No child welfare involvement identified, child welfare involvement identified

IV Operational Definition—Juvenile justice involvement: A) No juvenile justice involvement identified, juvenile justice involvement identified, B) No juvenile justice involvement identified, juvenile justice involvement identified once, juvenile justice involvement identified more than once

IV Operational Definition—Unmet basic needs: Basic needs identified as met in case note, unmet basic needs identified in case note

IV Operational Definition—Experiencing substance use: No substance use identified, substance use identified

IV Operational Definition—Race: White, Hispanic/Asian, African American

IV Operational Definition—Age: Continuous; victims' age at the writing of the case note

Dependent Variable: Number of individuals involved in trafficking victims

DV Operational Definition: No trafficker involved in child's commercial sexual exploitation; one trafficker involved in child's commercial sexual exploitation; more than one trafficker involved in child's commercial sexual exploitation

Rationale. Similar to Research Question 2, the hypothesis for this research question is that a greater number of risk factors is able to predict the number of traffickers or facilitators involved in victims' exploitation. According to Zimmerman, Hossein, and Watts' (2011) conceptual model of human trafficking, it is common for victims to be trafficked, exploited, and then re-trafficked again. It is also common for victims to continue to be exploited over longer periods of time when they do not see a viable exit (Hammond & McGlone, 2014). Although the question has not been directly asked within the literature, it is reasonable to hypothesize that victims are more likely to be trafficked and re-trafficked by more than one individual when their total number of risk factors is higher and their viable means to an exit are lower.

Research Question 5

How do victim unmet basic needs indirectly effect risk factors' prediction of the number of people involved in facilitating victims' exploitation?

Hypothesis 5. *Victim unmet basic needs statistically significantly and positively mediates the path between victims' risk factors and the number of people involved in their exploitation.*

Independent Variable: Race

IV Operational Definition—Race: White, Hispanic/Asian, African American

Mediating Variable: Unmet basic needs

Mediator Definition: Unmet basic needs unidentified in case note, unmet basic needs identified in case note

Dependent Variable: Number of traffickers or facilitators involved in victims' exploitation

DV Operational Definitions: No trafficker or facilitator involved in child's commercial sexual exploitation; one trafficker or facilitator involved in child's commercial sexual exploitation; more than one trafficker or facilitator involved in child's commercial sexual exploitation

Rationale. Given intersectionality theory, it is hypothesized that unmet basic needs interacts with other risk factors to mediate the number of people involved in facilitating DMST victim's exploitation. However, lower-level analyses suggest little, if any, association between risk factors and the number of traffickers or facilitators involved in victims' exploitation. Only Hispanic/Asian race appears statistically significantly associated with the number of traffickers or facilitators involved in victims' exploitation (see Results chapter, p. 153). If indeed the interaction of unmet basic needs and other risk factors produces more severe exploitative outcomes for victims, it is anticipated that victims' risk factors are positively mediated by victims' unmet basic needs to predict the number of people involved in facilitating victims'

exploitation. Unmet basic needs may multiply victims' risk factors—in this case, Hispanic/Asian race—to predict a greater number of traffickers involved in her or his exploitation.

Research Design and Data Source

This study relies on a cross-sectional analysis of secondary data because of the challenges associated with a) finding trafficking victims and survivors to participate in research (Tyldum, 2010), and b) ethical dilemmas that may arise from conducting research on trafficking victims who may be experiencing exploitation as the research is taking place (Duong, 2015). The data used in the present analysis is unique because it is a sample of adolescent girls (and three boys) who were recently commercially sexually exploited or may still be involved in a victim-trafficker relationship. One of the critiques of the literature on trafficking is researchers' reliance on retrospective data from the victims, given the potential that victims may misremember the circumstances of their exploitation after time has passed (Marcus et al., 2014). However, it is unethical to conduct research on child victims of trafficking without simultaneously intervening to protect them from greater harm. An analysis of secondary data, in which the DMST victims are not considered human subjects for research, is one way to mitigate the risks associated with human subjects research on this vulnerable population, and to obtain data about a population that is difficult for researchers to locate on their own.

Secondary data and data source description. The sampling frame for this study is 374 de-identified case notes from a counter-trafficking non-profit agency. The case notes were written over a five-year period between 2012 and 2017. Although the agency transferred all 374 case notes to the Principal Investigator for this study, many of the case files were duplicates. Only 245 case files are unique and usable. The Principal Investigator removed three case files because they had no information aside from the victim's age and race. The Principal Investigator

also experimented with dropping the three boy cases from the analysis, but doing so did not change the results of the study. Together, the total sample for this study is 242 cases.

Setting. The non-profit agency serving as the data source for this study is called Traffick911, and it is located in Dallas, Texas. The United States Census Bureau (2017) estimates that nearly 2.6 million people lived in Dallas county as of 2016, and that the median age of the population is 33.1. Texas is second in the nation for reports of potential human trafficking (Mervosh, 2014), and the Dallas-Fort Worth metro area is considered the top corner of the "Texas triangle" for human trafficking (Texas Department of Public Safety, 2014). Experts estimate that Dallas alone has 400 trafficked teens on its streets every night (Letot Center, 2015). It is suggested that the area has comparatively high human trafficking prevalence rates because of the number of converging highways in north Texas and its proximity to the Mexico border (Mervosh, 2014).

Traffick911 assists local, state, and federal law enforcement agencies with identifying and providing services to 150 suspected or confirmed DMST victims each year. These victims are residents of 40 counties located in all regions of Texas; most are from north Texas and surrounding areas. All victims receiving services from the agency are female (G. Lynch, personal communication, November 2016). (However, three of the case files in this sample include information about boy victims who were then referred to other agencies for services; this information was evident in the narrative, rather than collected as demographic data.) The majority of the trafficking victims served by Traffick911 are identified through the juvenile justice system or an agency volunteer trained to look for DMST victims in advertisements on escorting websites. Once a suspected or confirmed victim voluntarily provides information to an agency representative, the agency has two goals: a) to ensure that the victim receives appropriate

social services, and b) to assist law enforcement agencies with finding and prosecuting traffickers. As such, the agency representative provides case information to local and federal law enforcement agencies in order to pursue prosecution of victims' trafficker(s). Case information also informs how Traffick911's social workers or case managers refer the victim to appropriate services through Traffick911, Child Protective Services, or partnering non-profits.

Each written case note is roughly two to three pages in length. It includes demographic information about the victim's race, age, county of residence, juvenile justice involvement, and any CPS involvement with the family of origin. The case notes also include a social worker or case manager narrative of the victim's exploitation. The amount of information included in the case notes varies, since victims provide different types of information to different social workers and case managers, and the social workers and case managers have each developed different methods for relaying elements of the victims' histories. (As mentioned previously, there is no protocol for how social workers or case managers complete the narrative portion of the case note.) Nevertheless, the narrative portion of each case note typically includes information about victims' substance use, victims' housing status and other needs besides housing, victims' traffickers (when a trafficker is identified), victim-trafficker relationship types, and the number of traffickers involved in victims' exploitation.

Human subjects protection. A data use agreement is in place between Traffick911, the Principal Investigator, and the sponsoring university. This data use agreement specifies that all data are to be de-identified by Traffick911 prior to transfer to the Principal Investigator. According to the University of Texas at Arlington's Institutional Review Board (IRB), this data use agreement replaces the need for IRB approval for the study, since the study is an analysis of de-identified secondary data. Thus, the Principal Investigator obtained an IRB waiver for this

study, since it is not considered human subjects research. After the data were transferred to the Principal Investigator, a review of the data confirmed that it was, indeed, de-identified as required by the data use agreement.

Transferring data from source agency. Prior to discussions between the Principal Investigator and Traffick911, available case note data had not been de-identified for transfer. When it became evident that the Principal Investigator would not be able to view the data off-site (per IRB requirements) until it had been de-identified, Traffick911 utilized an agency-affiliated team of volunteers to de-identify the case notes for use in this study. The de-identification process was overseen by a Traffick911 volunteer, who is also a faculty member at the University of North Texas. This faculty member obtained IRB approval through the University of North Texas for one of her undergraduate research classes to de-identify the data. The de-identification process occurred between January 2017 and May 2017. The research class de-identified 374 files. There were problems with data corruption when the files were first transferred to the Principal Investigator, but another sweep of the data by an agency volunteer mitigated the data corruption problems.

All available de-identified case note files were transferred to the Principal Investigator via a password-protected flash drive in August 2017. Each case note saved on the flash drive was also password protected. The password protected case note files, in turn, were transferred from the flash drive to the Principal Investigator's password protected laptop. Password protection was used during this process out of an abundance of caution, even though it was not required by the data use agreement or the IRB.

Data Analysis Methods

This research study is a secondary research study. It differs from a primary research study in that the Principal Investigator is not responsible for a research design or data collection, whereas these are necessary activities for a Principal Investigator involved in primary research.

The lack of researcher involvement in data collection can be considered both a strength and weakness of secondary data research. To begin, archival or secondary data can be a source of valuable information that might not be readily available in prospective studies, which is extremely valuable for studies in which potential participants are difficult to locate. As Choy (2014) explains, "it is a major advantage to be able to use existing data sources, with large amounts of information" (p. 440) because this data can be used to answer research questions that might otherwise be unanswerable in prospective studies. Additionally, when a researcher is not involved in data collection, it is unlikely that the data will have researcher effects (Johnson & Turner, 2003). However, the data may also be incomplete because it is not possible for the researcher to ensure specific data or content is collected. Additionally, results generated from the data might not be generalizable beyond the geographically limited space in which the archival data was initially gathered (Johnson & Turner, 2003). Given the importance of producing research about the DMST victim population, and the major challenges that accompany primary research on the population, however, it is entirely reasonable to proceed with secondary data analysis rather than waiting indefinitely for primary research with additional variables.

The next section of this chapter covers the coding schemes, power analysis, and statistical methods selected for this secondary research.

Coding Process. The Principal Investigator culled all data relevant to the variables described in previous sections of this chapter from the de-identified case notes, and entered the data into an SPSS file. The specific coding schemes for the variables can be found in Table 1.

Several of the coded variables were readily apparent in the demographic data portion of the case note files. However, some of the variables were open to interpretation within the narrative portion of the case notes. These variables included experiencing substance use, unmet basic needs, victim-trafficker relationship type, and the number of people actively involved in perpetuating victim exploitation. Due to the variations that can arise through interpretation of the narrative, it was important to assess inter-rater reliability prior to applying a coding scheme to these variables. As a result, the Principal Investigator worked with another rater to assess inter-rater reliability for the coding schemes. The Principal Investigator and second rater provisionally coded 10 case files, and then checked these codes against each other. In the first 10 cases, inter-rater reliability ranged from 60% to 100%, depending upon the variable. After the Principal Investigator and second rater discussed their codes and results, and more specifically honed the operational definitions of the variables located in the narrative portion of the case files, they separately coded 10 additional case files. This process mimicked the triangulation process that occurs during qualitative analysis (Armstrong, Gosling, Weinman & Marteau, 1997). By the conclusion of the second round of coding, inter-rater reliability had improved to 100% for each of the variables in the study.

Next, the Principal Investigator discussed each of the variables with a member of the research committee. When it became clear that statistical analyses would not be possible without collapsing some variable categories into broader categories, these decisions were made by discussing the theoretical soundness of each categorical collapse. For instance, the Principal Investigator and research committee member jointly decided it was more appropriate to collapse Asian victims with Hispanic victims, due to their shared experiences as members of immigrant populations, than it was to collapse Asian victims with African American victims.

Finally, prior to statistical analysis, the Principal Investigator created dummy coded variables for each of the independent, categorical variables with more than two categories. These dummy coded variables are inserted into analyses when necessary.

Power Analysis. Power analysis is a concern in this research study because the relatively small number of cases in the secondary dataset. Power analyses were thus conducted a priori with G*Power software (Faul, Erdfelder, Lang & Buckner, 2007) for the range of statistical tests that are completed within this study. For chi square tests with a 95% CI and effect size of 0.3, and up to six degrees of freedom, the Principal Investigator determined that the minimum sample size to achieve adequate statistical power is 232 cases. For one-tailed independent t-tests with a 95% CI and effect size of 0.5, the Principal Investigator determined that the minimum sample size to achieve adequate statistical power is 176 total cases. For one-way ANOVA tests with three groups, a 95% CI, and effect size of 0.3, the Principal Investigator determined that the minimum sample size is 177. For one-tailed multinomial logistic regressions with an odds ratio of 1.6, a 95% CI, and an effect size of 0.5, the Principal Investigator determined that the minimum sample size to achieve adequate statistical power is 212.

Unfortunately, G*Power software is not equipped to conduct power analyses for path analyses with mediators. However, Hair, Celsi, Ortinau and Bush (2013) suggest that the minimum sample size ought to be the number of variables placed within the model, multiplied by the number of categories for each included variable, multiplied by ten. Because knowledge of the model is required for this calculation, the Principal Investigator was unable to conduct the calculation a priori. However, given the number of variables included in the path analysis model reported in the Results chapter, and the number of categories for each of the included variables, the total sample size easily meets this minimum threshold. (The model with the greatest number

of variables includes three variables with two categories each, which means that the minimum sample size for the path analysis models is 60.)

The total number of cases in the sample exceeds each of the minimum thresholds mentioned above. And while an effect size of 0.5 for some of the tests is not ideal (t-tests and multinomial logistic regressions), it is acceptable; the power of each of the above tests could be improved by increasing sample sizes in future studies.

Statistical Analyses. The statistical analyses selected for this study include chi square tests, t-tests, ANOVAs, multinomial logistic regressions, path analyses, and indirect effect analyses. The dataset is also analyzed for descriptive statistics. Descriptive statistics include information on the distributions of race, age, child welfare involvement, juvenile justice involvement, unmet basic needs, experiencing substance use, the number of traffickers or facilitators involved in victims' exploitation, and victim-trafficker relationship types. More advanced statistical tests include the following:

1. Chi square analyses are used to test associations between victims' unmet basic needs and the presence of risk factors in DMST victims' case files. Specifically, chi-square analyses are run to test the association between victims' race, child welfare involvement, juvenile justice involvement, experiencing substance use, and unmet basic needs; chi-square analyses are also used to test the association between the interaction term (race*unmet basic needs) and each of the above variables (RQ1). Additionally, though not directly relevant to the posed research questions, chi square analyses are used to examine the associations between each of the above variables, as doing so enhances the robustness of the overall study.
2. T-tests are used to test the association between victims' unmet basic needs and age.

3. ANOVAs are used to examine the association between each categorical risk factor variable and victims' age. Although these analyses do not directly relate to the research questions, they again enhance the overall robustness of the study.
4. Odds ratios are calculated to determine how risk factors predict the likelihood of specific relationship types between victim and trafficker (RQ2); odds ratios are also used to determine how the interaction term predicts the likelihood of specific relationship types. Finally, odds ratios are used to calculate the relationship between victims' risk factors and the number of traffickers or facilitators involved in victims' exploitation, as well as how the interaction between race and unmet basic needs predicts the number of people involved in the exploitation (RQ4).
5. Path analyses using the Baron and Kenny (1986) method to establish mediation effect are used to test how victim unmet basic needs mediates the path between victims' risk factors and victims' relationships with their traffickers (RQ3). This method is also used to test how unmet basic needs mediates the path between victims' risk factors and the number of traffickers or facilitators involved in their exploitation (RQ5). This method establishes whether a mediating variable completely or partially mediates the pathway, but is not able to assess the significance of the mediation.
6. Path analyses models are analyzed for indirect effect by calculating zmediation scores as described by Iacobucci (2012). Iacobucci (2012) notes that there is no method outside of zmediation to establish the significance of the mediating effect of a dichotomous variable. Every other indirect effect test assumes that the mediating variable is multicategorical or continuous; the zmediation test is the only one equipped to handle a dichotomous mediating variable. Since the mediating variable of unmet basic needs is

dichotomous, this method must be applied to determine the significance of its indirect effect on the outcome.

Statistical significance is set a priori at 0.05. The Principal Investigator screened each variable for normality, independence of the data, and any violations of statistical assumptions. Once the Principal Investigator determined which variables meet necessary statistical assumptions, the Principal Investigator included appropriate variables in the above analyses.

Reported statistics include descriptive statistics (mean, standard deviation), test statistics (such as chi-square values, t-values, betas), and 95% confidence intervals in order to estimate precision of point estimates. P-values are reported in the results section.

Before concluding this chapter, it is important to note that missing data is a small but important issue within the analysis. Although each variable is missing less than 10% of the overall data for the specific variable, listwise deletion would have reduced the total sample size to 221 and thus reduced the power of the tests. As a result, raw data is used for descriptive analyses, but all inferential analyses are run on a dataset with a single imputation. This is an appropriate method for addressing missing data, since the total proportion of missing data within each variable is less than 10% missing (Scheffer, 2002).

Chapter 5: Results

This study attempts to provide insight into the emerging area of DMST victims' relationships with their traffickers. This chapter reports the results of the data analytic procedures described in the Methods chapter of this study. The chapter begins with an overview of the descriptive statistical analyses, each of which the Principal Investigator conducted within the raw dataset. Subsequent sections are organized to provide test results that are relevant to the study's five overarching research hypotheses. The Principal Investigator conducted all inferential statistical analyses within a single imputation dataset, so that $n = 242$ for each inferential analysis. Although significance levels are set at 0.05 for each inferential analysis, there are a number of tests that approach significance but did not reach it. Since this study is exploring a new area of DMST research, the Principal Investigator occasionally reports results that approach significance, in addition to the significant results obtained in this study.

Descriptive Statistics and Distributions of Variables

Before beginning inferential statistical analyses, the Principal Investigator analyzed the raw data for descriptive information about the sample. The sample includes a plurality of African American victims ($n = 81$, 34.9%), followed by White victims ($n = 72$, 31.0%), Hispanic victims ($n = 56$, 24.1%), Mixed Race victims ($n = 21$, 9.1%), and finally Asian victims ($n = 2$, 0.9%). As displayed in Figure 1, when these five categories are collapsed into three categories for statistical purposes, the distribution contains a plurality of African American victims ($n = 97$, 41.8%), followed by White victims ($n = 73$, 31.5%), and Hispanic/Asian victims ($n = 62$, 26.7%).

Figure 1. Bar chart: Categorical race. This chart shows categorical race collapsed into the categories of White, Hispanic/Asian, and African American.

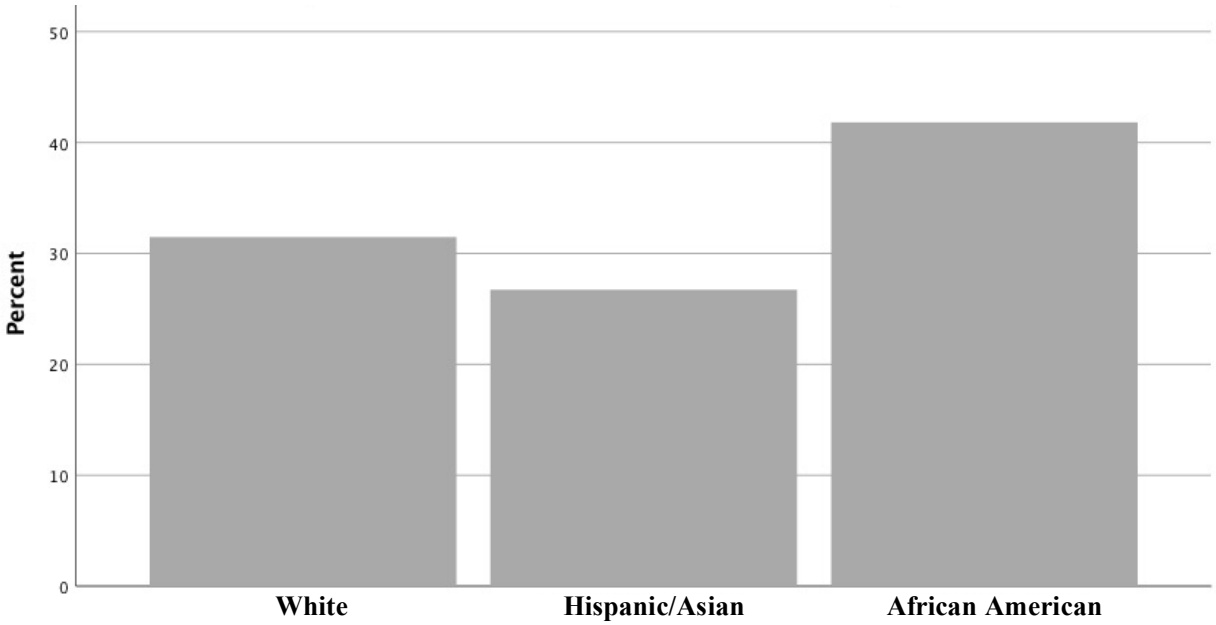
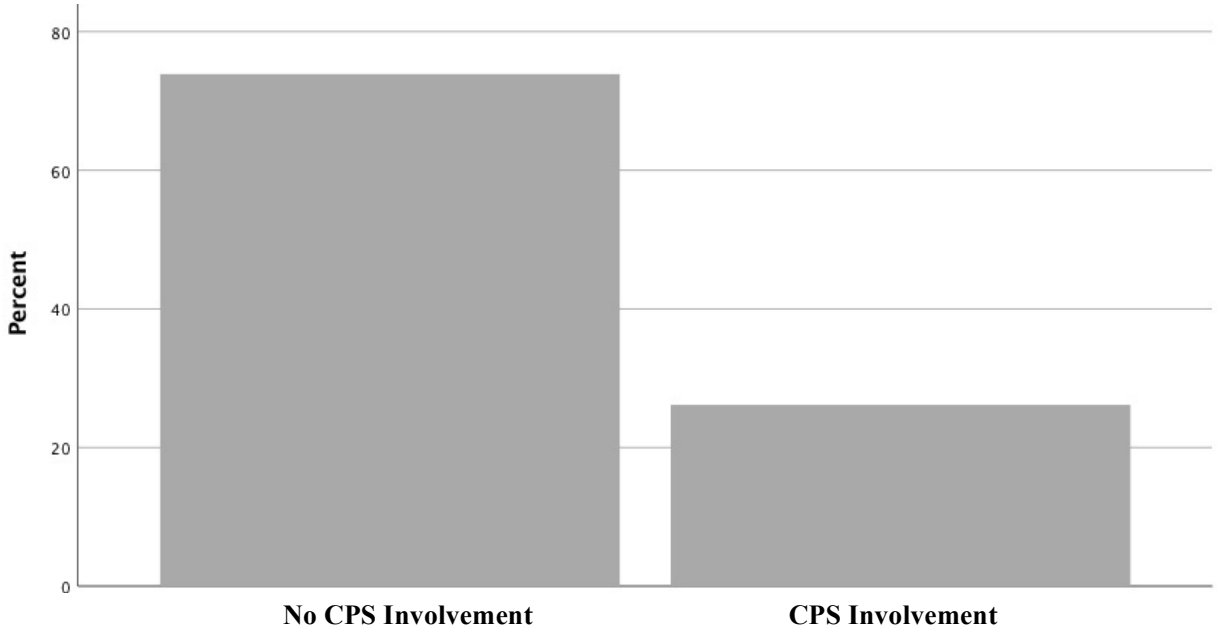


Figure 2 illustrates that the majority of the victims in this sample did not have child welfare involvement identified in their case notes (n = 178, 73.9%). There were differences in this finding by race, which will be discussed in the inferential analysis section of this chapter.

Figure 2. Bar chart: Child welfare involvement.



Figures 3 and 4 illustrate that most of the sampled victims had been involved with the juvenile justice system (n = 213, 88.0%); of those involved in the juvenile justice system, 127 (52.5% of total) were involved once, and 86 (35.5% of total) were involved more than once.

Figure 3. Bar chart: Juvenile justice involvement.

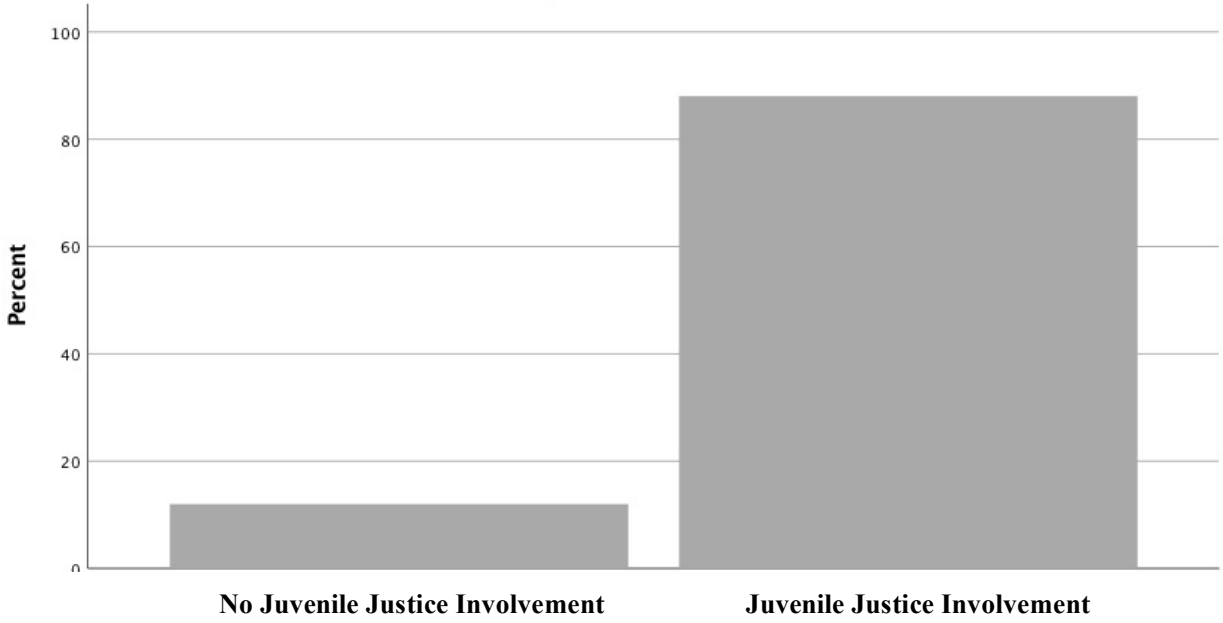


Figure 4. Bar chart: Number of times involved in juvenile justice system.

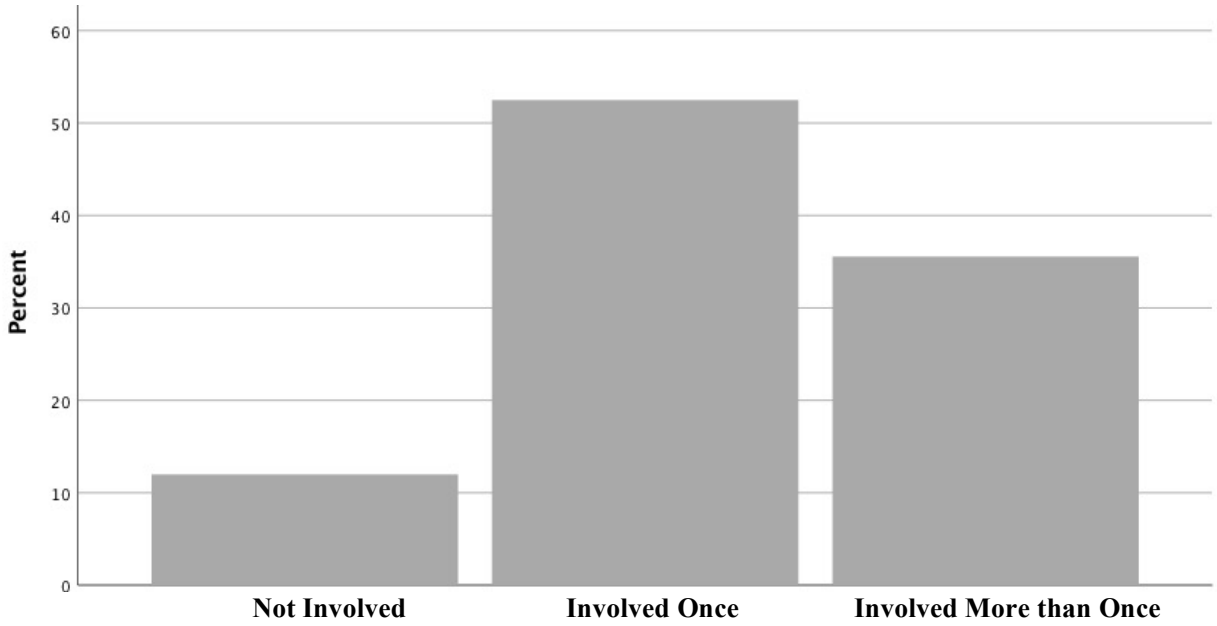
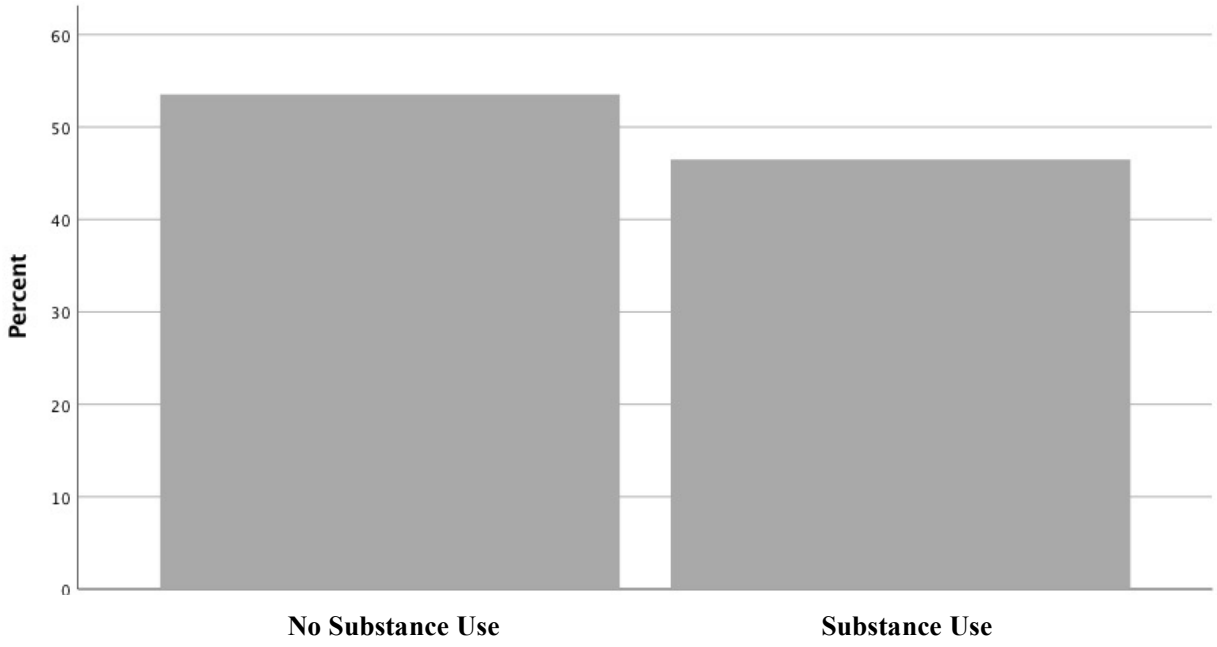


Figure 5 displays that a small majority of victims had no indication of substance use experience in their case files (n = 129, 53.5%).

Figure 5. Bar chart: Substance use.



Likewise, a small majority of victims had no indication of homelessness or running away in their case files (n = 126, 52.5%). However, when homelessness or running away is combined with other types of unmet needs (like food or clothing), this computed variable demonstrates that a majority of the sample had unmet basic needs, as illustrated in Figure 6 (n = 132, 55.0%). Figure 7 shows that a plurality of victims had one trafficker involved in their exploitation (n = 117, 49.2%), followed by two or more traffickers (n = 109, 45.8%) and no traffickers (n = 12, 5.0%).

Figure 6. Bar chart: Unmet basic needs, calculated as unmet needs for shelter and/or other unmet basic need.

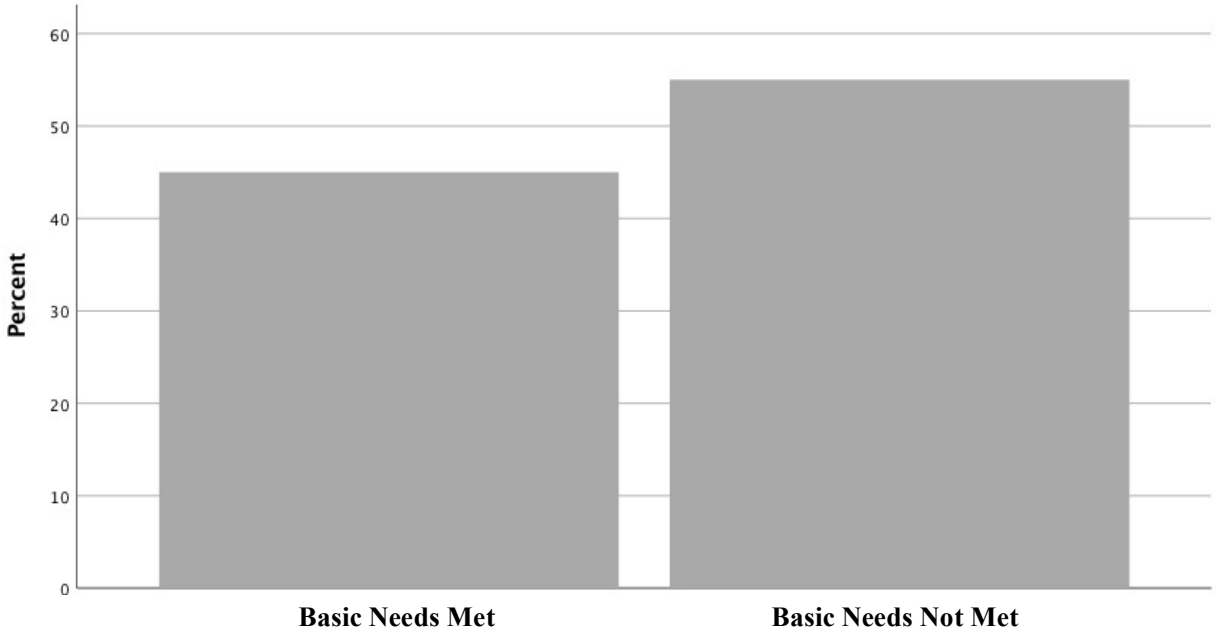
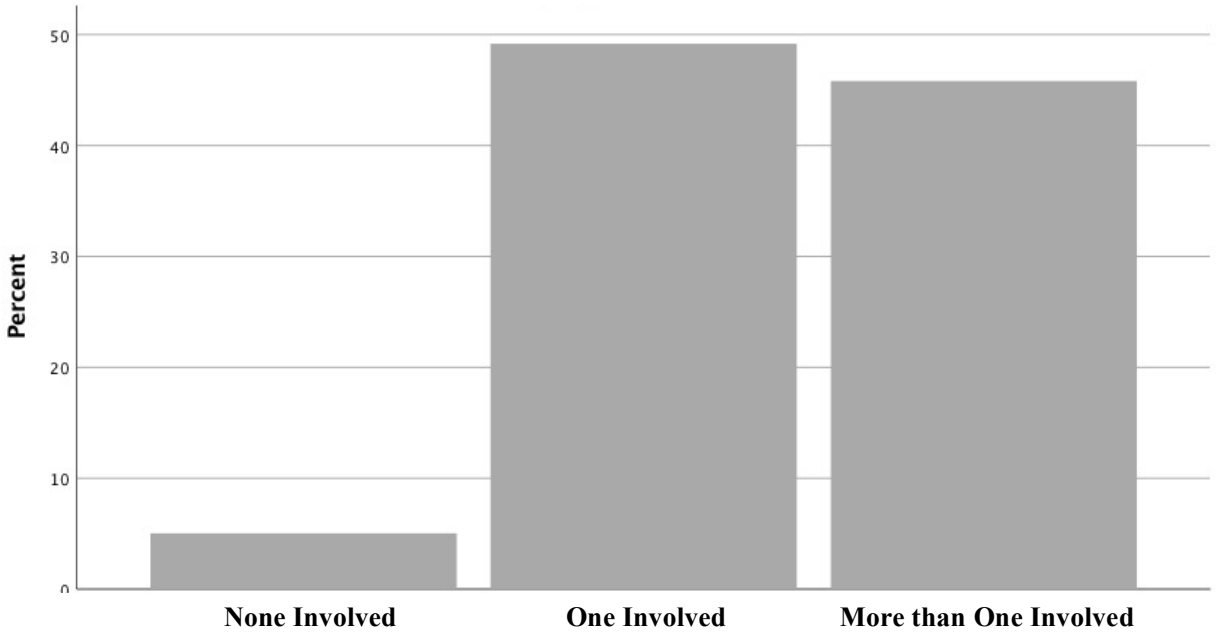
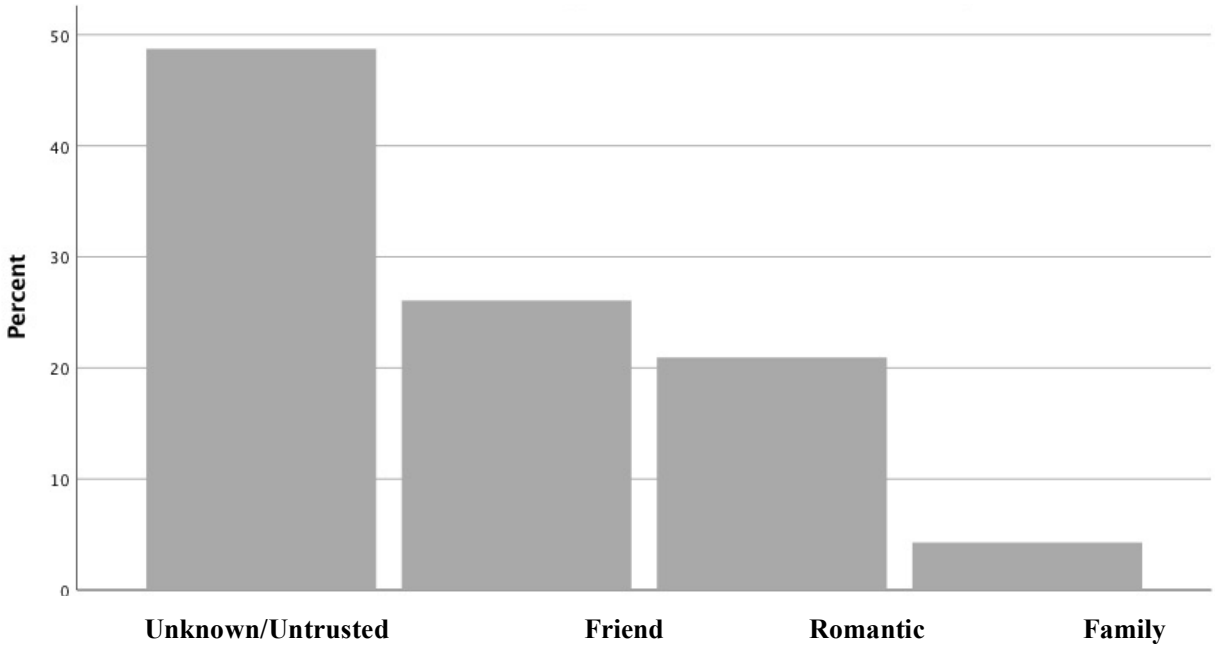


Figure 7. Bar chart: Number of traffickers or facilitators involved in exploitation.



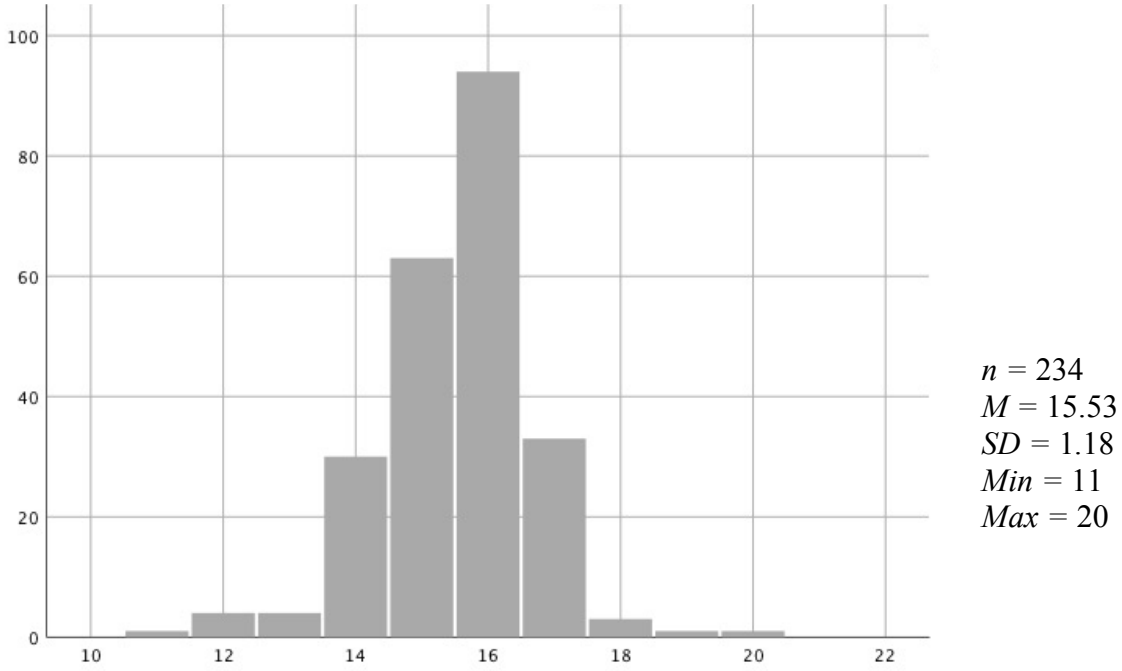
Most of the victims (n = 100, 42.7%) were trafficked by a "previously unknown of untrusted" trafficker—a person they did not previously know or trust. This category is followed by a friend-type trafficker (n = 61, 26.1%), a romantic partner trafficker (n = 49, 20.9%), no trafficker (n = 14, 6.0%), and finally a family member trafficker (n = 10, 4.3%). For statistical purposes, the "no trafficker" and "previously unknown or untrusted" trafficker are collapsed into one category for subsequent analyses. The Principal Investigator collapsed "no trafficker" and "other trafficker", rather than "family member" and "other trafficker", because it is theoretically important to avoid collapsing intimate-type relationships (family, romantic partner, friend) with non-intimate relationships (i.e. a stranger, like a previously unknown or untrusted trafficker). The distribution of these new categories is illustrated in Figure 8.

Figure 8. Bar chart: Type of victim-trafficker relationship.



Finally, it is important to note the ages of the victims in this sample. Age is the only variable in this study that is a continuous variable. The victims in this sample range in age from 11 to 20 (the few victims who are above the age of 18 indicated that they had been trafficked as minors). The average age of the sampled victims is 15.53 (*SD* = 1.18). The distribution of the age variable is contained in Figure 9.

Figure 9. Age. This figure shows the age distribution of the sample; descriptive statistics included.



The Principal Investigator provides an overview of the descriptive statistics of the categorical variables included in this study in Table 2. Note that all of the variables that are included in advanced statistical analyses (odds ratios, path analyses) are marked with an asterisk; it is important to differentiate which variables are used for those cases in which more than one variable could be appropriate but both may not be included without violating statistical assumptions. For instance, it is inappropriate to include both juvenile justice variables

(categorical juvenile justice involvement and ordinal juvenile justice involvement) into analyses because their categories and ordinal values overlap with one another. The Principal Investigator determined which variables to include over others based upon a) statistical assumptions about the normalcy of distributions, and b) the behavior of odds ratios models when different variables are included.

Table 2

Descriptive statistics of categorical variables explored in study

Variable	*n* (%)
Categorical race *(n* = 232*)*	
White	72 (31.0)
Hispanic	56 (24.1)
African American	81 (34.9)
Mixed Race	21 (9.1)
Asian	2 (0.9)
*Categorical race, collapsed into White, Hispanic/Asian, and AA *(n* = 232*)*	
White	73 (31.5)
Hispanic/Asian (96.8% Hispanic)	62 (26.7)
African American	97 (41.8)
*Child welfare involvement *(n* = 241*)*	
No CPS involvement identified in case note	178 (73.9)
CPS involvement identified in case note	63 (26.1)
*Juvenile justice involvement *(n* = 242*)*	
No juvenile justice involvement identified in case note	29 (12.0)
Juvenile justice involvement identified in case note	213 (88.0)
Number of times involved in juvenile justice system *(n* = 242*)*	
No juvenile justice involvement	29 (12.0)
Juvenile justice involvement noted once	127 (52.5)
Juvenile justice involvement noted more than once	86 (35.5)
*Experiencing substance use *(n* = 242*)*	
Substance use not identified in case note	129 (53.5)

Substance use identified in case note	112 (46.5)
Homelessness *(n* = 240*)*	
Homelessness not identified in case note	126 (52.5)
Homelessness identified in case note	114 (47.5)
Unmet basic needs, excluding need for shelter *(n* =240*)*	
Basic needs identified as met in case note	222 (92.5)
Basic needs not identified as met in case note	18 (7.5)
*Unmet basic needs, shelter and/or other unmet basic needs collapsed *(n* = 240*)*	
Not identified as homeless; basic needs met in case note	108 (45.0)
Identified as homeless; basic needs not met in case note	132 (55.0)
*Number of traffickers involved in exploitation, by three categories *(n* = 238*)*	
No traffickers or facilitators involved	12 (5.0) [a]
One trafficker or facilitator involved	117 (49.2)
More than one trafficker or facilitator involved	109 (45.8)
Number of traffickers involved in exploitation, dichotomous *(n* = 238*)*	
One or fewer traffickers/facilitators involved	129 (54.2)
Two or more traffickers or facilitators involved	109 (45.8)
Type of victim-trafficker relationship, by five categories *(n* = 234)[b]	
No Trafficker	14 (6.0)[a]
Friend	61 (26.1)
Romantic partner	49 (20.9)
Family member	10 (4.3)
Previously unknown/untrusted	100 (42.7)
*Type of victim-trafficker relationship, by four categories *(n* = 234)[b]	
Previously unknown/untrusted	114 (48.7)
Friend	61 (26.1)
Romantic partner	49 (20.9)
Family member	10 (4.3*)*

*Variables included in advanced statistical analyses (odds ratios, path analyses); some, but not all of the variables without asterisks are included in chi-square analyses, t-tests, and ANOVAs

[a] Two cases in which a victim entered trafficking without an identified trafficker or facilitator ended up joining with a trafficker or facilitator during the course of exploitation.

[b] Victims are only classified as having one victim-trafficker relationship type, even if more than one trafficker or facilitator was eventually involved. Victim-trafficker relationship type is coded by the first relationship that introduced the victim to trafficking.

Testing Hypothesis One

The first hypothesis in this research study is that the variable, victim unmet basic needs, is positively and statistically significantly associated with risk factors in victim case files. This overarching hypothesis is broken into three separate sub-hypotheses, each of which require separate statistical analyses. **Hypothesis 1a**—that victim unmet basic needs is positively, statistically significantly associated with victim minority race, child welfare involvement, juvenile justice involvement, and experiencing substance use—is tested through chi square analyses. Chi square tests were performed to test the associations between unmet basic needs and each of the risk factors mentioned above.

The results of these analyses are available in Table 3. The associations between unmet basic needs and three oppressive/risk factor variables are significant. Of note, unmet basic needs is not statistically significantly associated with any of the outcome variables included in this study (victim-trafficker relationship type, and number of traffickers involved in victims' exploitation).

Race and unmet basic needs are statistically significantly associated (x^2 [2] = 8.54, p = 0.01). Prior to conducting the analyses, the Principal Investigator anticipated that minority race would be significantly associated with the presence of unmet basic needs, but this was only partially the case. There is a greater than expected number of African American and White victims who have unmet basic needs, but a less than expected number of Hispanic/Asian victims who have unmet basic needs.

Child welfare involvement and unmet basic needs are also statistically significantly associated (x^2 [1] = 7.22, p = 0.007). In line with prediction, victim child welfare involvement is associated with a greater than expected number who also have unmet basic needs.

Finally, the number of juvenile justice involvements and unmet basic needs are statistically significantly associated (x^2 [2] = 7.66, p = 0.02). In line with prediction, a greater number of juvenile justice involvements is significantly associated with a greater degree of unmet basic needs. Interestingly, juvenile justice involvement (as a categorical variable) is not, in and of itself, statistically significant, indicating that group differences are only pronounced when juvenile justice involvement occurs repeatedly.

Given these results, the Principal Investigator rejects the null hypothesis (**hypothesis 1a**) that there is no association between unmet needs and victim race, child welfare involvement, and number of juvenile justice involvements. However, the Principal Investigator fails to reject the null hypothesis (**hypothesis 1a**) that there is no association between juvenile justice involvement (categorical), experiencing substance use, number of traffickers involved in exploitation, and victim-trafficker relationship type.

Table 3

Chi Square Results, Associations of Independent Variables (Risk Factors) and Outcome Variables with Unmet Basic Needs, n = 242

	Basic Needs Met (*n* =108)		Basic Needs Not Met (*n* = 134)				
	Observed (%)	*Expected*	*Observed (%)*	*Expected*	x^2	*df*	*p*
Race							
White	29 (*26.9*)	33.9	47 (*35.1*)	42.1	8.54	2	0.01*
Hispanic/Asian	39 (*36.1*)	29.0	26 (*19.4*)	36.0			
African American	40 (*37.0*)	45.1	61 (*45.5*)	55.9			
CPS Involvement							
No CPS Identified	89 (*82.4*)	79.9	90 (*67.2*)	99.1	7.22	1	0.007**
CPS Identified	19 (*17.6*)	28.4	44 (*32.8*)	34.9			
Juvenile Justice Involvement							
No Juvenile Justice Identified	12 (*11.1*)	12.9	17 (*12.7*)	16.1	0.14	1	0.71
Juvenile Justice Identified	96 (*88.9*)	95.1	117 (*87.3*)	117.9			
Number of Juvenile Justice Involvements							
Not Involved	12 (*11.1*)	13.1	17 (*12.7*)	16.0	7.66	2	0.02*
Involved Once	67 (*62.0*)	56.7	60 (*46.3*)	70.3			
Involved More than Once	29 (*26.9*)	38.4	57 (*42.5*)	47.6			
Experiencing Substance Use							
No Substance Use Identified	62 (*57.4*)	58.0	68 (*50.7*)	72.0	1.07	1	0.30
Substance Use Identified	46 (*42.6*)	50.0	66 (*49.3*)	62.0			
Number of Traffickers/Facilitators							
None	5 (*4.6*)	5.4	7 (*5.2*)	6.6	1.07	2	0.59
One	58 (*53.7*)	54.0	63 (*47.0*)	67.0			
More than One	45 (*41.7*)	48.6	64 (*47.8*)	60.4			
Victim-Trafficker Relationship Type							
Unknown/Untrusted	49 (*45.4*)	52.7	69 (*51.5*)	65.3	4.87	3	0.18
Friend	24 (*22.2*)	27.7	38 (*28.4*)	34.3			
Romantic Partner	29 (*26.9*)	22.8	22 (*16.4*)	28.2			
Family Member	6 (*5.6*)	4.9	5 (*3.7*)	6.1			

*$p < 0.05$, ** $p < .01$.

Although Hypothesis 1a is only concerned with associations between risk factors and unmet basic needs, it is also important to examine the associations between each of the risk factors and the outcome variables included in this study. Several additional associations are noted. Table 4 illustrates the associations between race and other risk factors, as well as associations with the outcome variables of number of traffickers involved and victim-trafficker relationship type. Race is significantly associated with both child welfare involvement and experiencing substance use. Race is not significantly associated with either of the outcome variables. The association between race and child welfare involvement is statistically significant (x^2 [2] = 7.14, p = 0.03), with a greater than expected number of both African Americans and Whites identified as child welfare involved. The association between race and experiencing substance use is also statistically significant (x^2 [2] = 13.53, p = 0.001). White victims are identified as substance users at a much greater than expected number; Hispanic/Asian victims are identified as substance users at a slightly greater than expected number. African American victims are identified as substance users at a much less than expected number.

Table 5 shows the associations between child welfare involvement and the other risk factors and outcome variables. Child welfare involvement is statistically significantly associated with victim-trafficker relationship type (x^2 [3] = 14.06, p = 0.003). A greater than expected number of victims trafficked by family members are also child welfare involved; a less than expected number of victims trafficked by friends are also child welfare involved.

Table 4

Chi Square Results, Associations of Independent Variables (Risk Factors) and Outcome Variables with Race, n = 242

	White (n = 76)		Hispanic/Asian (n = 65)		African American (n = 101)				
	Observed (%)	*Expected*	*Observed (%)*	*Expected*	*Observed (%)*	*Expected*	x^2	*df*	*p*
CPS Involvement									
No CPS Identified	48 (*63.2*)	56.2	49 (*75.4*)	48.1	82 (*81.2*)	74.7	7.14	2	0.03*
CPS Identified	28 (*36.8*)	19.8	16 (*24.6*)	16.9	19 (*18.8*)	26.3			
Juvenile Justice Involvement									
No Juvenile Justice Identified	11 (*14.5*)	9.1	6 (*9.2*)	7.8	12 (*11.9*)	12.1	0.92	2	0.63
Juvenile Justice Identified	65 (*85.5*)	66.9	59 (*90.8*)	57.2	89 (*88.1*)	88.9			
Number of Juvenile Justice Involvements									
Not Involved	11 (*14.5*)	9.1	6 (*9.2*)	7.8	12 (*11.9*)	12.1	3.27	4	0.51
Involved Once	36 (*47.4*)	39.9	40 (*61.5*)	34.1	51 (*50.5*)	53.0			
Involved More than Once	29 (*38.1*)	27.0	19 (*29.2*)	23.1	38 (*37.6*)	35.9			
Experiencing Substance Use									
No Substance Use Identified	31 (*40.8*)	40.8	31 (*47.7*)	34.9	68 (*67.3*)	54.3	13.58	2	0.001**
Substance Use Identified	45 (*59.2*)	35.2	34 (*52.3*)	30.1	33 (*32.7*)	46.7			
Number of Traffickers/Facilitators									
None	5 (*6.6*)	3.8	3 (*4.6*)	3.2	4 (*4.0*)	5.0	1.79	4	0.78
One	37 (*46.7*)	38.0	36 (*55.4*)	32.5	48 (*47.5*)	50.5			
More than One	34 (*44.7*)	34.2	26 (*40.0*)	29.3	49 (*48.5*)	45.5			
Victim-Trafficker Relationship Type									
Unknown/Untrusted	43 (*56.6*)	37.1	31 (*47.7*)	31.7	44 (*43.6*)	49.2	3.28	6	0.77
Friend	16 (*21.1*)	19.5	16 (*24.6*)	16.7	30 (*29.7*)	25.9			
Romantic Partner	14 (*18.4*)	16.0	15 (*23.1*)	13.7	22 (*21.8*)	21.3			
Family Member	3 (*3.9*)	3.5	3 (*4.6*)	3.0	5 (*4.9*)	4.6			

*$p < 0.05$, ** $p < .005$.

Table 5

Chi Square Results, Associations of Independent Variables (Risk Factors) and Outcome Variables with CPS Involvement, n = 242

	No CPS Involvement (*n* = 179)		CPS Involvement (*n* = 63)				
	Observed (%)	*Expected*	*Observed (%)*	*Expected*	x^2	*df*	*p*
Juvenile Justice Involvement							
No Juvenile Justice Identified	20 (*11.2*)	21.5	9 (*14.3*)	7.5	0.43	1	0.51
Juvenile Justice Identified	159 (*88.8*)	157.5	54 (*85.7*)	55.5			
Number of Juvenile Justice Involvements							
Not Involved	20 (*11.2*)	21.5	9 (*14.3*)	7.5	4.32	2	0.12
Involved Once	101 (*56.4*)	93.9	26 (*41.3*)	33.1			
Involved More than Once	58 (*32.4*)	63.6	28 (*44.4*)	22.4			
Experiencing Substance Use							
No Substance Use Identified	99 (*55.3*)	96.2	31 (*49.2*)	33.8	0.70	1	0.40
Substance Use Identified	80 (*44.7*)	82.8	32 (*50.8*)	29.2			
Number of Traffickers/Facilitators							
None	9 (*5.0*)	8.9	3 (*4.8*)	3.1	0.04	2	0.98
One	90 (*50.3*)	89.5	31 (*49.2*)	31.5			
More than One	80 (*44.7*)	80.6	29 (*46.0*)	28.4			
Victim-Trafficker Relationship Type							
Unknown/Untrusted	87 (*48.6*)	87.3	31 (*49.2*)	30.7	14.06	3	0.003**
Friend	50 (*27.9*)	45.9	12 (*19.0*)	16.1			
Romantic Partner	39 (*21.8*)	37.7	12 (*19.0*)	13.3			
Family Member	3 (*1.7*)	8.1	8 (*12.7*)	2.9			

** $p < .005$.

Table 6 illustrates the associations between categorical juvenile justice involvement and the other risk factors and outcome variables. Unsurprisingly, juvenile justice involvement is statistically significantly associated with the number of juvenile justice involvements, since the variables overlap with one another (x^2 [2] = 242.00, $p < 0.001$). Juvenile justice involvement is also statistically significantly associated with victim-trafficker relationship type (x^2 [3] = 7.66, $p = 0.002$). A slightly greater than expected number of victims trafficked by friends or romantic partners are also involved with the juvenile justice system; a slightly less than expected number of victims trafficked by family members are also involved with the juvenile justice system.

Meanwhile, Table 7 displays the associations between number of juvenile justice involvements (the ordinal version of this variable) and the other risk factors and outcome variables. This variable is only statistically significantly associated with victim-trafficker relationship type (x^2 [6] = 15.88, $p = 0.01$). A greater than expected number of victims trafficked by family members are likewise uninvolved in the juvenile justice. A greater than expected number of victims trafficked by friends or romantic partners are only involved in juvenile justice systems one time. Finally, a greater than expected number of victims trafficked by a previously unknown or untrusted trafficker are involved in juvenile justice more than once. However, this variable is not as strongly associated with victim-trafficker relationship type as the categorical juvenile justice variable, so the categorical variable is used in all subsequent analyses (odds ratios and path analyses).

Table 8 demonstrates that experiencing substance use is not statistically significantly associated with any other risk factors besides race, which is displayed in the chi square results in Table 4, or either outcome variable.

Table 6

Chi Square Results, Associations of Independent Variables (Risk Factors) and Outcome Variables with Juvenile Justice Involvement, n = 242

	No JJ Involvement (n = 29)		JJ Involvement (n = 213)				
	Observed (%)	*Expected*	*Observed (%)*	*Expected*	x^2	*df*	*p*
Number of Juvenile Justice Involvements							
Not Involved	29 (*100.0*)	3.5	0 (*0.0*)	25.5	242.00	2	< .001***
Involved Once	0 (*0.0*)	15.2	127 (*59.6*)	111.8			
Involved More than Once	0 (*0.0*)	10.3	86 (*40.4*)	75.7			
Experiencing Substance Use							
No Substance Use Identified	12 (*41.4*)	15.6	118 (*55.4*)	114.4	2.02	1	0.16
Substance Use Identified	17 (*58.6*)	13.4	95 (*44.6*)	98.6			
Number of Traffickers/Facilitators							
None	0 (*0.0*)	1.4	12 (*5.6*)	10.6	2.56	2	0.28
One	13 (44.8)	14.5	108 (*50.7*)	106.5			
More than One	16 (55.2)	13.1	93 (*43.7*)	95.9			
Victim-Trafficker Relationship Type							
Unknown/Untrusted	16 (*55.2*)	14.1	102 (*47.9*)	103.9	14.59	3	0.002**
Friend	4 (*13.8*)	7.4	58 (*27.2*)	54.6			
Romantic Partner	4 (*13.8*)	6.1	47 (*22.1*)	44.9			
Family Member	5 (*17.2*)	1.3	6 (*2.8*)	9.7			

*** p < .005, **** p < .001.*

***The variables juvenile justice involvement and number of times involved with juvenile justice are covariates; the significance of this association should be interpreted accordingly.*

Table 7

Chi Square Results, Associations of Independent Variables (Risk Factors) and Outcome Variables with Number of Juvenile Justice Involvements, n = 242

	Not Involved (*n* = 29)		Involved Once (*n* = 127)		Involved > Once (*n* = 86)				
	Observed (%)	*Expected*	*Observed (%)*	*Expected*	*Observed (%)*	*Expected*	x^2	*df*	*p*
Experiencing Substance Use									
No Substance Use Identified	12 (*41.4*)	15.6	74 (*58.3*)	68.2	44 (*51.2*)	46.2	3.06	2	0.22
Substance Use Identified	17 (*58.6*)	13.4	53 (*41.7*)	58.8	42 (*48.8*)	39.8			
Number of Traffickers/Facilitators									
None	0 (*0.0*)	1.4	7 (*5.5*)	6.3	5 (*5.8*)	4.3	8.55	4	0.07
One	13 (*44.8*)	14.5	73 (*57.5*)	63.5	35 (*40.7*)	43.0			
More than One	16 (*55.2*)	13.1	47 (*37.0*)	57.2	46 (*53.5*)	38.7			
Victim-Trafficker Relationship Type									
Unknown/Untrusted	16 (*55.2*)	14.1	58 (*45.7*)	61.9	44 (*51.2*)	41.9	15.88	6	0.01*
Friend	4 (*13.8*)	7.4	35 (*27.6*)	32.5	23 (*26.7*)	22.0			
Romantic Partner	4 (*13.8*)	6.1	29 (*22.8*)	26.8	18 (*20.9*)	18.1			
Family Member	5 (*17.2*)	1.3	5 (*3.9*)	5.8	1 (*1.2*)	3.9			

*$p < 0.05$

Table 8

Chi Square Results, Associations of Independent Variables (Risk Factors) and Outcome Variables with Substance Use, n = 242

	No Substance Use (*n* = 130)		Substance Use (*n* = 112)				
	Observed (%)	*Expected*	*Observed (%)*	*Expected*	x^2	*df*	*p*
Number of Traffickers/Facilitators							
None	6 (*4.6*)	6.4	6 (*5.4*)	5.6	0.11	2	0.95
One	66 (*50.8*)	65.0	55 (*49.1*)	56.0			
More than One	58 (*44.6*)	58.6	51 (*45.5)*	50.4			
Victim-Trafficker Relationship Type							
Unknown/Untrusted	58 (*44.6*)	63.4	60 (*53.6*)	54.6	4.17	3	0.24
Friend	38 (*29.2*)	33.3	24 (*21.4*)	28.7			
Romantic Partner	26 (*20.0*)	27.4	25 (*22.3*)	23.6			
Family Member	8 (*6.2*)	5.9	3 (*2.7*)	5.1			

Finally, Table 9 illustrates that the number of traffickers or facilitators involved in victims' exploitation is statistically significantly associated with victim-trafficker relationship type (x^2 [6] = 17.69, p = 0.007). This result may have occurred, partially, because DMST victims with no traffickers are collapsed into the previously unknown/untrusted category. As a result, a higher than expected number of victims trafficked by a previously unknown/untrusted person indicate that there is no trafficker involved in their exploitation. This previously unknown/untrusted category also has a lower than expected number who are only trafficked by one person, and a higher than expected number who are trafficked by more than one person. Victims trafficked by romantic partners also have a higher than expected number of victims who are only trafficked by one person.

Hypothesis 1b is very similar to Hypothesis 1a, but uses modifications of some of the above variables to accommodate interaction terms. Keeping with intersectionality-informed analysis, it is important to include the interaction term of race by unmet basic needs in order to determine how race and a poverty-proxy interact with one another, and are then associated with other variables included in this study. Hypothesis 1b tests the association between the interaction term (race*unmet basic needs) and the variables of child welfare involvement, juvenile justice involvement, and experiencing substance use. Because each of the variables included above are categorical, and because the range of possible interaction terms is only 0-2, chi square tests are the most appropriate procedure to test these associations. None of these associations are statistically significant, although the association between the interaction term and experiencing substance use approaches significance x^2 [2] = 5.28, p = 0.07). The associations between the interaction term and the other variables are illustrated in Table 10. Given these results, the Principal Investigator fails to reject the null hypothesis (**hypothesis 1b**) that the interaction term

race*unmet basic needs is not associated with child welfare involvement, juvenile justice involvement, experiencing substance use, the number of traffickers involved in exploitation, and the victim-trafficker relationship type.

Table 9

Chi Square Results, Association between Number of Traffickers/Facilitators Involved and Victim-Trafficker Relationship Type, n = 242

	None Involved (n = 12)		One Involved (n = 121)		More than One Involved (n = 109)				
	Observed (%)	*Expected*	*Observed (%)*	*Expected*	*Observed (%)*	*Expected*	x^2	*df*	*p*
Victim-Trafficker Relationship Type									
Unknown/Untrusted	12 (*100.0*)	5.9	49 (*40.5*)	59.0	57 (*52.3*)	53.1	17.69	6	.007*
Friend	0 (*0.0*)	3.1	33 (*27.3*)	31.0	29 (*26.6*)	27.9			
Romantic Partner	0 (*0.0*)	2.5	32 (*26.4*)	25.5	19 (*17.4*)	23.0			
Family Member	0 (*0.0*)	0.5	7 (*5.8*)	5.5	4 (*3.7*)	5.0			

* $p < .05$.

Table 10

*Chi Square Results, Association between Interaction Term (Race*Unmet Basic Needs) and Independent Variables (Risk Factors) and Outcome Variables, n = 242*

	Interaction Term: 0 (*n* = 155)		Interaction Term: 1 (*n* = 26)		Interaction Term: 2 (*n* = 61)				
	Observed (%)	*Expected*	*Observed (%)*	*Expected*	*Observed (%)*	*Expected*	x^2	*df*	*p*
No Child Welfare Involvement	118 (*76.1*)	114.6	15 (*57.7*)	19.2	46 (*75.4*)	45.1	4.50	2	0.13
Child Welfare Involvement	37 (*23.9*)	40.4	11 (*42.3*)	6.8	15 (*24.6*)	15.9			
No Juvenile Justice Involvement	19 (*12.3*)	18.6	3 (*11.5*)	3.1	7 (*11.5*)	7.3	0.23	2	0.89
Juvenile Justice Involvement	136 (*87.7*)	136.4	23 (*88.5*)	22.9	54 (*88.5*)	53.7			
No Juvenile Justice Involvement	19 (*12.3*)	18.6	3 (*11.5*)	3.1	7 (*11.5*)	7.3	2.99	4	0.56
Involved Once	87 (*56.1*)	81.3	12 (*46.2*)	13.6	28 (*45.9*)	32.0			
Involved More than Once	49 (*31.6*)	55.1	11 (*42.3*)	9.2	26 (*42.6*)	21.7			
Substance Use Not Identified	79 (*51.0*)	83.3	11 (*42.3*)	14.0	40 (*65.6*)	32.8	5.51	2	0.07
Substance Use Identified	76 (*49.0*)	71.7	15 (*57.7*)	12.0	21 (*34.4*)	28.2			
No Traffickers Involved	9 (*5.8*)	7.7	1 (*3.8*)	1.3	2 (*3.3*)	3.0	3.97	4	0.41
One Trafficker Involved	83 (*53.5*)	77.5	10 (*38.5*)	13.0	28 (*45.9*)	30.5			
More than One Trafficker Involved	63 (*40.6*)	69.8	15 (*57.7*)	11.7	31 (*50.8*)	27.5			
Unknown/Untrusted Relationship	75 (*48.4*)	75.6	17 (*65.4*)	12.7	26 (*42.6*)	29.7	5.34	6	0.50
Friend Relationship	37 (*23.9*)	39.7	5 (*19.2*)	6.7	20 (*32.8*)	15.6			
Romantic Partner Relationship	36 (*23.2*)	32.7	3 (*11.5*)	5.5	12 (*19.7*)	12.9			
Family Member Relationship	7 (4.*8*)	7.0	1 (*3.8*)	1.2	3 (*4.9*)	2.8			

** $p < .05$.*

Hypothesis 1c is likewise similar to hypotheses 1a and 1b, in that it is focused on examining the relationship between unmet basic needs and victim age. This hypothesis is tested through a t-test. As seen in Table 11, there is not a statistically significant relationship between victim unmet basic needs and victims' age. Table 11 also demonstrates that there is not a statistically significant relationship between child welfare involvement and victim age, juvenile justice involvement and victim age, or experiencing substance use and victim age. As a result of these analyses, the Principal Investigator fails to reject the null hypothesis (**hypothesis 1c**) that there is not a significant relationship between unmet basic needs and victim age.

Table 11

Independent T-tests of Mean Differences in Age based on Unmet Basic Needs, CPS Involvement, Juvenile Justice Involvement, and Substance Use, n = 242

Independent Variables	Age				
	n	*M*	*SD*	*t*	*p*
Basic Needs Met	108	15.43	1.29	-1.08	0.28
Basic Needs Not Met	132	15.60	1.07	-	-
No CPS Involvement	179	15.55	1.16	0.81	0.42
CPS Involvement	63	15.41	1.21	-	-
No Juvenile Justice Involvement	29	15.38	1.78	-0.66	0.51
Juvenile Justice Involvement	213	15.54	1.07	-	-
No Substance Use	130	15.56	1.26	0.57	0.57
Substance Use	112	15.47	1.07	-	-

Although there are not a priori hypotheses about the relationship between victim age and other categorical risk factors and outcome variables, it is important to examine any existing relationships before including the variables in more advanced statistical analyses. The Principal Investigator used one-way ANOVAs to examine the relationship between age and the multicategorical variables of race, number of juvenile justice involvements, number of traffickers

involved, and victim-trafficker relationship types. The results of these analyses are illustrated in Table 12.

Table 12

Analysis of Variance (ANOVA) Testing Mean Differences in Age by Race, Number of Juvenile Justice Involvements, Number of Traffickers/Facilitators Involved, and Victim-Trafficker Relationship, n = 242

	SS	*df*	*MS*	*F*	*p*
Race					
Between Groups	9.93	2	4.96	3.69	0.03*
Within Groups	321.40	239	1.35		
Total	331.33	241			
Number of Juvenile Justice Involvements					
Between Groups	9.15	2	4.57	3.39	0.04*
Within Groups	322.18	239	1.35		
Total	331.33	241			
Number of Traffickers/Facilitators Involved					
Between Groups	4.40	2	2.20	1.61	0.20
Within Groups	326.93	239	1.37		
Total	331.33	241			
Victim-Trafficker Relationship Type					
Between Groups	6.20	3	2.07	1.51	0.21
Within Groups	325.12	238	1.37		
Total	331.33	241			

**p is significant at the .05 level.*

Victim race is statistically significantly related to victim age (F [2, 239] = 3.69, p = 0.03). A Bonferroni post hoc test, the results of which are displayed in Table 13, shows that the Hispanic/Asian group is 0.53 years younger, on average, than the White group (p = 0.02). Likewise, the number of juvenile justice involvements is statistically significantly related to victim age (F [2, 239] = 3.39, p = 0.04). Table 14 shows the results of a Bonferroni post hoc test examining the mean age differences between victims grouped by number of juvenile justice

involvements. Victims involved in juvenile justice once are 0.41 years younger, on average, than the group involved more than once ($p = 0.04$).

Table 13

Bonferroni Comparison for Age by Race, n = 242

	Mean Age Difference	SE	95% CI Lower Bound	95% CI Upper Bound
White vs. Majority Hispanic	0.53*	0.20	0.06	1.00
White vs. African American	0.27	0.18	-0.16	0.69
Majority Hispanic vs. White	-0.53*	0.20	-1.00	-0.06
Majority Hispanic vs. African American	-0.27	0.18	-0.71	0.18
African American vs. White	-0.27	0.18	-0.69	0.16
African American vs. Majority Hispanic	0.27	0.18	-0.18	0.71

*$p = .02$

Table 14

Bonferroni Comparison for Age by Juvenile Justice Involvement, n = 242

	Mean Age Difference	SE	95% CI Lower Bound	95% CI Upper Bound
Not Involved vs. Involved Once	0.01	0.24	-0.57	0.59
Not Involved vs. Involved > Once	-0.40	0.25	-1.00	0.20
Involved Once vs. Not Involved	-0.01	0.24	-0.59	0.57
Involved Once vs. Involved > Once	-0.41*	0.16	-0.80	-0.02
Involved > Once vs. Not Involved	0.40	0.25	-0.20	1.00
Involved > Once vs. Involved Once	0.41*	0.16	.02	0.80

*$p = .04$

Testing Hypothesis 2

The second hypothesis in this research study is simply that the presence of risk factors in victims' case files statistically significantly predicts the types of relationship between the victims

and traffickers. Additional sub-hypotheses address how the *number* and *type* of specific risk factors predict the type of relationship between the victim and trafficker, but before presenting results relevant to the sub-hypotheses it must first be determined whether or not the data supports the broader hypothesis (**hypothesis 2**).

Each of the independent variables/risk factors presented with an asterisk in Table 2—race, child welfare involvement, juvenile justice involvement (categorical), unmet basic needs—as well as age and the race*unmet needs interaction term, were placed within a multinomial logistic regression, where the outcome variable includes the categories of previously unknown/untrusted trafficker relationship, friend relationship, romantic partner relationship, and family member relationship. The race variable is dummy coded for use in this analysis. The Principal Investigator dropped age from this initial model because it caused irregularities in the Hessian matrix. The model fitting information for this model can be seen in Table 15. The model statistically significantly fits the data (x^2 [24] = 37.20, p = 0.04), and the Nagelkerke pseudo r-square test suggests that roughly 16% of the variation in the outcome is accounted for by the included independent variables.

Table 15
Multinomial Logistic Regression Model Fitting Information, Victim-Trafficker Relationship Type as Outcome Variable (Initial), n = 242

	-2 Log Likelihood	x^2	*df*	*p*
Intercept Only	217.99			
Final	180.79	37.20	24	.04*

Pseudo R-Square	
Cox and Snell	0.15
Nagelkerke	0.16
McFadden	0.07

* $p < .05$.

However, the likelihood ratio tests of the predictor variables, illustrated in Table 16, suggest that the model is not parsimonious, as several predictor variables do not have statistically significant likelihood ratio tests. The only variables with significant likelihood ratio tests in this initial model are child welfare involvement (x^2 [3] = 9.02, p = 0.03) and juvenile justice involvement (x^2 [3] = 7.74, p = 0.05).

Table 16
Likelihood Ratio Tests of Predictor Variables (Initial)
Multinomial Logistic Regression with Victim-Trafficker Relationship Type as Outcome Variable, n = 242

	-2 Log Likelihood of Reduced Model	x^2	*df*	*p*
Intercept	180.79	.000		
CPS Involvement	189.81	9.022	3	0.03*
JJ Involvement	188.53	7.743	3	0.05*
Experiencing Substance Use	185.31	4.52	3	0.21
Unmet Basic Needs	185.43	4.64	3	0.20
Race*Unmet Needs	188.02	7.24	6	0.30
Hispanic/Asian (DC)	183.70	2.92	3	0.41
African American (DC)	182.38	1.59	3	0.66

** $p < .05$.

After experimenting with the inclusion of several variations of predictor variables, the final model includes the variables of child welfare involvement, juvenile justice involvement, unmet basic needs, and experiencing substance use. Model fitting information is displayed in Table 17. The Nagelkerke pseudo r-square is only slightly lower than the initial model (this is to be expected when variables are removed), but the model returns a stronger significance value (x^2 [12] = 33.19, p = 0.001). Thus, this final model retains significance and more accurately fits the data than the initial model.

Child welfare involvement (x^2 [3] = 12.62, p = 0.006), and juvenile justice involvement (x^2 [3] = 10.05, p = 0.02) remain the only variables with significant likelihood ratio tests in this

model. However, the remaining variables (unmet basic needs and experiencing substance use) perform much better than they did in the initial model.

Table 17
Multinomial Logistic Regression Model Fitting Information, Victim-Trafficker Relationship Type as Outcome Variable (Final), n = 242

	-2 Log Likelihood	x^2	*df*	*p*
Intercept Only	130.34			
Final	97.14	33.19	12	.001*
Pseudo R-Square				
Cox and Snell	0.13			
Nagelkerke	0.14			
McFadden	0.06			

* $p < .05$.

Although unmet basic needs and experiencing substance use do not have significant likelihood ratio tests, the Principal Investigator retained them because they approach significance in predicting different types of victim-trafficker relationships in the final model. Table 18 provides additional information on the likelihood ratios of predictor variables.

Table 18
Likelihood Ratio Tests of Predictor Variables (Final) Multinomial Logistic Regression with Victim-Trafficker Relationship Type as Outcome Variable, n = 242

	-2 Log Likelihood of Reduced Model	x^2	*df*	*p*
Intercept	97.14	.000	0	
CPS Involvement	109.76	12.62	3	0.006*
JJ Involvement	107.19	10.05	3	0.018*
Unmet Basic Needs	102.27	5.13	3	0.16
Experiencing Substance Use	101.77	4.63	3	0.20

** $p < .05$.

The final model information is available for view in Table 19. In this model, it is established that child welfare involvement (B = -2.20, p = 0.003) and juvenile justice involvement (B = 1.87, p = 0.01) are significant predictors of a family member victim-trafficker relationship.

Specifically, these victims (trafficked by family members) are 11% more likely to have child welfare involvement than victims trafficked by a previously unknown/untrusted trafficker. They are also 647% less likely to be involved in the juvenile justice system than victims with a previously unknown/untrusted trafficker. And though experiencing substance use is not a significant predictor of a family member relationship (B = 1.30, p = 0.10), it approaches significance and is thus noteworthy. According to this statistic, victims trafficked by a family member are 366% less likely than victims with a previously unknown/untrusted trafficker to use substances.

None of the other victim-trafficker relationship types have significant predictors. However, the unmet basic needs variable approaches significance and is thus noteworthy (B = 0.60, p = .09). According to this statistic, victims who are trafficked by a romantic partner are 182% more likely to have their basic needs met than victims who are trafficked by a previously unknown/untrusted trafficker. No predictors approach significance within the friend victim-trafficker relationship type.

Given the results of these analyses, the Principal Investigator can broadly reject the null hypothesis (**hypothesis 2**) that risk factors in victims' case files do not statistically significantly predict the type of victim-trafficker relationship. Additionally, the results partially support rejecting the null hypothesis of **hypothesis 2a**, which simply states that, specifically, child welfare involvement, juvenile justice involvement, unmet basic needs, experiencing substance

use, race, age, and the interaction term statistically significantly predict victim-trafficker relationship type. In fact, only child welfare involvement, juvenile justice involvement, unmet basic needs, and experiencing substance use are included in the model as predictor variables.

The alternative hypothesis associated with **hypothesis 2b** is also partially supported. Hypothesis 2b states that the presence of fewer risk factors statistically significantly predicts a previously unknown/untrusted relationship type. When compared with a family member type relationship, the Principal Investigator can reject the null hypothesis that fewer risk factors do not statistically significantly predict this type of relationship. However, there is not a statistically significant prediction of this type of relationship when compared with friend or romantic partner types of relationships. The Principal Investigator, meanwhile, fails to reject the null hypotheses for both **hypothesis 2c** and **hypothesis 2d**, because there are no significant predictors of a friend type or romantic partner type relationships within the model.

The Principal Investigator rejects the null hypothesis associated with **hypothesis 2e**, because the model suggests that victims who are exploited by family members have a greater number of risk factors when compared with victims trafficked by previously unknown/untrusted individuals. Finally, the Principal Investigator fails to reject the null hypothesis associated with **hypothesis 2f**, because the interaction term is not a significant predictor of any relationship type.

Table 19

Multinomial Logistic Regression Predictors of Victim-Trafficker Relationship Type Previously Unknown and/or Untrusted Trafficker as Reference Category, n = 242

	B	*SE*	*Wald*	*df*	*p*	*Exp(B)*	*95% Confidence Interval*	
							Lower Bound	*Upper Bound*
Friend Relationship								
No CPS Involvement	0.42	0.40	1.15	1	0.28	1.53	0.70	3.31
No Juvenile Justice Involvement	-0.78	0.59	1.73	1	0.19	0.46	0.15	1.46
Basic Needs Met	-0.23	0.33	0.50	1	0.48	0.79	0.41	1.51
No Substance Use	0.43	0.32	1.74	1	0.19	1.53	0.81	2.89
Romantic Partner								
No CPS Involvement	0.004	0.40	0.00	1	0.99	1.00	0.45	2.22
No Juvenile Justice Involvement	-0.56	0.59	0.88	1	0.35	0.57	0.18	1.83
Basic Needs Met	0.60	0.35	2.94	1	0.09	1.82	0.92	3.60
No Substance Use	0.002	0.34	0.00	1	0.99	1.00	0.51	1.95
Family Member								
No CPS Involvement	-2.20	0.75	8.63	1	0.003*	0.11	0.03	0.48
No Juvenile Justice Involvement	1.87	0.76	6.03	1	0.01*	6.47	1.46	28.69
Basic Needs Met	0.50	0.73	0.46	1	0.50	1.64	0.40	6.81
No Substance Use	1.30	0.79	2.70	1	0.10	3.66	0.78	17.20

** $p < .05$.*

Testing Hypothesis 3

The Baron and Kenny (1986) method for testing mediation involves four steps. The first step involves running a regression analysis between a predictor variable (X) and the outcome variable (Y)—path c. The second step involves running a regression analysis between the predictor variable (X) and the mediating variable (M)—path b. The third step involves running another regression analysis between the mediating variable (M) and outcome variable (Y)—path c. If the effect of X on Y while controlling for M is 0, a total mediation has occurred. If the value is anything more than 0, a partial mediation is indicated. Or, in notated format:

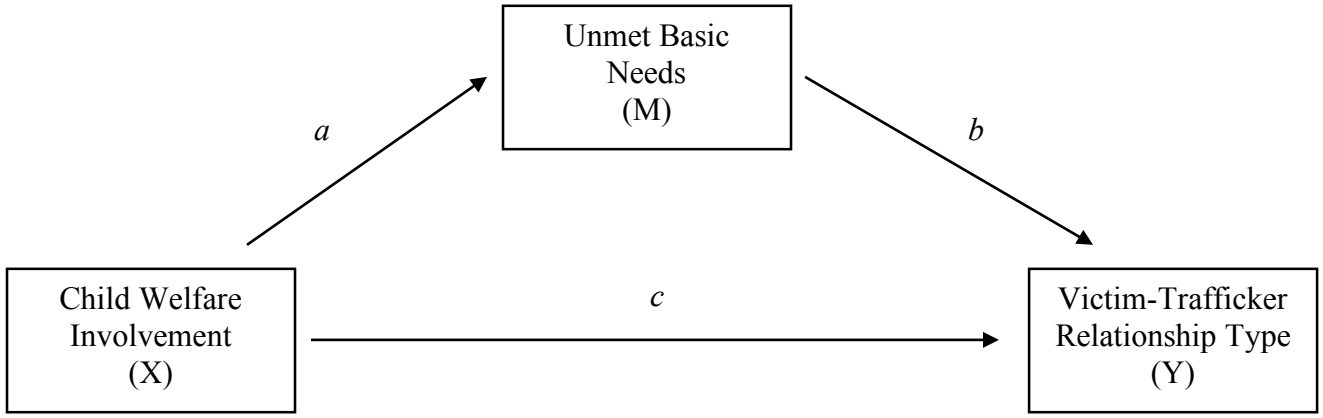
$$\text{Total effect} = \text{Direct effect} + \text{Indirect effect}$$

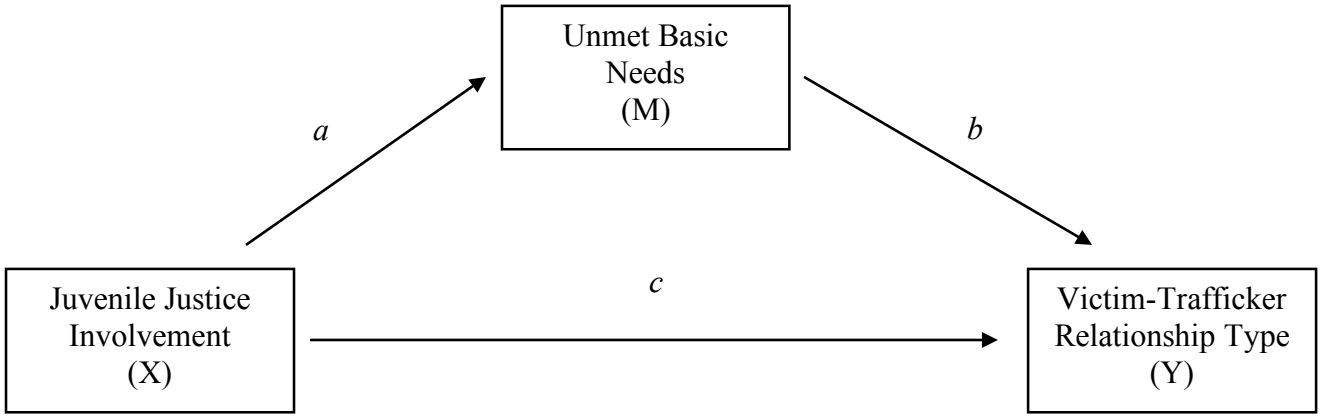
$$C = c + ab$$

To test **hypothesis 3**—that unmet basic needs statistically significantly mediates the relationship between victims' risk factors and victim-trafficker relationship type—the Principal Investigator tested the two strongest predictor variables from previous hypothesis testing—specifically child welfare involvement and juvenile justice involvement—in two separate path analysis models so that the significance of the mediation could be tested with the available zmediation testing mechanism (Iacobucci, 2012). These proposed path analysis models are illustrated in Figure 10.

The Principal Investigator tested the mediating effect of unmet basic needs on the path between a) child welfare involvement victim-trafficker relationship type, and b) juvenile justice involvement and victim-trafficker relationship type. The model fitting for each of the steps required by Baron and Kenny (1986) is available in Tables 20 and 23, for the predictor variables of child welfare involvement and juvenile justice involvement, respectively.

Figure 10. Path analysis models: Victim-trafficker relationship type.
The mediating effect of unmet basic needs on the path between child welfare and juvenile justice involvement and victim-trafficker relationship





Child welfare to victim-trafficker relationship path analysis. See Table 20 to examine the model fitting information for the paths between X and Y, X and M, and M and Y, when the predictor variable is child welfare involvement. Step one of the child welfare path analysis suggests that the regression model in which child welfare predicts unmet basic needs significantly fits the data ($x^2[1] = 7.41$, $p = 0.007$), and step three also suggests that the regression model in which child welfare involvement predicts victim-trafficker relationship significantly fits the data ($x^2[3] = 12.15$, $p = 0.007$).

Table 20
Mediated Path Analysis Multinomial Regression Model Fitting Information (CPS)
CPS Involvement to Unmet Basic Needs, Unmet Basic Needs to Victim-Trafficker Relationship Type, and CPS Involvement to Victim-Trafficker Relationship Type
n = 242

	-2 Log Likelihood	x^2	*df*	*p*
CPS to Unmet Basic Needs				
Intercept Only	17.48			
Final	10.08	7.41	1	0.007*
Unmet Basic Needs to Victim-Trafficker Type				
Intercept Only	31.19			
Final	26.34	4.85	3	0.18
CPS to Victim-Trafficker Type				
Intercept Only	37.59			
Final	25.44	12.15	3	0.007*
CPS to Unmet Basic Needs				
Cox and Snell	0.03			
Nagelkerke	0.04			
McFadden	0.02			
Unmet Basic Needs to Victim-Trafficker Type				
Cox and Snell	0.02			
Nagelkerke	0.02			
McFadden	0.01			
CPS to Victim-Trafficker Type				
Cox and Snell	0.05			
Nagelkerke	0.05			
McFadden	0.02			

** $p < .05$.*

However, the model in which unmet basic needs predicts victim-trafficker relationship type does not significantly fit the data ($x^2[3] = 4.85$, $p = 0.18$).

Because the effect of X on Y while controlling for M is not 0, it may be possible to broadly reject the null hypothesis that unmet basic needs does not mediate the pathway between child welfare involvement and victim-trafficker relationship type. Unmet basic needs does

mediate the pathway, but additional testing is required to test the significance of the indirect effect of the mediator. It is possible to test the indirect effect of a dichotomous mediator by applying the zmediation method described by Iacobucci (2012). The zmediation method requires an analysis of each of the paths (steps 1-3) and their betas and standard errors. Table 21 includes model information that is used to test the indirect effect of unmet basic needs as the mediator in the path analysis using the zmediation method. In the case of the models included in this analysis, only a lack of child welfare involvement significantly predicts lower rates of unmet basic needs (B = -0.83, p = 0.008), and only child welfare involvement predicts a family member relationship (B = -2.01 p = 0.005).

Table 21
Model Information for Testing Indirect Effect of Unmet Basic Needs as Mediator in Path Analysis: CPS Involvement to Victim-Trafficker Relationship Type
n = 242

	B	*SE*	*Wald*	*df*	*p*	*Exp(B)*	*95% Confidence Interval*	
							Lower Bound	*Upper Bound*
CPS Involvement to Unmet Needs No CPS Involvement	-0.83	0.31	7.03	1	0.008*	0.44	0.24	0.81
Unmet Needs to Friend Relationship No Unmet Basic Needs	-0.12	0.32	0.13	1	0.72	0.89	0.47	1.67
Unmet Needs to Romantic Partner No Unmet Basic Needs	0.62	0.34	0.33	1	0.07	1.86	0.96	3.61
Unmet Needs to Family Member No Unmet Basic Needs	0.53	0.63	0.69	1	0.41	1.69	0.49	5.85
CPS Involvement to Friend Relationship No CPS Involvement	0.40	0.38	1.06	1	0.30	1.49	0.70	3.15
CPS Involvement to Romantic Partner No CPS Involvement	0.15	0.39	0.14	1	0.71	1.16	0.54	2.49
CPS Involvement to Family Member No CPS Involvement	-2.01	0.71	8.07	1	0.005*	0.13	0.03	0.54

** $p < .05$.*

Based upon data included in Table 21, the zmediation scores indicate no significant indirect effect of the mediator for the paths from child welfare involvement to the outcomes of a friend-type trafficker, romantic partner trafficker, or family member trafficker. The only path in which the mediator approaches a significant indirect effect is the path from child welfare involvement to a romantic partner trafficker (*zmed* = 1.44, p = 0.15). Details related to zmediation testing are displayed in Table 22.

Table 22
Z Mediation Test Scores for Significance of Indirect Effect in Mediated Multinomial Logistic Regression Model: CPS Involvement to Victim-Trafficker Relationship Type
n = 242

*Y**	*za*	*zb*	*zaxb*	*SE*	*z-mediation*	*p*
Y_{Friend}	2.67	0.003	0.01	2.89	0.003	0.99
$Y_{RomanticPartner}$	2.68	1.82	4.88	3.39	1.44	0.15
$Y_{FamilyMember}$	2.68	1.33	3.55	3.15	1.13	0.26

** Where X = CPS Involvement, M = Unmet Basic Needs, and Y = Victim-Trafficker Relationship Type*
***$p < .05$.*

Juvenile justice to victim-trafficker relationship path analysis. The model fitting information for paths X to Y, X to M, and M to Y, in which juvenile justice involvement is the predictor variable, is displayed in Table 23. In this case, the only significantly fitted model is the model in which juvenile justice involvement is a sole predictor of victim-trafficker relationship type (x^2 = 10.91, p = 0.01). This model fitting information suggests that the indirect effect of unmet basic needs on the path between juvenile justice involvement and victim-trafficker relationship type are likely insignificant. In order to test this, however, it is necessary to examine the slopes and standard errors of each of the predictors in the models, which is displayed in Table 24.

Table 23

Mediated Path Analysis Multinomial Regression Model Fitting Information (Juvenile Justice) Juvenile Justice Involvement to Unmet Basic Needs, Unmet Basic Needs to Victim-Trafficker Relationship Type, and Juvenile Justice Involvement to Victim-Trafficker Relationship Type
n = 242

	-2 Log Likelihood	x^2	*df*	*p*
Juvenile Justice to Unmet Basic Needs				
Intercept Only	9.75			
Final	9.612	0.14	1	0.71
Unmet Basic Needs to Victim-Trafficker Type				
Intercept Only	31.19			
Final	26.34	4.85	3	0.18
Juvenile Justice to Victim-Trafficker Type				
Intercept Only	34.84			
Final	23.94	10.91	3	0.01*
Juvenile Justice to Unmet Basic Needs				
Cox and Snell	0.001			
Nagelkerke	0.001			
McFadden	< 0.000			
Unmet Basic Needs to Victim-Trafficker Type				
Cox and Snell	0.02			
Nagelkerke	0.02			
McFadden	0.01			
Juvenile Justice to Victim-Trafficker Type				
Cox and Snell	0.04			
Nagelkerke	0.05			
McFadden	0.02			

** $p < .05$.*

Table 24

Model Information for Testing Indirect Effect of Unmet Basic Needs as Mediator in Path Analysis: Juvenile Justice Involvement to Victim-Trafficker Relationship Type

n = 242

	B	*SE*	*Wald*	*df*	*p*	*Exp(B)*	*95% Confidence Interval*	
							Lower Bound	*Upper Bound*
JJ Involvement to Unmet Needs No CPS Involvement	0.15	0.40	0.14	1	0.71	1.16	0.53	2.55
Unmet Needs to Friend Relationship No Unmet Basic Needs	-0.12	0.32	0.13	1	0.72	0.89	0.47	1.67
Unmet Needs to Romantic Partner No Unmet Basic Needs	0.62	0.34	0.33	1	0.07	1.86	0.96	3.61
Unmet Needs to Family Member No Unmet Basic Needs	0.53	0.63	0.69	1	0.41	1.69	0.49	5.85
JJ Involvement to Friend Relationship No JJ Involvement	-0.12	0.32	0.13	1	0.72	0.89	0.47	1.67
JJ Involvement to Romantic Partner No JJ Involvement	0.62	0.34	3.33	1	0.07	1.86	0.96	3.61
JJ Involvement to Family Member No JJ Involvement	0.53	0.63	0.69	1	0.41	1.69	4.88	5.86

** $p < .05$.*

Indeed, none of the included predictors are significant, although the absence of unmet basic needs approaches significance in the prediction of trafficking by a romantic partner (B = 0.62, p = 0.07). Lack of juvenile justice involvement also approaches significance in the prediction of trafficking by a romantic partner (B = 0.62, p = 0.07). When placed within a zmediation analysis, however, unmet basic needs does not have a statistically significant indirect effect on the pathways between juvenile justice involvement and trafficking by a friend, romantic partner, or family member. The results of the zmediation analysis are available in Table 25.

Table 25
Z Mediation Test Scores for Significance of Indirect Effect in Mediated Multinomial Logistic Regression Model: Juvenile Justice Involvement to Victim-Trafficker Relationship Type
n = 242

*Y**	*za*	*zb*	*zaxb*	*SE*	*z-mediation*	*p*
Y_{Friend}	0.38	0.38	0.14	1.13	0.12	0.90
$Y_{RomanticPartner}$	0.38	1.82	0.68	2.11	0.32	0.75
$Y_{FamilyMember}$	0.38	0.84	0.32	1.36	0.23	0.82

** Where X = Juvenile Justice Involvement, M = Unmet Basic Needs, and Y = Victim-Trafficker Relationship Type; Previously Unknown/Untrusted Relationship is reference category*

Based upon all of the above analyses, the Principal Investigator fails to reject the null hypothesis, associated with **hypothesis 3,** that unmet basic needs has no mediating effect on the pathways between child welfare involvement and victim-trafficker relationship type, and juvenile justice involvement and victim-trafficker relationship type. The mediating effect of unmet basic needs is not significant.

Testing Hypothesis 4

Hypothesis 4 of this study is that the presence of a greater number of risk factors in victims' case files statistically significantly predicts a greater number of traffickers or facilitators involved in the victims' exploitation. Like the tests for the second hypothesis, each of the independent variables presented with an asterisk in Table 2—race, child welfare involvement, juvenile justice involvement (categorical), unmet basic needs—as well as age and the race*unmet needs interaction term, were placed within a multinomial logistic regression. The outcome variable includes the categories of no traffickers involved, one trafficker involved, and more than one trafficker involved.

Again, the race variable is dummy coded for use in this analysis. Both age and juvenile justice involvement had to be removed from the analysis because they caused errors in the Hessian matrix. The model fitting information for this model can be seen in Table 26. The model does not statistically significantly fit the data (x^2 [14] = 10.33, p = 0.74), and the Nagelkerke pseudo r-square test suggests that only about 5% of the variation in the outcome is accounted for by the included independent variables.

Table 26
Multinomial Logistic Regression Model Fitting Information, Number of Traffickers/Facilitators Involved as Outcome Variable, n = 242

	-2 Log Likelihood	x^2	*df*	*p*
Intercept Only	117.14			
Final	106.64	10.50	14	0.73
Pseudo R-Square				
Cox and Snell	0.04			
Nagelkerke	0.05			
McFadden	0.03			

Furthermore, there are no significant likelihood ratio tests of the predictors included within the initial model. Table 27 displays the likelihood ratio information for the variables included in the initial model.

Table 27
Likelihood Ratio Tests of Predictor Variables
Multinomial Logistic Regression with Number of Traffickers/Facilitators Involved as Outcome Variable, n = 242

	-2 Log Likelihood of Reduced Model	x^2	*df*	*p*
Intercept	106.64	0.000		
CPS Involvement	106.72	0.08	2	0.96
Hispanic/Asian (DC)	111.73	5.09	2	0.08
African American (DC)	107.31	0.67	2	0.71
Experiencing Substance Use	106.76	0.11	2	0.95
Unmet Basic Needs	109.08	2.44	2	0.30
Race*Unmet Basic Needs	114.47	7.83	4	0.10

** $p < .05$.

Unfortunately, no variation of predictor variables enhanced the model fit to the point of statistical significance. Furthermore, only the initial model creates a scenario in which one or more risk factors are statistically significant predictors of the number of traffickers or facilitators involved in exploitation. The only significant predictor in this model is Hispanic/Asian race (B = -1.16, p = 0.03). Stated simply, Hispanic/Asian victims are 31% more likely to have only one trafficker involved in their exploitation, rather than two or more traffickers involved. However, because this significant predictor is located within an insignificant model, its value in interpretation is quite limited.

Given the results of these analyses, the Principal Investigator fails to reject the null hypothesis (**hypothesis 4**) that a greater number of risk factors are unable to statistically significantly predict a greater number of traffickers or facilitators involved in exploitation. The results of the initial model are included for reference in Table 28.

Table 28

Multinomial Logistic Regression Predictors of Number of Traffickers or Facilitators Involved More than One Trafficker as Reference Category, n = 242

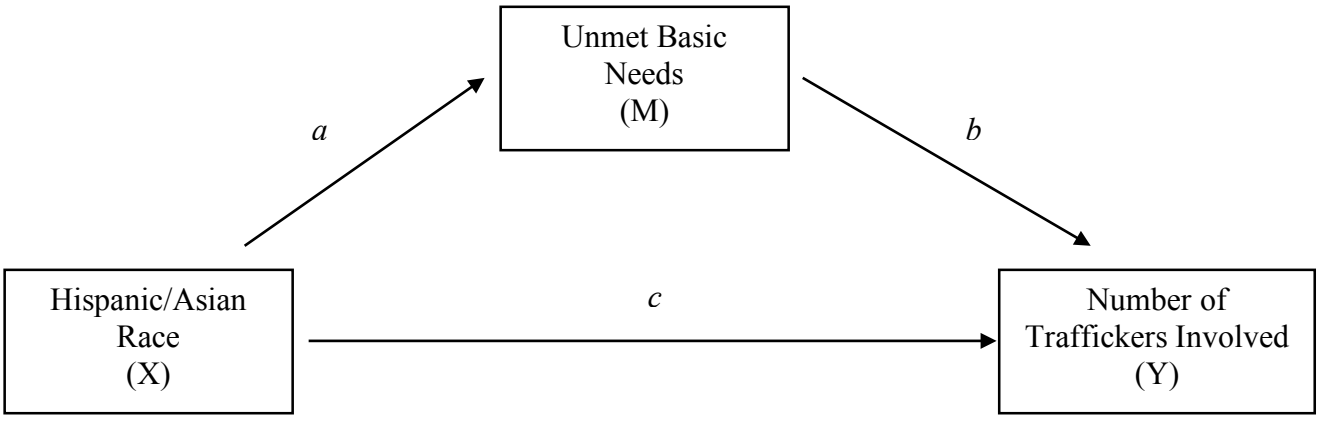
	B	*SE*	*Wald*	*df*	*p*	*Exp(B)*	*95% Confidence Interval*	
							Lower Bound	*Upper Bound*
No Trafficker Involved								
No CPS Involvement	0.09	0.73	0.01	1	0.91	1.09	0.26	4.58
Hispanic/Asian (DC)	1.05	1.30	0.66	1	0.42	0.35	0.03	4.43
African American (DC)	-0.55	1.29	0.18	1	0.67	0.58	0.05	7.23
No Substance Use	0.02	0.64	0.001	1	0.98	1.02	0.29	3.53
No Unmet Basic Needs	-1.27	1.17	1.18	1	0.28	0.28	0.03	2.79
Race*Unmet Basic Needs (0)	1.81	1.57	1.32	1	0.25	6.08	0.28	131.81
Race*Unmet Basic Needs (1)	-0.45	1.66	0.07	1	0.79	0.64	0.03	16.58
One Trafficker Involved								
No CPS Involvement	-0.07	0.32	0.05	1	0.82	0.93	0.50	1.73
Hispanic/Asian	-1.16	0.53	4.81	1	0.03*	0.31	0.11	0.88
African American	-0.39	0.51	0.58	1	0.45	0.68	0.25	1.84
No Substance Use	0.09	0.28	0.11	1	0.74	1.10	0.64	1.90
No Unmet Basic Needs	-0.63	0.49	1.61	1	0.21	0.54	0.20	1.41
Race*Unmet Basic Needs (0)	0.84	0.65	1.69	1	0.19	2.31	0.65	8.20
Race*Unmet Basic Needs (1)	-1.07	0.69	2.40	1	0.12	0.34	0.09	1.33

** $p < .05$.*

Testing Hypothesis 5

Hypothesis 5 is that unmet basic needs mediates the path between risk factors and the number of traffickers involved in victims' exploitation. However, since only victims' Hispanic/Asian race (compared with White or African American race) is statistically significantly associated with the number of traffickers involved in victims' exploitation, this path is the only reasonable one to test for Hypothesis 5. In this proposed path, unmet basic needs (M) mediates the path between Hispanic/Asian race (X) and the number of traffickers involved in victims' exploitation (Y). This path analysis model can be viewed in Figure 11.

Figure 11. Path Analysis Model: Number of traffickers involved.
The mediating effect of unmet basic needs on the path between Hispanic/Asian race and the Number of Traffickers Involved in Exploitation



Similar to the testing that occurred for Hypothesis 3, the first step in analyzing the mediating effect of unmet basic needs on the pathway between Hispanic/Asian race and the number of traffickers involved is to analyze the regression models that map Hispanic/Asian race to number of traffickers involved (X to Y), Hispanic/Asian race to unmet basic needs (X to M), and finally unmet basic needs to number of traffickers involved (M to Y). Table 29 contains information related to the steps involved in this initial analysis.

Table 29
Mediated Path Analysis Multinomial Regression Model Fitting Information (Hispanic/Asian Race) Hispanic Race to Unmet Basic Needs, Unmet Basic Needs to Number of Traffickers Involved, and Hispanic Race to Number of Traffickers Involved
n = 242

	-2 Log Likelihood	x^2	*df*	*p*
Hispanic/Asian Race to Unmet Basic Needs				
Intercept Only	18.66			
Final	10.17	8.48	1	0.004*
Unmet Basic Needs to Number of Traffickers				
Intercept Only	18.63			
Final	17.56	1.07	2	0.60
Hispanic/Asian Race to Number of Traffickers				
Intercept Only	18.13			
Final	17.09	1.04	2	0.60

Hispanic/Asian Race to Unmet Basic Needs	
Cox and Snell	0.03
Nagelkerke	0.05
McFadden	0.03
Unmet Basic Needs to Number of Traffickers	
Cox and Snell	0.004
Nagelkerke	0.005
McFadden	0.003
Hispanic/Asian Race to Number of Traffickers	
Cox and Snell	0.004
Nagelkerke	0.005
McFadden	0.003

** $p < .05$.*

This initial analysis suggests that there may be partial mediation of unmet basic needs between Hispanic/Asian race and the number of traffickers involved. However, to test the significance of the partial mediation it is first necessary to examine the slopes and standard errors of each of the predictors included in the model. These slopes and standard errors can be viewed in Table 30.

Table 30

Model Information for Testing Indirect Effect of Unmet Basic Needs as Mediator in Path Analysis: Hispanic/Asian Race to Number of Traffickers or Facilitators Involved

Reference Category: More than One Trafficker Involved

n = 242

	B	*SE*	*Wald*	*df*	*p*	*Exp(B)*	*95% Confidence Interval*	
							Lower Bound	*Upper Bound*
Hispanic/Asian Race to Unmet Needs Not Hispanic/Asian	-0.85	0.30	8.29	1	0.004*	0.43	0.24	0.76
Unmet Needs to No Traffickers Involved No Unmet Basic Needs	0.02	0.62	0.001	1	0.98	1.02	0.30	3.40
Unmet Needs to One Trafficker Involved No Unmet Basic Needs	0.27	0.27	1.02	1	0.31	1.31	0.78	2.21
Hispanic Race to No Traffickers Involved Not Hispanic	-0.06	0.70	0.08	1	0.93	0.94	0.24	3.73
Hispanic/Asian Race to One Trafficker Involved Not Hispanic/Asian	-0.30	0.30	1.01	1	0.32	0.74	0.41	1.33

** $p < .005$.*

Although there is indication that a partial mediation has occurred—after all, the effect of X (Hispanic/Asian race) on Y (number of traffickers involved) while controlling for M (unmet basic needs) is not 0—it appears that the indirect effect is not significant. To test this, it is necessary to place the slopes and standard errors listed in Table 30 into a zmediation analysis (Iacobucci, 2012). The results of this analysis are displayed in Table 31.

Table 31
Z Mediation Test Scores for Significance of Indirect Effect in Mediated Multinomial Logistic Regression Model: Hispanic/Asian Race to Number of Traffickers or Facilitators Involved
n = 242

*Y**	*za*	*zb*	*zaxb*	*SE*	*z-mediation*	*p*
$Y_{NoTrafficker}$	0.38	0.38	0.14	1.13	0.03	0.98
$Y_{OneTrafficker}$	2.83	0.03	0.09	3.00	0.89	0.37

** Where X = Hispanic/Asian race, M = Unmet Basic Needs, and Y = Number of traffickers involved; More than one trafficker is reference category*

Based upon the zmediation test scores for this specific path, and all previous analyses, the Principal Investigator fails to reject the null hypothesis (**hypothesis 5**) that unmet basic needs statistically significantly mediates the path between risk factors and the number of traffickers involved in victims' exploitation.

The forthcoming Discussion chapter analyzes the results of these tests, in light of the extant literature on DMST risk, DMST victims' relationships with their traffickers, and intersectionality theory. Additionally, discussion focuses on the implications of these results for the social work profession.

Chapter 6: Discussion

The purpose of this chapter is to link the results of this study to a discussion of its implications for theory, policy, practice, and social work education. Recall that the stated purpose of this study is to reveal the oppressive, systemic nature of the DMST phenomenon, and to explain how the multiplicative nature of oppression may produce different forms of exploitation. The results of this study lend credibility to this study's stated purpose, and may be relevant to social workers who are keen to address the oppressions and risk factors that underlie the DMST issue in its varied forms. The chapter begins with a discussion of the results derived from hypothesis testing, as these results are the basis for broader conclusions about the study's implications. The chapter closes with an overview of the limitations of the study, as well as recommendations for future research.

Context of the Cases

Before launching into the discussion topics noted above, though, it is important to link the study's demographic data to the broader literature on DMST victims. The majority of this study's DMST victim sample is minority race (African American or Hispanic/Asian), with African American victims comprising a plurality (n = 97, 41.8%) of the sample. This finding is aligned with what other authors have noticed about DMST victims. Perkins and Ruiz (2017) report, for instance, that roughly 40% of their sample of DMST victims are African American; Butler (2015) states that over half of known DMST victims in the United States are African American; and, finally, Choi (2015) also suggests that minority race, in and of itself, may be predictive of DMST victimization. Although victims are often White in this study's sample and within other studies, it appears that DMST is a phenomenon that is disproportionately experienced by children of color. The demographics of this study's sample, along with the

numerous studies that demonstrate that minority races comprise a majority of known victims, suggest that DMST is a problem that must be approached with sensitivity to the racial dimensions of victimization. Race may not be predictive of victim-trafficker relationship type, but it cannot be ignored in discussions of the DMST problem.

Surprisingly, child welfare involvement is an important predictor of victim-trafficker relationship type, but it is not a risk factor experienced by a majority of the victims in this sample. In fact, most of the victims in this sample had no identified history of child abuse or child welfare involvement. This finding is quite different from the findings of other authors, who report that child abuse or child welfare involvement are experienced by the majority of their DMST victim samples (see Countryman-Rowsurm & Bolin, 2014; Goldberg et al., 2017). It is possible that this variation occurred because the present study utilizes child welfare involvement as a proxy for child abuse or neglect; however, the two are not synonymous, so it is possible that some of the victims in this study had experienced abuse without also experiencing child welfare involvement. Also surprising, most of the victims in this sample did not use substances. Other literature appears mixed on this issue. Some studies have found that a majority of sampled DMST victims use or abuse substances (Cole et al., 2016); others have found that substance use experience may be a predictor of DMST victimization, but is still not a risk factor shared by a majority of victims (Reid & Piquero, 2014).

Most of the DMST victims included in this sample are juvenile justice involved, with over 35% (n = 86) involved in the juvenile justice system more than once. This finding aligns with other authors' findings that juvenile justice involvement is a very common condition experienced by DMST victims (see Chohaney, 2016; Hartinger-Saunders, Trouteaud & Matos Johnson, 2016). Homelessness is also a common condition within this sample, with about 48%

(n = 114) of the victims identified as homeless or runaway. This finding, too, aligns with the broader literature. Reid and Piquero (2014) find, for instance, that about 40% of a sample of DMST victims had histories of running away. When homelessness is collapsed into a broader category of unmet basic needs—since homelessness is an acute example of unmet basic needs—over half of the sample (n = 132) is identified as having at least one unmet basic need. This finding is likewise supported within the emerging literature on human trafficking (see Preble, 2016, who found that the majority of her sample of trafficking victims reported financial strain or poverty prior to their victimization).

Interestingly, the victim-trafficker relationship types identified within this sample diverge from what other authors have found. Nearly half of this sample (n = 114) of DMST victims were trafficked by a previously unknown or untrusted trafficker. In Marcus et al.'s (2014) sample of DMST victims, however, fewer than 20% of their respondents had been exploited by a trafficker who could be described as previously unknown or untrusted. Meanwhile, although only 6% (n = 14, before categories are collapsed) of the victims in this study's sample had no trafficker, Marcus et al. (2014) found that the majority of their sample fell into this category.

The surface similarities and differences between this study's sample and other studies' samples must be considered. Within the literature, it appears that there is an emerging consensus around some of the characteristics shared by DMST victims; some characteristics, however, appear to be experienced differently depending upon factors that have not yet been established. For instance, the research literature tends to concur that DMST victims are usually children of color, that they are usually involved in the juvenile justice system, and that they usually have one or more unmet basic needs. They sometimes use substances, but often do not. However, there appears to be sharp contrasts between this sample's experiences with the child welfare system,

and their experiences with traffickers, when cursorily compared with other samples of DMST victims. Notably, this sample is less involved with child welfare systems than other authors have found in their samples, and more are trafficked by a previously unknown or untrusted trafficker than found within other studies.

Of course, the statistical significance of these differences is not established in this study, but this observation seems to give credibility to Weitzer's (2011) remarks that patterns of prostitution and trafficking vary greatly depending upon geographic area. This study is the first of its kind, after all, to examine data from 242 DMST victims trafficked in and around the North Texas area; other studies' samples hail from different geographic areas. Perhaps patterns of DMST—and who is involved in trafficking—are dependent upon regional culture, policy, or some other factor that may influence observed patterns of exploitation. To date, researchers have done little to compare DMST patterns by region; Perkins and Ruiz (2016) alone find that rural victims are more likely to be trafficked by family members, and urban youth are more likely to be trafficked by romantic partners. It seems that additional studies have not yet investigated questions related to differences in regional patterns, and the factors that underlie these differences. Future research should examine why some samples of DMST victims have such divergent patterns of victim-trafficker relationship types, and child welfare involvement, and whether or not these differences are significant by region.

Discussion of Hypothesis One

The purpose of testing hypothesis 1, and all of its sub-hypotheses, was to understand how all of this study's variables are associated with one another—particularly how they are associated with unmet basic needs—and to lay a foundation for advanced statistical analysis. It was important to test associations between each variable and unmet basic needs, in particular,

because unmet basic needs was hypothesized as a mediating variable in the path between risk factors and the outcome variables (victim-trafficker relationship type and number of traffickers involved). The results of the hypothesis testing indicate that the decisions about variable inclusion within the path analysis models tested in hypotheses 3 and 5 are appropriate and reasonable. There are enough significant associations between risk factors and unmet basic needs to test whether or not unmet basic needs served as a significant mediator between risk factors and the outcomes.

The Principal Investigator broadly rejects the null hypothesis that there is no association between the risk factors included in this study and unmet basic needs. However, the broad rejection of this null hypothesis does not offer much dimension to this finding. It is in examining the sub-hypotheses that it is possible to better understand how each included risk factor is associated with unmet basic needs.

In rejecting the null hypothesis associated with hypothesis 1a, it is determined that there are, in fact, significant associations between unmet basic needs and child welfare involvement, juvenile justice involvement, and race. This aligns with the literature on the interplay between child welfare involvement, juvenile justice involvement, race, and unmet basic needs, which generally concludes that poverty and homelessness are related to each of these risk factors (Cancian, Yang & Slack, 2013; Henry, 2004; Lee & Goerge, 1999; Rodriguez, 2011). Experiencing substance use, however, is not significantly associated with unmet basic needs within the hypothesis testing. This aligns with the findings of a systematic review of socioeconomic advantage and substance use, in which the author found that area-level disadvantage was not associated with increased substance use (Karriker-Jaffe, 2011). While the results related to hypothesis 1a are unsurprising given the extant literature on the subject, this

finding suggests that it is reasonable to include unmet basic needs as the mediating variable in path analysis models investigating the pathway from risk to trafficking relationship, since unmet basic needs is associated with most of the studied risk factors.

Interestingly, in failing to reject the null hypothesis associated with hypothesis 1b, it is determined that child welfare involvement, juvenile justice involvement, and experiencing substance use are not associated with the interaction term of race*unmet basic needs within this study. This is a surprising finding, since intersectionality suggests that multiplying race by unmet basic needs would enhance, rather than reduce, the significance of the associations between poverty and the other risk factors. Intersectionality suggests that the multiplicative nature of oppression has a multiplying effect on negative outcomes (Bowleg, 2012), but this phenomenon did not appear to occur within this study. This finding also suggests that it was reasonable to not include the interaction term as the mediating variable of choice within the tested path analysis models.

Finally, in failing to reject the null hypothesis associated with hypothesis 1c, it is determined that age of entry to DMST is not associated with unmet basic needs. This finding suggests, of course, that age of entry is likely an inappropriate variable to include within mediated path analysis models in which unmet basic needs is the mediator. More than that, though, this finding is an important contribution to discussions about DMST among scholars and advocates. Age of entry to DMST appears unassociated with poverty or unmet basic needs. This buttresses the findings of other authors, who have noted that age of entry to DMST may be predicted by parental substance use, early age of first sex, psychotic symptoms, and educational attainment (Reid & Piquero, 2014); unmet basic needs were not predictive within this model. And though Cronley et al. (2016) found that youth homelessness—a proxy for unmet basic

needs—is predictive of earlier age of entry to street prostitution, this was in a study that included street prostitutes who began as both minors and adults. Perhaps unmet basic needs and earlier age of entry to sex work are associated within samples of sex workers from many age groups. After all, poverty may be a compelling force in individuals' decision to participate in sex work. But within this study's sample, which included victims aged 11-20, other factors besides poverty or unmet basic needs appear associated with age of DMST entry.

The testing that occurred for hypothesis 1 also included an analysis of all the variables' interrelationships with one another. Although the following findings are not specific to hypothesis 1, they do provide insight into forthcoming hypothesis testing for hypotheses 2-5. Child welfare involvement is associated with race, with Whites and African Americans having a higher degree of child welfare involvement than expected. This finding partially aligns with other studies on race and child welfare involvement; a large study by Putnam-Hornstein, Needell, King and Johnson-Motoyama (2013) found that African American children were more likely to be child welfare involved than White or Hispanic children. When other factors were controlled, however, African American and White children were more likely to be child welfare involved than Hispanic children.

Additionally, child welfare involvement, juvenile justice involvement (its presence and absence), and juvenile justice involvement (number of involvements) are associated with victim-trafficker relationship type. This is an important finding. Certainly, other authors have found that child welfare involvement and juvenile justice involvement are associated with DMST (Chohaney, 2016; Reid, 2010), but this is the first scientific indication that these variables are associated with the type of relationship the victim has with her or his trafficker. These variables are also the only variables with significant likelihood ratios in the odds ratio model associated

with hypothesis 2. This finding, which the Principal Investigator discusses shortly, suggests that these variables are both associated with victim-trafficker relationship type, and predictive of a particular victim-trafficker relationship outcome.

The number of traffickers involved in victims' exploitation is also associated with victim-trafficker relationship type. This is a slightly surprising finding, since the Principal Investigator conceptualized the number of traffickers involved as a dependent variable; however, this finding suggests that the number of traffickers involved in exploitation could be explored as a potential predictor of victim-trafficker relationship type. Unfortunately, experimenting with this variable as an independent variable caused errors in the models, so it could not be included within the final model for hypothesis 2. Future studies may be able to further test how the number of traffickers involved in victims' exploitation is related to victim-trafficker relationship type.

Finally, testing indicates that Hispanic/Asian victims are significantly younger than victims of other races. Questions about the association between age of victimization and Hispanic race are mostly unexplored in the literature, so it is difficult to contextualize this finding within the broader knowledge base. Kramer and Berg (2003) found in their regression analysis that minority race females are more likely to enter prostitution before White females, but the Hispanic/Asian race is not isolated from African American race within their study. Reid and Piquero (2014) found, however, that there are no significant differences in age of DMST entry for minority and White races.

Discussion of Hypothesis Two

The null hypothesis associated with hypothesis 2 is simply that this study's risk factors do not significantly predict victim-trafficker relationship type. The Principal Investigator broadly rejects this null hypothesis, because several of the study's oppression and risk factors do

significantly predict victim-trafficker relationship type. Specifically, child welfare involvement and juvenile justice involvement (categorical) are significant predictors within the odds ratio model. This finding aligns closely with what was found while testing all of the variables' interrelationships with one another, in which some of the strongest associations are observed between child welfare involvement and victim-trafficker relationship type, and juvenile justice involvement and victim-trafficker relationship type.

Although experiencing substance use and unmet basic needs are retained within the final, significant odds ratio model because of the additional insight they offered into victim-trafficker relationship type, they do not have significant likelihood ratio tests. Time and again, and with many combinations of predictor variables, it is really child welfare involvement and juvenile justice involvement that were the substantial predictors of victim-trafficker relationship type.

This is interesting, because even though child welfare involvement and juvenile justice involvement are associated with unmet basic needs (hypothesis 1), it is victims' child welfare and juvenile justice status that can predict who trafficked them. Unmet basic needs is not the strongest variable in the model. This finding challenges any existing assumptions that unmet basic needs is the most salient variable in determining victim-trafficker relationship type. Additionally, it extends the findings reached by authors like Choi (2015), who determined that child welfare involvement and juvenile justice involvement are two of the most significant predictors of DMST victimization. In fact, child welfare involvement and juvenile justice involvement are more than predictors of DMST victimization. The findings from this study suggest that their presence or absence in adolescents' lives can predict who might exploit them if the opportunity presents itself.

At this juncture, it is important to note that many authors have suggested that race is an important risk factor to study within intersectional analyses of human trafficking (Butler, 2015; Ocen, 2015; Phillips, 2015). In testing hypothesis 2, race is simply not a predictor of victim-trafficker relationship type. Even when the Principal Investigator developed an interaction term between race and unmet basic needs, this factor is not significant.

Despite these important findings, the odds ratio model associated with hypothesis 2 should only be considered an important first step in understanding predictors of victim-trafficker relationship types. It is important to note, though, that this study utilized a sample located within a relatively small geographic region of Texas; generalizability of the model to other populations cannot be assumed.

The model produced while testing hypothesis 2 is significant and accounts for an adequate amount of variation in the outcome. However, it does not offer a large amount of information that could be used to discriminate between all of the different victim-trafficker relationship types. The model is most helpful in predicting when adolescents may be trafficked by family members. Victims trafficked by family members are more involved in the child welfare system, less involved in juvenile justice, and less substance using than those victims who are trafficked by previously unknown or untrusted individuals. The reverse of this finding is that the "previously unknown or untrusted" relationship type is marked by a higher degree of juvenile justice involvement, higher degree of substance use, and lesser degree of child welfare involvement than the family member relationship type.

The model also begins to shed light on trafficking by a romantic partner, in that victims trafficked by romantic partners have a lesser degree of unmet basic needs than those trafficked by previously unknown or untrusted individuals (this finding should be interpreted cautiously,

since unmet basic needs only approached significance). This suggests, perhaps, that poverty is less of a factor in luring or coercing those victims who are exploited by their romantic partners than it is for those victims exploited by previously unknown or untrusted individuals. Unfortunately, the model does nothing to explain how oppressive or risk factors may begin to predict friend-type trafficking relationships.

Testing of sub-hypotheses 2a through 2e offers additional insight into the findings associated with the broader hypothesis. Hypothesis 2a is that all of the risk factors included in this study are significant predictors of victim-trafficker relationship type. In fact, only child welfare involvement, juvenile justice involvement, unmet basic needs, and experiencing substance use are included in the final odds ratio model (unmet basic needs and experiencing substance use, as mentioned previously, do not have significant likelihood ratio tests but are retained because their slopes approached significance within the model for specific victim-trafficker relationship types). Race, age, and the interaction term (hypothesis 2f) are not significant predictors. This suggests that these variables can be dropped from future studies that investigate victim-trafficker relationship types, since they are not helpful in predicting the outcome. Perhaps these factors can predict DMST victimization, but they are unable to predict victim-trafficker relationships.

Hypothesis 2b—that fewer risk factors are predictive of the previously unknown or untrusted relationship type—is partially supported. When this category is compared with the family member type of relationship, it is true that victims who are exploited by previously unknown or untrusted individuals have a *differen*t risk factor profile than those exploited by family members. They have a greater degree of substance use experience and greater degree of juvenile justice involvement. But to quantitatively evaluate the number of risk factors

experienced by victims trafficked by previously unknown or untrusted individuals is a misrepresentation of the data. Perhaps it is not that this category of victims has *more* or *less* risk factors, than it is that they have *different* risk factors than victims trafficked by family members. The same is true for the hypothesis testing associated with hypothesis 2e—that victims trafficked by family members have more risk factors than victims trafficked by other relationship types. It is true that victims trafficked by family members are more involved with the child welfare system than victims trafficked by previously unknown or untrusted individuals. But, perhaps, the quantification of risk factors is less important to this discussion than is the observation that victims trafficked by family members appear to have a *different* risk factor profile than victims trafficked by previously unknown or untrusted individuals.

Within this study, there is no support for hypothesis 2c and 2d—that friend-type relationships and romantic partner relationships have unique risk factor profiles—because there were no significant predictors of these types of relationships within the final odds ratio model. Certainly, it is worth further exploring whether unmet basic needs (or the lack thereof) is predictive of romantic partner relationships, since this variable approached significance in the model, but it is not possible to state that the risk factors included in this study are able to definitively predict these two relationship types. More work needs to be done to determine which factors contribute to these relationship types.

Discussion of Hypothesis Three

When the Principal Investigator conceptualized this study, it was hypothesized that unmet basic needs is the factor that underlies many of the other variables included in the analyses. After all, in the extant literature and the results of this study, unmet basic needs is associated with DMST risk factors like child welfare involvement and juvenile justice involvement. Moreover,

intersectionality suggests that the multiplicative nature of oppression is likely to amplify the relationship between risk factors and the outcome variables. The assumption of hypothesis 3 is that unmet basic needs is not only associated with these other risk factors, but serves as a mediator between the risk factors and the final outcome of victim-trafficker relationship type. It was hypothesized that the mediator would increase the effect of risk factors on the outcome.

The results of testing hypothesis 3 indicate, however, that unmet basic needs does not mediate the path between DMST risk factors and victim-trafficker relationship type. Testing suggests that the indirect effect of unmet basic needs is insignificant.

Despite the fact that the Principal Investigator fails to reject the null hypothesis associated with hypothesis 3, this is still quite an important finding. First, the majority of the victims included in this sample are identified as having unmet basic needs. This suggests that unmet basic needs may be an important consideration when examining risk factors for DMST victimization in the first place. However, it appears that the mediating effect of unmet basic needs on the outcome of victim-trafficker relationship type is not significant. Within the models tested in this study, the victim-trafficker relationship outcome appears to be predicted only by child welfare involvement and juvenile justice involvement, even when controlling for unmet basic needs.

A large amount of human trafficking literature (see, for instance, Preble, 2016; United States Department of State, 2016) indicates that economic factors are important to consider when studying risk factors that predict trafficking victimization, but the results of this study suggest that economic factors may not be helpful in explaining the type of trafficking relationships experienced by DMST victims. This is a very important finding to explore more in the future. Differentiation between victim-trafficker relationships only appears to be predicated by child

welfare and juvenile justice involvement. The presence of unmet basic needs in victims' lives has no mediating effect on these variables. Whether a victim is in poverty or not appears not to influence victims' pathway into particular relationships, once initial contact is made with child welfare or juvenile justice systems.

Discussion of Hypothesis 4

Researchers have done little to examine how many different relationships DMST victims have with traffickers during their victimization. For this study, it was hypothesized that victims with larger numbers of risk factors would experience a greater number of trafficking relationships than those victims with fewer risk factors. Surprisingly, the results of testing hypothesis 4 provide little evidence in support of this hypothesis. No combination of risk factors in the odds ratio models produces a significant model. Moreover, each of the models produced in the analysis fit the data quite poorly. It appears that the number of traffickers involved in victims' exploitation is not predictable through intersectionality-informed variables. It is possible that another theoretical framework may provide more useful results.

A very modest exception to this finding is that victims' Hispanic/Asian race significantly predicts their exploitation by only one trafficker. However, since the model itself is insignificant, this result may amount to very little and should be interpreted cautiously.

Discussion of Hypothesis 5

Following the results that stemmed from hypothesis 4, it became clear that testing hypothesis 5 would likely produce insignificant results. After all, the risk factors included in the model tested in hypothesis 4 do not produce significant results, so it is therefore highly unlikely that adding unmet basic needs as a mediator in the model would produce a significant indirect effect.

The only risk factor/independent variable that is at all appropriate to place within the mediated model is Hispanic/Asian race, because this is the only variable that is a significant predictor of the number of traffickers or facilitators involved in exploitation. The Principal Investigator conducted this test in order to thoroughly adhere to this study's initial analytic plan. In testing the pathway between Hispanic/Asian race and number of traffickers involved in exploitation, with unmet basic needs as the mediator, the Principal Investigator fails to reject the null hypothesis. It appears that the number of traffickers involved in exploitation is not predictable with intersectionality-informed variables, nor is it helpful to consider unmet basic needs as a mediator within such analyses.

Implications for Theory

The Principal Investigator designed this study with the assumption that intersectionality theory is useful for explaining both a) victims' entry to DMST, and b) DMST victims' experiences once they are already commercially sexually exploited. This study does not test whether or not intersectionality theory is useful for explaining the first assumption regarding entry to DMST. Since the sample includes only DMST victims, and has no similar comparison group, it is impossible to state whether or not intersectionality can either explain or predict DMST victimization based upon victims' risk factor profiles alone.

However, the descriptive statistics reported herein may give some credibility to intersectionality as an explanation for the demographic profile of the sample. The sample is, after all, nearly 99% (n = 239) female, and over 68% (n = 159) minority race. Moreover, the majority (n =132) of the sample is impoverished, and poverty/unmet basic needs itself is associated with minority race. Although there is some indication that DMST can affect individuals from all races, genders, and socioeconomic statuses (Choi, 2015; Salisbury et al., 2014), there is

increasing evidence that DMST is largely a social problem experienced by low income girls (or sexual minorities; Choi, 2015; Reid & Piquero, 2014) who are, primarily, children of color (Butler, 2015). The demographics associated with this sample cumulate around this growing consensus. It appears that the intersectional factors of gender, race, and socioeconomic status—as well as juvenile justice system and child welfare system involvement—may explain why there is an overrepresentation of poor girls of color within this sample. Of course, future research should test whether the demographic profiles of DMST victims are statistically significantly different from the demographic profiles of children who are not DMST victims, while controlling for some factor like child welfare involvement or juvenile justice involvement. It is only through testing the statistical significance of samples' demographic profiles that it is possible to determine if intersectionality can explain whether a vulnerable adolescent becomes a DMST victim or not. This study does not attempt to answer such a question, as it would have been impossible to do so with the available sample.

However, this study does attempt to answer questions about how intersectionality theory can explain DMST victims' experiences once they are already commercially sexually exploited. The Principal Investigator assumed that victims with a greater degree of risk factors—those intersectionality-informed independent variables like minority race or child welfare involvement—would experience a greater, and perhaps exponentially greater, degree of oppression at the hands of their traffickers. For instance, the Principal Investigator assumed that DMST victims with a greater degree of risk factors would be trafficked by a larger number of traffickers or facilitators than their peers with fewer risk factors. The Principal Investigator also assumed that DMST victims with a lesser degree of risk factors would be more likely to be trafficked by a friend, in which both victim and trafficker share in the decision to sell sex for

money, goods, or services. These are just a few of the hypotheses that were developed for testing within this study. The Principal Investigator developed all of the hypotheses, however, with the assumption that the intersectionality of victims' risk factors would increase the degree of exploitation experienced by victims while trafficked.

Remarkably—and despite all of the literature that suggests intersectionality is a solid theory through which to explore human trafficking (Anthias, 2014; Makkonen, 2002)—the results of this study simply do not offer a great deal of support for intersectionality as a theory through which to understand DMST victim-trafficker relationship types. It is possible that these results occurred because of the homogeneity of the sample (it would be difficult to identify within-group variations when the sample itself is predominantly impoverished and minority race, for instance). The lack of support for the theory can be seen in the study's insignificant results related to a) minority race, b) the interaction term of race and unmet basic needs, and c) the path analysis models.

Minority race. First, although minority race is statistically significantly associated with unmet basic needs, it is not a significant predictor of victim-trafficker relationship type, nor the number of traffickers involved in victims' exploitation. Although intersectionality theory allows for the testing of other intersectionality-informed variables, it is hard to deny that the original theorists placed intense emphasis on the role of race in predicting negative societal outcomes (Crenshaw, 1991; Hill Collins & Bilge, 2016). Minority race is an insignificant risk factor in every odds ratio and path analysis model tested within this study. Hispanic/Asian race is a significant predictor of trafficking by only one trafficker within one odds ratio model, but the model itself is insignificant, so wisdom suggests these results should be disregarded in this discussion. That race is not predictive of any victim-trafficker relationship types or patterns

undercuts the assumption that victim-trafficker relationship type or pattern can be understood, in part, by intersectionality theory and one of its foremost constructs. This is not because race is unimportant within a discussion of DMST, in general. Perhaps it is because once vulnerable adolescents—who comprise the vast majority of this sample, in one way or another—are trafficked, their race cannot explain the patterns by which they are exploited.

Interaction term. Scholars specializing in intersectionality-informed methods suggest the use of interaction terms to emulate the multiplicative nature of risk factors in predicting negative societal outcomes (see, for instance, Steinmetz & Henderson, 2015). Guided by intersectionality theorists' emphasis on race, the Principal Investigator developed an interaction term of race and unmet basic needs to test the multiplicative nature of poverty and race in predicting outcomes. It was not possible to create an interaction term of race and gender, since almost the entire sample is female. The interaction term is not predictive of either victim-trafficker relationship type or the number of traffickers or facilitators involved in victims' exploitation. This finding, too, is a setback to the assumption that intersectionality as a theory through which which researchers can understand victim-trafficker relationship patterns.

Path analysis models. Finally, this study utilized path analysis models in order to test whether unmet basic needs mediates the path between risk factor(s) and victim-trafficker relationship type, or risk factor(s) and the number of traffickers involved in victims' exploitation. Intersectionality theory suggests that the insertion of unmet basic needs as a mediator between risk factors and outcomes would enhance the effect of the risk factors on the outcomes. Imagine light changing course when it is refracted through a glass of water: the light is the risk factor(s), unmet basic needs is the glass of water, and the direction the light takes as it passes through the water is the effect of unmet basic needs on the outcome. This type of analysis is fused with the

basic assumptions of intersectionality theory. If intersectionality theory were true—if variables of oppression interact with one another to change the outcome—one would expect a different outcome with the addition of the mediating variable, just like one would expect the light to bend as it passes through the glass of water. Interestingly, unmet basic needs has no mediating effect within either path analysis model. It is as though the light passes through the glass of water without changing its course at all. Thus, there is evidence that intersectionality theory does not fully work as an explanation of victim-trafficker relationship types, or the number of traffickers or facilitators involved in exploitation. More broadly, perhaps intersectionality theory is not the best theory through which to understand DMST victims' experience of exploitation once trafficking has already occurred. All that appears to matter is victims' experiences with child welfare, juvenile justice, and, to a lesser degree substance use experience and unmet basic needs. These variables did not intersect with one another in the analyses.

It is not possible to state, however, that intersectionality is a complete misfit. First of all, it is possible that intersectionality-informed analyses could work when the limitations of this particular study are reduced (see the Limitations section on p. 188). Additionally, there is some remaining support for intersectionality theory within the results of this study. First, some of the intersectionality-informed variables selected for this study work within the significant odds ratio model. Child welfare involvement and juvenile justice involvement are both significant predictors of DMST victim-trafficker relationship types; unmet basic needs and experiencing substance use approach significance within the model. Child welfare involvement and juvenile justice involvement, as well as unmet basic needs and experiencing substance use, can perhaps be understood as symptoms of oppression, and thus may give credibility to the idea that

intersectionality-informed factors of oppression can help predict DMST victim experience once trafficked.

Additionally, intersectionality theory informs the design of this study from start to finish. Intersectionality theorists encourage study designs that explore within-group variations, and this study both examines within-group variations as suggested by the theory, and discovers within-group variations. DMST victims' within-group variations, which are observed within this study's results, are quite important for informing conversations about policy, practice, and education. In this regard, then, intersectionality theory is quite useful for elucidating these important within-group variations.

Perhaps in the future, research can test whether intersectionality theory is useful for explaining entry to DMST victimization, since it seems to have only modest utility in explaining victim-trafficker relationships and patterns once victims are exploited. Then, perhaps, some other human behavior theory, like life course theory, can begin to more fully explain victim-trafficker relationships and patterns. Ideally, any selected human behavior theory would share with intersectionality its emphasis on social justice (Crenshaw, 1995), the interaction between the micro and macro, and the humanization of vulnerable groups of people (Else-Quest & Hyde, 2016a).

Implications for Policy

The UN's Palermo Protocol provided the first cohesive international definition of human trafficking, and many—though not all—of the protocol's ratifying nations have borrowed definitional language directly from the protocol itself for use in their own national anti-trafficking policies. Nevertheless, since its development, the Palermo Protocol has been heavily criticized by human rights and feminist scholars for its one-dimensional handling of victims.

Feminist authors like Lobasz (2009) and Van Pinxteren (2015) argue, for instance, that the protocol's particular focus on victim protection casts women—for whom, along with children, the protocol is ostensibly written—as passive actors who lack their own agency. The protocol implies in its very title, after all, that the problem of human trafficking is primarily experienced by women and children, and that the protocol is written with meticulous attention to their plight. With this implicit approach to female agency, the argument goes, females-as-victims are handed off from the patriarchal trafficker to the patriarchal state for management of their protection (Lobasz, 2009). In this archetypal formulation, victims are passive and naïve; they lack experience and require protection (Bernstein, 2010; Bernstein & Shih, 2014; Cojocaru, 2015; Russell, 2014); they are often sexual slaves, and if they sell or trade sex for money, it is only because they are desperate and have no real choice (Bernstein, 2012; Bernstein & Shih, 2014). If one looks closely, it is possible to see similar language contained within the United States' original human trafficking policy, which reads, "Traffickers primarily target women and girls…Traffickers often make representations to their victims…Because victims of trafficking are frequently unfamiliar with the laws, cultures, and languages of the countries into which they have been trafficked…These victims often find it difficult or impossible to report the crimes committed against them (Victims of Trafficking and Violence Protection Act, 2000, p. 114)." The neo-abolitionist understanding of human trafficking and even sex work is nondescriptly woven in and through both of these formative policies.

Of course, child victims lack agency in many ways that their adult counterparts do not, but both international and federal trafficking policies do not make distinctions between child and adult victims, nor do they offer specific and divergent protections for members of the two groups. Certainly, the UN Convention on the Rights of the Child (UN Office of the High

Commissioner, 1989/2017)—which is not specific to trafficking—distinguishes children as a group that requires special protection from "all forms of physical or mental violence, injury or abuse, neglect or negligent treatment, maltreatment or exploitation, including sexual abuse" while in the care of others (Article 19). But, as previously discussed, the United States has not ratified the UN Convention on the Rights of the Child. Thus, there is not a law in the United States that serves the purpose of specifically protecting the rights of child victims of sex trafficking.

This ought to be addressed by lawmakers. The results of this study suggest that economic vulnerability may play less of a role in DMST dynamics than it plays within the trafficking dynamics experienced by adult victims. There must be evidence-informed laws that specifically prevent DMST and other forms of child trafficking, and specifically protect child victims of trafficking. These laws should be developed for local, state, federal, and international jurisdictions. A one-size-fits-all approach to human trafficking policy is an approach that cannot adequately fit the needs of children.

Additionally, the TVPA (2000) and its reauthorizations still approach human trafficking victims from a neo-abolitionist perspective, as though their primary need is for protection (Bromfield & Capous-Desyallas, 2012). They may be in need of protection, but it is the Principal Investigator's opinion that neither trafficker prosecution nor victim protection can serve as the linchpins of counter-trafficking policy. Effective counter-trafficking policy must rely upon prevention efforts rather than remediation efforts (McCoy, 2017). Furthermore, effective prevention efforts can only reach their full potential when they are targeted towards specific forms of human trafficking, and specific dynamics within the victims' patterns of exploitation.

An answer to this problem, within the subcategory of DMST and perhaps beyond, lies not in the intellectualization of victims into passive recipients of State-managed care. While important for some roles within society, the criminal justice system cannot and should not be conceived as a system through which DMST victims are protected. It is one thing, after all, that the victims in this study's sample are overwhelmingly involved in the juvenile justice system, and quite another that juvenile justice involvement is actually predictive of these vulnerable adolescents' exploitation by a stranger. Indeed, the DMST literature is steeped in examples of the juvenile justice system as predictive of future commercial sexual exploitation (Chohaney, 2016; Godsoe, 2015). This ought to give federal and state advocates and legislators pause before insisting upon State-managed care for victims and survivors.

While Texas counter-trafficking policy is rapidly evolving, there is evidence that the state could do more to meaningfully engage in comprehensive prevention, protection, and prosecution efforts. First, though, it must be noted that the state of Texas has a child sex trafficking prevention unit, which is tasked with connecting trafficking survivors with service providers, disseminating research, and suggesting evidence-based improvements to Texas's trafficking prevention strategies (Williams, April 2017). This is an important step towards prevention. However, the state could do more to enhance its comprehensive approach to human trafficking and DMST by offering both immunity and diversion to DMST victims under its Safe Harbor law. The current law in Texas is to provide diversion opportunities for adolescents who are commercially sexually exploited, rather than immediately detaining them for prostitution or related charges (Williams, April 2017). But, this diversion necessarily requires State management of their care to avoid criminal charges; if adolescents do not choose to receive the prescribed treatment, they can be charged with criminal offenses.

This approach to DMST intervention emulates the types of assumptions that underlie so much human trafficking policy: That victims cannot act in their own best interests, and must be detained in order to keep them safe if they are unwilling to comply with what State officials view as beneficial. Furthermore, it also reeks of the types of social control that were authorized by the White Slave Traffic Act. While offering protection to victims is important, immunity should not be contingent upon victims' agreement to comply with services. Victims should be granted immunity regardless of their compliance with official orders. This is especially true if detaining DMST victims puts them at risk for a specific trafficking trajectory, as is hinted at by this study's results. Other states like Washington, New York, and Louisiana have similar Safe Harbor laws to Texas (Williams, April 2017). Other states still do not have Safe Harbor laws. While Texas should immediately consider adapting their Safe Harbor laws to provide both immunity and diversion, the federal government should work towards an counter-trafficking policy that requires uniform immunity and diversion laws across the United States.

Finally, it must be noted that, of all the DMST victim-trafficker relationship types examined within this study, the preferred victim archetype described above most closely corresponds with the victim-trafficker family member relationship depicted in this study's results. Adolescents trafficked by family members are less likely to use substances, less likely to be involved in the juvenile justice system, and more likely to be child abuse victims, than victims trafficked by previously unknown or untrusted traffickers. They look like the "perfect victim"; they are, however, the least represented category within the sample. Local, state, and federal policy needs to be written to accommodate not just those victims whose histories make it easy to advocate for State-managed care, but also those victims whose histories defy simple solutions and platitudes. As social workers advocate for such policies, they embrace the dignity and worth

of all victims (NASW, 2008), and not just those victims whose histories are expedient for the political goal of enacting mandated, State-run victim protection services via detention centers.

Implications for Practice

The results of this study ought to inform how social workers engage with the DMST issue on both micro and macro levels. Perhaps the study's most obvious implications for social work practice are the categories through which social workers can now meaningfully confront the issue in adolescents' lives. The results of this study suggest that DMST is not a monolithic phenomenon, perpetrated against vulnerable adolescents by a lurking bogeyman, but is instead perpetrated by traffickers who exploit minors' vulnerabilities based upon a) the unique combinations of these vulnerabilities in victims' lives, and b) the traffickers' relationships with the victims.

This study suggests that the risk factor profiles of minors trafficked by family members, previously unknown or untrusted traffickers, and romantic partners vary from one another. Adolescents who are trafficked by their family members are more likely to have experienced child abuse than those who are trafficked by strangers, and those who are trafficked by strangers are more likely to be involved in juvenile justice and more likely to use substances than those who are trafficked by family members. It seems that family members commercially sexually exploit their own children after, or concurrent with, reported child abuse. Social workers who are employed within the child welfare system must ensure that youth who enter the system are regularly screened for commercial sexual exploitation. They should ensure that the tools used to screen for commercial sexual exploitation are sensitive to the reality that youth who are trafficked by family members may not even know that they are victims of a crime. The Principal Investigator recommends the uniform use of the Westcoast Children's Clinic CSE-IT tool to

assist social workers and other advocates with the identification of DMST victims within child welfare caseloads (Westcoast Children's Clinic, 2017b). In the absence of a tool like the CSE-IT, social workers should still consider asking questions that explore commercial sexual exploitation in adolescents' lives, such as inquiring about romantic partners, or how they provide for their basic needs while on the run.

It is also recommended that social workers employed within juvenile justice systems use this same tool to uniformly screen adolescents when they enter the system. Social workers should also ensure that psychoeducation offered in juvenile justice contexts provides adolescents with information about the previously unknown or untrusted trafficker type, who appear particularly disposed to take advantage of their victims once these victims leave the juvenile justice system. Social workers must be prepared to advocate for comprehensive discharge planning services for all youth who exit the juvenile justice system. Although this study does not assess the quality of discharge planning services from juvenile justice systems, it is possible that victims are particularly vulnerable to exploitation by strangers because they are desperate for support when they exit. After all, juvenile justice involvement is not only predictive of victims' trafficking by a stranger; it is also statistically significantly associated with unmet basic needs. It is possible that previously unknown or untrusted individuals commercially sexually exploit victims who are desperate for help; it is also possible that adequate discharge planning could minimize the desperation felt by youth when they exit the system.

There is some evidence that victims trafficked by their romantic partners are more likely to have their basic needs met than victims trafficked by strangers. It is possible that traffickers take advantage of vulnerabilities *besides* socioeconomic desperation when exploiting victims within this victim-trafficker subcategory. Perhaps this victim-trafficker relationship type shares

similarities with domestic violence relationships, rather than the patterns that are observed within other victim-trafficker relationship categories. Certainly, domestic violence victims can experience socioeconomic desperation, but their relationships with their abusers are perhaps more marked by psychological and emotional abuse than financial desperation (Stark, 2009). It seems that victims trafficked by romantic partners are more controlled by other factors, than they are controlled by vulnerabilities stemming from their unmet basic needs (Hammond & McGlone, 2014).

Finally, there is some indication that social workers ought to pay attention to differences in the onset of DMST victimization by victims' race. That Hispanic/Asian (96.8% of whom are Hispanic) victims appear to be exploited at a younger age than victims of other races, suggests that service providers should consider tailoring interventions and education strategies within predominantly Hispanic neighborhoods to include education that is appropriate for younger adolescents.

While these results are certainly applicable at the micro level, social workers should also engage with these findings at the macro level of practice. Certainly, social workers should ensure the uniformity of victim identification assessments within juvenile justice and child welfare contexts. They should also ensure that the education offered to vulnerable youth provides them with facts about the different types of traffickers they might encounter, and the types of vulnerabilities these traffickers could exploit. This study's findings, however, are relevant for social workers who would like to shape the conversation about DMST within community, administrative, and policy practice. Social workers should engage with communities, so that community members themselves can recognize problematic behaviors and patterns in would-be traffickers and vulnerable adolescents, and appropriately intervene. They should engage within

their administrative roles, to ensure that vulnerable youth are screened for DMST, educated about DMST based upon facts rather than ideologies; they should also ensure that their staff members are educated about the different victim-trafficker relationship types so that they may compassionately work with vulnerable and victimized youth who do not fit the "perfect victim" archetype. Finally, social workers engaged in policy practice must advocate at the local, state, and federal level for policies that are prepared to accommodate the variations in victim experience, with deference to the social work values of social justice and the dignity and worth of all human beings (NASW, 2008).

Implications for Social Work Education

The results of this study are relevant to social work educators who aspire to replace anecdotal lessons about human trafficking with empirical knowledge about the phenomenon. The general population's interest in human trafficking has swelled within recent years, but unfortunately, a great deal of the available information about human trafficking is dominated by anecdotes and ideology, rather than knowledge grounded in empiricism (Weitzer, 2011). Many social work students want to engage the issue of human trafficking, but due to the anecdotal and ideological nature of the human trafficking knowledge base, they may enter the classroom with preconceived notions about what human trafficking is, who the victims are, and what it means to meaningfully engage in service to this vulnerable population. Furthermore, Nsonwu et al. (2017) report that empirical "material on human trafficking has only been gradually incorporated into social work education" (p. 562), leaving a substantial gap between social work students' understanding of the problem and the availability of evidence to promote a deeper understanding.

Indeed, there is a tendency within the general population to flatten human trafficking victims into a unidimensional victim archetype. This archetype is often a virginal, innocent girl

who is snatched from a loving environment and sold into sexual slavery (Bernstein, 2010; Cojocaru, 2015). The results of this study suggest that while this archetype may sometimes exist in the real world, actual DMST victims tend to have more complicated histories than are afforded by this "perfect victim" archetype. While it is the Principal Investigator's opinion that this archetype is counterproductive within the broader counter-trafficking movement, it is particularly damaging if the archetype is unequivocally accepted and promoted by people who engage the issue on the front lines of direct and policy practice. Social workers are positioned to serve on the front lines of the human trafficking issue (Nsonwu et al., 2017). They need to be able to engage the phenomenon with a sound and sober understanding of what human trafficking is, beyond what they have heard in the news and from the nonprofit agencies or advocacy groups that may employ them.

The Council on Social Work Education's (CSWE, 2015) Educational Policy and Accreditation Standards (EPAS) Competency 2 mandates that social workers engage diversity and difference in practice. The results of this study suggest that just like there is not one type of human trafficking, there is not one type of DMST. Variations exist within and between victim-trafficker relationship subcategories, so social workers must be prepared to not only engage with the aberrant victims who are trafficked by family members—who are rarely represented within the sample, and who more closely fit the "perfect victim" archetype described above—but also with the majority of victims who may be labeled by society as delinquents. Social workers must be prepared to engage the diversity of victim experience in both direct and policy practice, and integrating the results of this study into social work education may promote this ability.

Additionally, CSWE's (2015) EPAS Competency 3 states that social work students must be prepared to advance human rights and social, economic, and environmental justice. In the

Literature Review chapter of this study, the Principal Investigator explains that human rights protections are typically afforded by the law (Ife & Tascón, 2016), but that human rights protections are more appropriately understood as the collective responsibility of all human beings to one another at the individual, group, and community levels. If social work students are to be prepared to engage meaningfully with the human rights dimensions of counter-trafficking work, they must be prepared to rally individuals, groups, and communities towards action on behalf of vulnerable individuals and trafficking victims, rather than relying on legal apparatuses and law enforcement officials to protect the human rights of trafficking victims once harm has already been done.

Unfortunately, the results of this study suggest that the protection of DMST victims' human rights has fallen, perhaps, on systems rather than on individuals, groups, and communities. The majority of victims in this study's sample are juvenile justice involved; many are also child welfare involved. Additionally, the model derived from this study suggests that juvenile justice involvement predicts when victims are trafficked by strangers. If children are trafficked by strangers following involvement with the legal systems that are ostensibly designed to protect their human rights, it follows that something is not working in the protection of those rights.

Although some social work students may work within juvenile justice systems, social work students should also be troubled by society's reliance on legal systems to protect the human rights of victims in ways that these systems are not designed to do. Social work students must be prepared to engage individuals, groups, and communities to look after the human rights of commercially sexually exploited children. This can only occur by turning an eye towards repairing the social fabric of families and communities—so that human beings can look after one

another's human rights—rather than relying on juvenile justice or child welfare systems to protect children after harm has already been done. Relevant content could be integrated into many areas of the curriculum, including core courses like social welfare and social work, community practice courses, and human behavior in the social environment courses. It could also be integrated into electives covering human rights law, global poverty and inequality, and international social work.

To educate social work students in this way would require something of a paradigm shift. In order to accomplish this shift, students would need to be a) trained on the inherent shortcomings of legal and law enforcement systems in protecting human rights, b) encouraged to question criminal justice solutions to human rights problems, and c) urged to organize individuals and groups to address DMST within their communities, rather than relying on juvenile justice and child welfare systems as the primary solution to the problem. Training students in this regard may advance the human rights of victims in a way that is only possible if students are encouraged to respectfully question and challenge the reactionary systems that may someday employ them.

Limitations

This study has several weaknesses, each of which potentially limit the validity and reliability of the derived results. Threats to validity include the study's reliance on archival data, its relatively small sample size, and its reliance on categorical variables. Threats to reliability include the potential biases of the caseworkers who collected the case notes included in the sample, the raters' reliance on the case managers' identification of variables within the case notes, and a lack of dual rater coding throughout the entirety of the coding process. The Principal Investigator discusses each of these threats in more detail within this section.

Use of archival data. This is a secondary research study, which is limited by the unavailability of specific data. The literature review identifies multiple risk factors that may contribute to DMST victimization, such as a chaotic home environment or mental health diagnoses (Choi, 2015); intersectionality theory also suggests the use of other specific variables, such as gender and sexual identity (see, for instance, Crenshaw, 1991). However, the archival data utilized in this study does not include information about each potential risk factor suggested in the literature review and theoretical overview. For instance, the case managers who collected the data used in this study did not uniformly collect information about victims' sexual identity or mental health diagnoses, which are considered important risk factors for DMST within the literature (Countryman-Rowsurm & Bolin, 2014; Goldberg, 2017; Reid & Piquero, 2014). And though they did collect information about the gender of victims, all but three of the victims were female, making it impossible to statistically analyze the dataset by gender. Finally, secondary data analysis limits the generalizability of study results to the geographic area in which the data was gathered (Johnson & Turner, 2003). It is therefore not possible to state with certainty that the model produced by this study is generalizable to areas outside of North Texas. Future research should attempt to locate archival data that includes all of the risk factor variables suggested by the extant literature and intersectionality theory. Additionally, primary research methods are also indicated, in order to collect primary data on these variables, and to improve the generalizability of study results to a broader population of DMST victims.

Small sample size. When this study was developed, it was unclear how many case files would be included within the final sample. Initially, the Principal Investigator believed that the sample would only include 133 cases, but the data source agency was eventually able to provide nearly 500 cases for analysis. A sample of 500 DMST victims would have greatly enhanced the

statistical power of the analyses; it also would have been a very large sample within the DMST research field, since many pioneering studies rely upon samples that are smaller and, at times, do not specifically isolate DMST victims from broader populations of study (see, for instance, Chohaney, 2016, n = 61 (minors); Reid, 2011, n = 174). However, many of these case files were duplicates or unusable because they were "internet surveillance forms" rather than "lead tracking forms" (the case files that are used in this study), and thus included data that was wholly different than required for this study.

Once the Principal Investigator excluded duplicates, empty case files, and inappropriate case files, the final sample size was only 242. While this sample size is much larger than many current DMST research studies (exceptions include studies in which the samples are stakeholders rather than DMST victims; see, for instance, Hartinger-Saunders, Trouteaud & Matos Johnson, 2016), the relatively small sample size means that the effect sizes for the statistical analyses are large, albeit acceptable. Future studies should attempt to increase the sample size of DMST victims in order to reduce the effect sizes of the statistical procedures included herein.

Reliance on categorical variables, and categorical collapse. This study relies heavily on categorical variables, many of which are dichotomous. This means that many of the variables within this study (all of the variables, in fact, except for age) are not continuous, and thus there are few opportunities to scale the degree to which the variable exists in victims' lives. This may have influenced the results of the study, since removing variation from the variables by collapsing them into categories can increase Type II error rates in logistic regression models (Peduzzi, Concato, Kemper, Holford & Feinstein, 1996). In other words, significant results may have been hidden, since the categorization of scale-type variables reduces or altogether removes the important variations that may exist within the sample.

This reliance on categorical variables is not problematic within those variables that can only be understood as categories, such as race or victim-trafficker relationship type. (Although, it must be noted that the collapse of "Asian" and "Hispanic," and the collapse of "Mixed Race" into other racial categories, is not ideal since there may be variations between the races. Other decisions to collapse variables were made throughout the analysis in order to adhere to statistical assumptions, but each of these decisions may have inappropriately removed variation from the study and its results.) However, some of the variables are, perhaps, better understood conceptually as continuous variables. For instance, the variable "unmet basic needs" is only assessed as either existing or not existing in the victims' case files. But, since unmet basic needs is a proxy variable for poverty, it would have been preferable for this variable to exist on a scale rather than categorically. Dichotomous categories necessarily collapse variations in poverty into a "yes" or "no", but poverty has much more dimension to it than can be afforded by noting its presence or absence.

The same collapse occurs within the variables "child welfare involvement", "experiencing substance use", and the dichotomous version of "juvenile justice involvement"—which is the juvenile justice variable that is included within the odds ratio model. But, each of these constructs may be more appropriately assessed within the domains of both presence *and* severity, rather than an assessment of presence alone. Even the interaction term (race*unmet basic needs) is categorical within this study, since race only has three categories and unmet needs only has two. Important variations within these variables, therefore, might be missed within the study design. It is possible that the existence of these conditions in victims' lives is less relevant to the prediction of the outcome variables than the severity of these conditions in victims' lives, but this study is unable to assess these variables for severity. In order to address concerns about

data variability, future studies should attempt to assess risk factors for both existence and severity, whenever it is possible to do so. Future research should also make every effort to include continuous variables, rather than categorical variables, whenever doing so is possible and appropriate.

Data collection bias. All data used in this study was collected by a small group of case managers or volunteers who are affiliated with the data source agency, Traffick911. According to the CEO of Traffick911 (G. Lynch, personal communication, November 2016), the purpose of case manager data collection is to a) assist case managers with connecting victims to appropriate services, and b) provide information to law enforcement officials who are involved in tracking and prosecuting traffickers. Since the case notes were written for individual use rather than analysis in the aggregate, the case managers were not trained how to identify and collect data that are pertinent to the study. Therefore, it is possible that they simply missed the identification of the variables included within this study, because the purpose of the case notes was not to identify victims' substance use experience or unmet basic needs, but instead to help law enforcement officials identify traffickers. This is an example of explicit bias (Means & Thompson, 2016). The case managers were trained to provide information to law enforcement, and they were aware that they had this bias while writing their case notes. To approach case notes with an explicit bias towards providing information to law enforcement is, in fact, part of their jobs and thus to be expected. Nevertheless, this type of bias may influence the reliability of the results.

There is also a risk that the case managers and volunteers who wrote the sampled case notes approached the data collection with implicit bias. Implicit bias is much more difficult to identify, assess, and mitigate than explicit bias (Means & Thompson, 2016). It is not possible to

assess implicit bias as a part of this study, since the Principal Investigator does not have direct access to the case managers. However, given that Traffick911 is an evangelical Christian faith-based agency (Traffick911a, 2018a), and given evangelical Christianity's historical affiliation with the abolitionist and neo-abolitionist counter-trafficking movement (Bernstein, 2012), it is possible that the data collection was influenced by the case managers' implicit bias towards a neo-abolitionist perspective on DMST. If, indeed, the case managers approached the data with a neo-abolitionist bias, one would expect to see an emphasis on victims' manipulation and exploitation by traffickers (such as when they are trafficked by a previously unknown or untrusted person), and a de-emphasis of instances in which victims exercise some degree of personal agency (such as might be the case when they are trafficked by a friend, or when there is no trafficker involved).

Although it is not possible to determine if this implicit bias existed within the sample, even the possibility that case managers identified coercion and manipulation where none existed suggests that the results should be approached with caution. Future studies could attempt to reduce both explicit and implicit bias by training case managers how to pay close attention to the variables under study, or editing the lead tracking forms to explicitly include fields for data related to the variables under study. (For instance, instead of coding the narrative portion of case notes, it would be ideal for case managers to use a form that includes prompts for each of the variables included in this study.)

Reliance upon identification in case note. Several of the variables included in this study rely upon their identification within the case note narrative. For instance, experiencing substance use is not simply a checkbox at the top of the case notes, in which case managers must note whether or not substance use experience is identified in victims' lives. Instead, if substance use

exists within victims' lives, the onus is upon the case manager to name its existence within the case note narrative, and for the rater to make note of this identification in the coding of the case file.

Unfortunately, the absence of substance use experience in the case note narrative is not synonymous with its absence in DMST victims' lives. It is always possible that case managers simply fail to include substance use narratives within case note files, even if substance use exists. This same phenomenon occurs for the variables concerned with the number of traffickers involved and unmet basic needs. To a lesser degree, the juvenile justice involvement and child welfare involvement variables also rely upon case managers' identification of these variables within victims' lives; however, there is a section where the case managers are prompted to fill in this information. However, it is possible that child welfare involvement was underreported by the victims, because they may have been unaware of any child welfare involvement, or resistant to share this involvement with the caseworker. As a result of this study's reliance upon case managers' identification of the variables in victims' lives—even when case managers were not trained to provide specific information about these variables—some of the data may be unreliable. Again, this threat to reliability may be countered by encouraging case managers to use a form that has standard fields for each of the variables included within the study, in order to prompt them to included data related to each of the variables.

Lack of dual coding throughout. Although inter-rater reliability is established within this study, it would have been preferable for both raters to code the entire sample to ensure reliability of the coding throughout. However, this was not possible due to limitations on the second rater's time. Future research should make every attempt to improve inter-rater reliability by coding the entire dataset with more than one person.

Given these limitations, and the study's novelty within the scholarly literature on DMST, study results should be considered preliminary and warrant further investigation. Researchers should consider replication studies, in which these limitations are addressed through the recommended adaptations to the study design, in order to determine if other studies produce similar, or more robust, results.

Future Studies

The next section of this chapter is devoted to how additional research may address a) the questions that went unanswered by this study, and b) the questions that emerged directly from the results.

Exploring relationship types through qualitative inquiry. This study makes clear that family member trafficking relationships are marked by significantly different risk factor profiles than the previously unknown or untrusted relationship type. Namely, this study reveals that, within the sample, victims trafficked by family members are more likely to be involved in child welfare systems and less likely to be involved in juvenile justice systems than victims trafficked by previously unknown or untrusted traffickers. They are also less likely to use substances than victims trafficked by previously unknown or untrusted traffickers.

However, this study provides little insight into how risk factors may predict other victim-trafficker relationship types. The sole exception is that it appears that victims trafficked by romantic partners are less likely to have unmet basic needs than victims trafficked by a previously unknown or untrusted trafficker. This finding, though, is quite preliminary. More research must be done to determine the types of risk factors or circumstances that may be associated with the other victim-trafficker relationship types included within this study. If intersectionality-informed variables are unable to differentiate DMST victims by victim-

trafficker relationship type (beyond the family member and previously unknown or untrusted types of relationships), it is possible that other factors or constructs are involved in the differentiation. For this reason, future studies should qualitatively explore the archival case notes for other factors or constructs that may relate to victim-trafficker relationship type. Ideally, researchers should parse apart the dataset by the category of victim-trafficker relationship, and then qualitatively examine the data to determine which themes emerge within specific groups, which differences emerge between the groups, and whether additional constructs relevant to relationship type materialize from the data. The results of these studies may suggest additional variables for incorporation in a future predictive model of victim-trafficker relationship types.

Additionally, it was statistically necessary to collapse the "no trafficker" category into another category within this study. This is unfortunate, because there may be important differences between this group and others. These differences could potentially shed light on how service providers may intervene with victims who trade or sell sex without an outside person involved. Even if it is not possible to include this category in a predictive model by itself, qualitative research should explore the circumstances that surround DMST victims who do not have traffickers or facilitators involved in their exploitation.

Exploring regional differences. In the first section of this chapter, the Principal Investigator notes that far more DMST victims in this study's sample were trafficked by a previously unknown or untrusted individual than DMST victims included within other samples. Although this finding is preliminary, and though the significance of these differences is not explored within this study, it is still a curious finding that ought to be further explored. Weitzer (2011) advocates for researchers to examine trafficking regionally, to determine if there are differences in prevalence and patterns, so that prevention and intervention can be tailored

appropriately to regional conditions. Future research should examine whether regional policy or cultural differences contribute to the differences observed in victim-trafficker relationship types between this sample and other samples represented in the literature. Marcus et al.'s (2014) Atlantic City and New York City sample was far less controlled by exploitative traffickers than this study's North Texas sample. Perhaps regional policies (or something else) have limited the control that previously unknown or untrusted traffickers have over the area in which Marcus et al. (2014) conducted their study.

Integration of findings to community setting. The agency that provided the data for this study is involved in both DMST prevention and intervention efforts. The agency's prevention efforts center on providing information to adolescent girls within juvenile justice systems, churches, schools, and other community centers; their specific efforts include presenting information to adolescents about the "traps of a trafficker" so that potential victims are less likely to fall into these traps (Traffick911, 2018b). The results of this study suggest, however, that there are significant variations between victims' risk factor profiles. Traffickers may exploit these vulnerabilities differently based upon the circumstances faced by the victims, but these variations may not be accounted for within the agency's current prevention efforts.

Ideally, the results of this study would help inform how education and other prevention efforts are delivered to vulnerable adolescents. To the Principal Investigator's knowledge, the education offered by the data source agency is not tailored to the settings in which the volunteers present the information. In other words, there is not specific curriculum for the juvenile justice setting, or the child welfare setting, or Hispanic neighborhood setting. The results of this study suggest that education should be tailored to social service and community setting, though. There is often a gap, though, between the results of research studies and the integration of findings back

into the agency setting. Following McCoy and Preble's (2017) Intersectional-Standpoint Framework, it would be interesting to qualitatively explore with the agency how the findings of this study might influence their practice going forward, how they would like to assess the integration of study findings into their practice setting, and then quantitatively evaluate how the study findings influences the agency's prevention efforts. Completing a study of this kind would offer a dual benefit: Results may provide valuable information to other researchers who are interested in integrating research into practice, and the researcher effects produced by studying the agency would likely encourage staff to integrate the findings into their curriculum and prevention efforts.

Intersectionality theory to investigate DMST entry. There is only modest support for intersectionality theory within this study. Certainly, some of the intersectionality-informed variables included within this study significantly predict specific victim-trafficker relationship types. Neither the interaction term nor race, however, are significant in the odds ratio model. The mediators tested in this study are also insignificant. The lack of support for race and race*unmet basic needs, and the lack of mediation in the hypothesized path analysis models, suggest that intersectionality may not be the best, or the only, theoretical framework through which to understand victim-trafficker relationship types.

Perhaps intersectionality theory is better for explaining victims' entry into trafficking than it is for explaining the type of traffickers who exploit them. After all, this study's sample of DMST victims is predominantly minority race, impoverished, and juvenile justice involved, suggesting that, perhaps, these factors influenced their entry into trafficking. Future studies should explore how intersectionality-informed variables predict whether or not an adolescent is trafficked. This type of study would require a sample that includes both DMST victims and non-

DMST victims, who share some common characteristic like child welfare involvement or juvenile justice involvement.

Conclusion

This study seeks to explore how various forms of intersectionality-informed oppression and risk factors predict specific subcategories of DMST victimization. It also seeks to explore how these oppressive and risk factors predict the number of traffickers involved in victims' exploitation. The Principal Investigator attends particularly to how victims' experiences with unmet needs influences their trajectories into victim-trafficker relationship types and patterns. This study fills an important gap in the literature, since to date, no other authors have examined how risk factors predict how DMST victims are exploited by their traffickers, and how frequently traffickers are involved in their exploitation. The results of this study begin to elucidate the ongoing relational patterns observed between DMST victims and their traffickers. Findings suggest that DMST is not a uniform phenomenon, but instead surfaces in various relational patterns. The recommendations that emanate from these findings point towards strategies that may interrupt the specific patterns observed within victim-trafficker relationships.

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