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Exploring Knowledge and Perceptions of Nursing Students: A Quantitative Study on Sexual Assault and Sex Trafficking Awareness

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ABSTRACT

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This study aims to explore nursing students' knowledge and perceptions of identifying and treating victims of sexual assault and sex trafficking. Survey data was collected from second to fifth semester nursing students in Eastern Tennessee. The study aims to identify students' perceptions of medical personnel's ability to identify and treat sexual assault and sex trafficking victims, examine whether adherence to myths affects knowledge and confidence levels, determine students' confidence in identifying and treating victims, and evaluate whether demographic characteristics affect identification and treatment. Results will help improve our approach towards these issues.

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TABLE OF CONTENTS

LIST OF TABLES

Chapter 1. Introduction

Sexual assault and sex trafficking have historically posed significant challenges to systems, communities, and professionals across the globe seeking to respond both ethically and effectively (Chatiz et al., 2000). This paper aims to explore one of these challenges: the knowledge and perceptions nursing students have toward victims of sexual assault and sex trafficking and how it may impact the treatment they receive from medical personnel.

Sexual assault and sex trafficking were and still are among the most prevalent forms of violence and exploitation globally, affecting individual communities, and nations (Chatiz et al., 2000). On average, there are approximately 463,634 victims of sexual violence each year (Bureau of Justice Statistics, 2020). Additionally, it was estimated that 40.3 million people became victims of human trafficking globally, with 5.4 individuals trafficked for every 1,000 humans, and one in every four victims being a child (Bureau of Justice Statistics, 2020). The World Health Organization (WHO) reported that one in three women worldwide have experienced physical or sexual violence, often from an intimate partner (World Health Organization, 2021). Moreover, men, children, and members of the LGBTQ+ community were also at risk of sexual assault and abuse. To avoid confusion, it is essential to define sexual assault and sex trafficking to understand their relationship better.

Definitions

Sexual assault, according to (Bureau of Justice Statistics, 2020) is a term that covers various types of sexual contact without consent. Consent is a voluntary agreement to engage in sexual activity, and a person may be incapable of giving consent due to age, physical or mental condition, or power imbalance (Bureau of Justice Statistics, 2020). Sexual assault includes rape,

attempted rape, child molestation, incest, and sexual harassment, all which can occur in the context of sex trafficking.

According to the US Department of State's Trafficking Victims Protection Act, human trafficking involves the recruitment, harboring, transportation, provision, or obtaining of a person for labor or services, commercial sex acts, or any commercial sex act involving a person younger than 18, using force, fraud, or coercion (Department of Justice, 2023). Force can include physical restraint, physical harm, sexual assault, and beatings (Department of Justice, 2023). As previously mentioned, sexual assault often preceded or occurs within the context of sex trafficking.

The United Nations Office on Drugs and Crime (UNODC) identified human trafficking as the third largest and fastest-growing criminal industry in the world, generating profits of over $150 billion annually (Chatiz et al., 2000). Moreover, it is estimated that 1 in 5 victims of human trafficking is subjected to sexual exploitation (Chatiz et al., 2000). One of the few times when the lives of trafficking victims encounter the broader public is during hospitalization (Chatiz et al., 2000). According to research and testimony from survivors, many human trafficking victims will obtain medical care at a hospital's emergency room while they are being held captive (Paranize, 2020). This is why it is important to add to the literature surrounding medical personnel, specifically nursing students, to expand their knowledge and perceptions of the victims of sexual assault and sex trafficking.

History of Sexual Assault

Sexual assault has had a long and complex history, dating back to ancient times when it was frequently used as a tool of war and conquest, with women and children often being raped and sexually assaulted during times of conflict (Paolella, 2020). In early societies, women were

often seen as property of men, and sexual assault was viewed as a violation of the male owner's rights (Williams, 2014). In some cases, women who were raped or sexually assaulted were punished rather than the perpetrators, perpetuating harmful attitudes (Williams, 2014). For example, in ancient Rome, if a woman was raped, she was expected to marry her attacker (Williams, 2014). During the Middle Ages, rape and sexual assault were often considered crimes against the church, rather than against the individual victim. The church had strict rules about sexual behavior, and women who were seen as sexually promiscuous were often punished, while men were not held accountable for their actions (Paolella, 2020; Williams, 2014).

Throughout the 19th and 20th centuries, there was growing recognition of the harm caused by sexual assault, leading to the passing of laws against rape in the United States in the 1970s, along with the introduction of the concept of consent into legal definitions of sexual assault (Williams, 2014).

Sex Trafficking History

Human trafficking, including sex trafficking, has a long and complex history, with early forms traced back to ancient civilizations such as the Greeks and Romans, who captured and enslaved people for forced labor and sexual exploration (Parenzin, 2020). The practice of human trafficking, especially in the form of sex trafficking, has been shaped by various factors, including economic, social, political, and technological developments. The transatlantic slave trade from the 16th to the 19th centuries also involved the forcible transportation of millions of Africans who were sold as slaves and subjected to brutal conditions and sexual abuse (Paolella, 2020).

In the late 19th and early 20th centuries, the trafficking of women for sexual purposes became more widespread, with the growth of international migration and the development of

modern transportation systems (Paolella, 2020; Roberson, 2017). Women from poor countries in Europe and Asia were often deceived or forced into prostitution in cities such as Paris and London (Roberson, 2017). During the two World Wars, trafficking and sexual exploitation of women increased as military personnel created a demand for prostitution services. The trafficking of women and children for sexual exploitation also occurred in the aftermath of wars, such as the conflicts in Bosnia and Herzegovina, where women and girls were abducted and forced into sexual slavery (Paolella, 2020; Roberson, 2017).

In the second half of the 20th century, the rise of globalization and the growth of the internet contributed to the expansion of sex trafficking (Roberson, 2017). The ease of international travel and communication made it easier for traffickers to move their victims across borders and to advertise their services online. The demand for commercial sex in the form of prostitution and pornography continues to fuel the market for sex trafficking (Parenzin, 2020).

Despite the fact that traditional slavery in the United States was abolished with the passage of the Thirteenth Amendment in 1865, the trade in human beings continues to be a major industry countrywide (International and Domestic Law, 1862). When individuals are treated like objects to be bought and sold for the purpose of physical or sexual exploitation, human trafficking takes place. Despite being difficult to trace due to its subterranean nature, research shows that there are currently 20.9 million victims globally, making human trafficking the third-largest global criminal activity (Chatzis et al., 2000).

Lack of Awareness and Preparedness among Medical Personnel

Many medical professionals, including nursing students, are not familiar with the signs of sexual assault and sex trafficking, leading to missed opportunities to identify and help victims (Long & Dowdell, 2018; Mays, 2020). Nurses, being the first point of contact for victims of

sexual assault and sex trafficking in healthcare settings, play a critical role in identifying and responding to these individuals (Long & Dowdell, 2018). However, inadequate training and knowledge of signs of sex trafficking can hinder their ability to provide appropriate care and support (Ropero-Padilla et al., 2021; Rutten et al., 2010).

Nurses also may not have received training on how to screen for and respond to sex trafficking, or they may have received inadequate training that does not prepare them to recognize and respond to the complex needs of trafficking victims. One study published in the Journal of Forensic Nursing found that many nurses felt unprepared to identify and respond to victims of sex trafficking (Ropero-Padilla et al., 2021). The study found that only 12% of nurses had received training on how to recognize and respond to sex trafficking, and only 4% felt very confident in their ability to identify victims (Ropero-Padilla et al., 2021). Another study found that nursing students had limited knowledge of sex trafficking and were not prepared to identify and respond to victims. The study found that only 14% of nursing students correctly identified all the indicators of sex trafficking, and only 17% felt confident in their ability to provide appropriate care and support to victims (Rutten et al., 2010)

Human trafficking and sexual assault are serious public health issues that have significant physical and psychological consequences for victims. Despite the increasing recognition of these crimes as major health and social problems, nursing students often receive limited training on the identification and management of sexual assault and human trafficking cases (Mays, 2020).

This lack of education and preparedness could lead to stigmatization, judgmental attitudes, and perpetuation of harmful stereotypes, impacting the quality of care provided to survivors (Mays, 2020). To better prepare nurses for their work with victims of sexual assault

and sex trafficking, it is essential to understand their current knowledge, perceptions, and education regarding these issues.

Perceptions

As mentioned earlier, perceptions have the potential to impact the level of treatment, which is why evaluating nursing students' perceptions regarding victims of sexual assault and sex trafficking is crucial. Perceptions of sexual assault can vary widely depending on a person's cultural background, personal experiences, and education. However, research has identified some common perceptions and attitudes regarding sexual assault (Worthen & Wallace, 2017).

One common misperception of sexual assault is the belief that it only involves physical force (Buss & Malamuth, 1996). However, research has shown that sexual assault can also occur through coercion, manipulation, or when the victim is unable to give informed consent (Buss & Malamuth, 1996). Unfortunately, some individuals may wrongly think that a victim's behavior or clothing choices imply consent, perpetuating misinformation and victim blaming attitudes that contribute to a culture of silence and shame around sexual assault (Worthen & Wallace, 2017).

Research indicates that sexual assault is far more prevalent than commonly realized, affecting approximately one in three women and one in six men during their lifetime (Worthen & Wallace, 2017). It can happen to anyone, regardless of gender, age, or behavior. Consequently, it is essential to place the responsibility for preventing sexual assault on the perpetrators rather than the victims. Additionally, identifying sexual assault can help in identifying victims of sex trafficking; thus, it is crucial to ensure that medical personnels perceptions are accurate and not skewed.

When considering medical personnel's perceptions of sex trafficking victims, it becomes apparent that these perceptions vary widely based on their training, experience, and personal

beliefs (Mays, 2020). Some may view sex trafficking victims as prostitutes or criminals, while others may see them as vulnerable individuals who need help and support (Mays, 2020; Roberson, 2017). Some medical personnel may stigmatize victims of sex trafficking, viewing them as “dirty” or “promiscuous” (Mays, 2020; Roberson, 2017). This can lead to judgmental attitudes and prevent medical personnel from providing appropriate care and support.

Another perception that medical personnel may have towards victims of sex trafficking is lack of awareness (Mays, 2020). Many medical professionals may not be familiar with the signs of sex trafficking, which can result in missed opportunities to identify and help victims, with serious consequences for the victim’s health and well-being. Nurses are often the first point of contact for victims of sex trafficking in healthcare settings, and they play a critical role in identifying and responding to these individuals. However, many nurses may lack knowledge, confidence, and training on the signs of sex trafficking, which can hinder their ability to provide appropriate care and support (Mays, 2020).

Problem

The impact of perceptions on treatment of sexual assault victims has been researched and these perceptions can extend to victims of sex trafficking. Therefore, it is important to raise awareness about these issues within the medical field to equip healthcare professionals with the knowledge needed to interact with and support victims of sexual assault and sex trafficking. As previously mentioned, the prevalence of sexual assault and sex trafficking underscores the significance of this awareness. Nevertheless, nursing programs often fail to provide comprehensive education and training on these subjects (Mays, 2020), leaving healthcare professionals ill-prepared to recognize the signs, offer compassionate and culturally sensitive care, and make appropriate referrals for survivors.

This study will highlight the lack of comprehensive knowledge on sexual assault and sex trafficking in nursing programs, which may result in healthcare professionals being ill-prepared to provide compassionate and effective care to survivors of these crimes. Despite the high prevalence of sexual assault and sex trafficking, nursing programs often fail to provide comprehensive education and training on these issues (Mays, 2020). As a result, healthcare professionals may be ill-prepared to recognize the signs and symptoms of sex trafficking and sexual assault, provide compassionate and culturally sensitive care to survivors, and refer them to appropriate resources.

Furthermore, a lack of education and training may inadvertently lead healthcare professionals to perpetuate harmful stereotypes and victim-blaming attitudes, further exacerbating the challenges faced by survivors. Given these concerns, it becomes crucial to critically examine the current state of knowledge, perceptions, and education regarding sexual assault and sex trafficking in nursing programs. Only by addressing these gaps can we ensure that healthcare professionals are equipped to provide compassionate and effective care to survivors of these heinous crimes. if they lack education and training on these sensitive issues. Therefore, it is critical to examine the current state of education, knowledge, and perceptions on sexual assault and sex trafficking in the nursing program.

Purpose of the Study

The purpose of this study is to investigate the existing knowledge and perceptions of nursing students concerning sexual assault and sex trafficking victims and its potential impact on nursing practice. Although some nursing programs might incorporate courses or modules on these subjects, the extent to which they cover the complexities and nuances of sexual assault and sex trafficking is unclear. Furthermore, it is important to examine the educational approaches

used in teaching these topics and how they may influence nursing students' attitudes and behaviors toward survivors of these crimes. Nursing practice can be significantly impacted by the quality and depth of education on these topics in nursing programs, as healthcare professionals who lack comprehensive education and training may not be equipped to provide appropriate care to survivors.

Additionally, the implications of inadequate education, knowledge, and perceptions on sexual assault and sex trafficking in nursing programs may extend beyond healthcare settings, with potentially harmful consequences for survivors seeking justice and support from law enforcement and other social service providers. Therefore, it is critical to explore the current state of education, knowledge, and perceptions on these topics in nursing programs and its implications for nursing practice.

While research has examined the training and expertise of law enforcement and medical staff on sexual assault and sex trafficking (Rutten et al., 2010), studies specifically exploring the association between nursing students' knowledge and perceptions of sexual assault and sex trafficking have been limited. The present study aims to bridge this gape and establish a connection between nursing students' knowledge, perceptions, and education to better prepare nurses for their work with victims of sexual assault and sex trafficking. Understanding the existing baseline of education and awareness among nursing students can aid in tailoring more effective targeted interventions to enhance their ability to care for survivors.

Chapter Summary

The current chapter introduced sexual assault and sex trafficking. It explored how education plays a role in how individuals perceive and treat victims of sexual assault and sex trafficking. Since this topic is understudied this study is exploratory, but based on current

literature, those in the medical field feel ill-prepared to treat victims of sexual assault and sex trafficking. In order to support the claims being made chapter two will consist of the literature surrounding sexual assault and sex trafficking and how medical personnel have been trained to identify and treat victims of sexual assault and sex trafficking. This section will also include a history of how sexual assault and sex trafficking have been viewed. It then explores rape myths and how when medical personnel adhere to those myths it could impact the treatment of victims of sexual assault and sex trafficking. Chapter three addresses the methodology used to investigate the education and perceptions of sexual assault and sex trafficking among nursing students using a quantitative survey design. It includes the subsections of the Sample, Survey Instrument, Measures, and Limitations. The first section includes the overall approach to the study and the characteristics of the participants. The next section (survey instrument) breaks down how the in-person survey is designed. Then the following section will look at the independent and dependent measures based on the research questions. Here it is decided what statistical analysis would best serve the study to find a relationship between the variables in the research questions. Chapter four encompasses the result section which will present the findings of the explored research questions. The fifth chapter will interpret and discuss the results presented in the previous chapter. This section will focus on answering the research questions, as well as providing an explanation for the results obtained. Additionally, the chapter will include limitations of the study, suggestions for future research, and recommendations for practical applications of the findings.

Chapter 2. Literature Review

Sexual assault and sex trafficking are severe and pervasive problems affecting millions worldwide (Asiama & Zhong, 2022; Cunningham & Cromer, 2014). Victims of sex trafficking and sexual assault often require medical attention and support, and medical personnel play a crucial role in identifying and responding to these cases. It has been estimated that more than 20 million individuals around the world are victims of forced labor and or sex trafficking (U.S. Department of State, 2014). Human trafficking is a major issue that generates an estimated $150 billion USD per year, making it the second-largest criminal enterprise in the world (International Labor Organization, 2015). Unfortunately, due to the ease with which this crime goes underreported, it is difficult to determine the exact number of victims in the United States. However, in 2014, 8,414 victims were identified in the Western Hemisphere (U.S. Department of State, 2015). According to research, a significant proportion of trafficking victims in the United States are likely to have come into contact with healthcare professionals during their period of captivity (Richie-Zavaleta et al., 2021; Shandro et al., 2016; Stoklosa et al., 2016). Estimates suggest that this figure ranges between 30% and 88% (Richie-Zavaleta et al., 2021; Shandro et al., 2016; Stoklosa et al., 2016).

These findings highlight the importance of healthcare professionals in detecting and responding to cases of human trafficking, given their potential to serve as a critical point of contact for victims. The purpose of this literature review is to explore the perceptions of medical personnel regarding sexual assault and sex trafficking and to examine how these perceptions influence their practice. First, it is essential to discuss the evolving perspective of sexual assault to see how society has perceived victims of sexual assault and sex trafficking.

Evolving Perspective of Sexual Assault

As stated in Chapter 1, sexual assault has had a long history. In fact, throughout history, sexual assault has been viewed as normal. For example, in ancient Greece and Rome, sexual assault was so common that it was considered a way for men to assert their power over women (Jozkowski & Wiersma-Mosley, 2017). Likewise, in medieval Europe, rape was often viewed as a crime against property rather than against the victim, with women being treated as property (Jozkowski & Wiersma-Mosley, 2017). However, awareness and attitudes began to change with the emergence of movements like the child-saving movement.

A big turning point in history that brought awareness of abuse among children was the child-saving movement, which emerged between 1865 and 1900 and was led by white women from the middle and upper classes (Jozkowski & Wiersma-Mosley, 2017; Langlands, 2009). The importance of the child-saving movement in advancing kids' rights and well-being is one essential subject from this literature. The child-saving movement was founded on the idea that children have inherent rights and dignity and should be protected from exploitation and abuse (Ramsland, 1980). This same principle is at the heart of movements to combat sexual assault, which seeks to prevent the exploitation of vulnerable individuals, including children (Ramsland, 1980).

The child-saving movement significantly impacted sexual assault victims by raising awareness of their vulnerability and advocating for their protection and rights (Ramsland, 1980). The movement's focus on the welfare of children and the prevention of exploitation has been particularly relevant to efforts to combat these forms of violence. The child movement played a crucial role in establishing child welfare agencies and organizations that provide support and resources to victims of abuse and exploitation. Many organizations also worked to raise

awareness of the dangers of sexual assault and trafficking and advocated for stronger legal protections for victims.

In her book "The Way We Never Were," historian Stephanie Coontz examined the changing attitudes towards children throughout history. She argued that the child movement represented a significant shift in how children were perceived and treated (Coontz, 2016). Coontz notes that the child movement emphasized the importance of education, play, and socialization and helped to establish legal protections for children, including child labor laws and mandatory schooling (Coontz, 2016). With the growing awareness of sexual assault, more movements, such as the Anti-rape movement, were being established.

The need to exert control over women led to the development of rape as a weapon. The Anti-rape movement was founded in the 1970s as the second-wave feminist movement started to gain greater public support and influence in the 1960s (DeKeseredy, 2020). During these 20 years, American rape legislation saw a substantial improvement, and the perception of rape in society was also altered (DeKeseredy, 2020).

Many different factors are related to the anti-rape movement. Initially, the general feminist movement contributed to it as women began to speak out about their problems and "second-class citizenship" (DeKeseredy, 2020; Norton, 2021). Women's rights activists now realize the impact they can have if they organize and participate in policy formulation at the local, state, and federal levels because of the success of other campaigns. Second, in the 1960s, topics previously deemed private began to attract public attention, making it easier to bring up sensitive topics like rape in public (Norton, 2021). Among the first reference to rape in the media in the early 1970s were discussions about the treatment of rape within politics. Furthermore, the

recognition of child abuse, in particular, legitimized activist's concerns and government concerns about rape (DeKeseredy, 2020).

Evolving Perspective of Sex Trafficking

Sex trafficking is a human rights issue that has increasingly garnered public attention in recent years, yet there is little empirical research related to this topic (Bono-Neri & Toney-Butler, 2023). Throughout history, there have been efforts to combat trafficking, and by studying these responses, one can learn about what has worked and what has not. For example, the White Slave Traffic Act of 1910 (also known as the Mann Act) was a federal law in the United States that prohibited the transportation of women across state lines for prostitution. While the law was well-intentioned, it was often used to target and criminalize women who were engaged in consensual sexual activity, and it did little to address the root causes of trafficking (Pliley, 2014).

The Mann Act was designed to address the issue of "white slavery," which referred to the trafficking of women and girls for prostitution (White et al. Act, 1910). The act was supported by many progressives and reformers concerned about exploiting women and girls. However, the law was also criticized for its vague and broad language, which could be used to target and criminalize consensual sexual activity. Additionally, the law was often applied in a racist and discriminatory manner, with African American men disproportionately targeted and prosecuted under the law (Pliley, 2014).

The Mann Act helped establish trafficking as a federal crime and paved the way for future legislation to address the issue. However, the law also had unintended consequences, and its limitations and failures highlighted the need for more nuanced and effective responses to trafficking. The Mann Act, despite its limitations, remained a crucial legislation in the fight

against trafficking. Its significance led to the enactment of the Trafficking Victims Protection Act (TVPA) in 2000 (Polaris Project, 2006). The TVPA helped define human trafficking and protected victims from it. For the past two decades, the law has played a significant role in raising awareness about the sufferings of the victims who are oppressed by their traffickers (Polaris Project, 2006). Educational efforts have been made to educate the public and establish protocols to identify victims in various settings. However, gaps still exist in the identification and prevention of adult victimization especially in the healthcare setting (Polaris Project, 2006). The complexity of this crime is a reminder of the ongoing need to address this pervasive issue.

Throughout history, there have been a variety of responses to trafficking, ranging from criminalizing the traffickers and buyers to providing support and rehabilitation for survivors (Whitney, 2022). In many countries, prostitution has been outlawed, which can make it more difficult for people engaged in sex work to seek help or protection from traffickers (Jessica, 2019). This approach has also been criticized for stigmatizing and marginalizing sex workers, who may be vulnerable to exploitation and abuse. Additionally, criminalizing prostitution can increase the demand for illicit sex services, fueling the demand for trafficking (Jessica, 2019; Whitney, 2022).

Trafficking traps people in a variety of coercive settings, including forced prostitution, domestic, manufacturing, and agricultural labor, detention bonds, and the sale of human organs (Jessica, 2019). Traffickers frequently seek victims from at-risk groups or locations by making promises of economic riches, education, security, or love (Tillyer et al., 2021). Victims may be brought in from abroad or maybe "domestically" trafficked within international and local borders.

Because they are subjected to coercion and abuse while being trafficked, victims encounter a wide range of physical and psychological issues (Lederer & Wetzel, 2014). Acute injuries, STDs, problems from coerced or improperly performed abortions, anxiety, traumatic and post-traumatic stress disorder, and suicidality are only a few of the health effects (Tillyer et al., 2021). In addition to these poor health outcomes, victims had restricted access to medical care. Compared to other sex workers, women who are trafficked into the industry are likely to use social and health services (Tillyer et al., 2021).

Access to healthcare may be complicated for trafficked people since they may be held in physical captivity and subjected to physical, sexual, and psychological manipulation (Panda et al., 2021). They may not speak the local language, lack identification, and legal documents, and are uncomfortable in their surroundings. Those who have been trafficked may be reluctant to disclose their abuse even if they were able to contact a health professional. Patients' guilt, blame, and helplessness were common impediments to disclosure in the healthcare industry, as are erroneous beliefs about the healthcare system (Panda et al., 2021).

Healthcare practitioners are in a unique position to assist in identifying, interacting with, and supporting victims of trafficking because there is an elevated chance that these victims will experience acute and chronic health impacts. It is important to note that healthcare facilities provide a promising environment for identifying victims of sex trafficking. In fact, research suggests that between 30-88% of trafficking victims in the US have had at least one encounter with healthcare professionals during their time in captivity (Richie-Zavaleta et al., 2021; Shandro et al., 2016; Stoklosa et al., 2016). There are instances where healthcare professionals have the potential to offer assistance to individuals who may be victims of trafficking (Richie-Zavaleta et al., 2021; Shandro et al., 2016; Stoklosa et al., 2016). One study found that twenty-one

trafficking victims were interviewed from two studies to determine how frequently they interacted with medical professionals. Six of the twenty-one people surveyed in the study reported having contact with the healthcare system while they were still being held captive (Cunningham & Cromer, 2014).

Another study surveyed 180 emergency medicine providers in the United States and found that only 5% had ever been trained on how to respond to victims of human trafficking (Chisolm-Straker et al., 2012). Healthcare practitioners may participate in social services and offer safe places for victims because it is possible to meet patients alone in a healthcare setting (Chisolm-Straker et al., 2012; Cunningham & Cromer, 2014). Healthcare professionals must be aware that abusers can present themselves as loving and caring family members or partners when they bring their victims to the healthcare facility. This makes it challenging for professionals to recognize a victim of abuse (Becker & Bechtel, 2015; Chisolm-Straker et al., 2012; Cunningham & Cromer, 2014). Some hospitals have addressed the issue of identifying and treating by implementing training and protocols, but as of recent years, the number of hospitals that practice this type of training is less than 1% (Barrows, 2015). Naturally, without education and training, there are myths that build a framework as to what sex trafficking entails and what it should look this. These myths can impact identifying and treating victims of sexual assault and sex trafficking.

Myths

Societal views of sexual violence are powerful, often harmful, and serve to silence survivors from disclosing an assault. They are primarily based on rape myths, the false beliefs that shift blame for sexual violence from the perpetrator to the survivor, and strongly influence the perception and response to certain phenomena, both as individuals and as a collective society.

(Burt, 1980). Burt's (1980) seminal article on rape myth acceptance served as the psychological literature's first introduction to rape myths. Burt asserted that culturally accepted beliefs about the nature of rape, its victims, and its perpetrators contributed to the crime's continuance by placing the blame on the victims and downplaying the perpetrator's guilt. False notions like "any woman can resist a rapist if she wants to" (Burt, 1980) are examples of rape myths. Further investigation into rape myths revealed that men accepted them more readily than women (Walfield, 2018) and that greater acceptance of rape myths was linked to a higher propensity to place the blame on the victim. These results revealed that acceptance of the rape myth led to victim disbelief, stigmatization, and blame.

When victims are not believed, there are practical repercussions. One significant conclusion is that victims were less likely to disclose and, as a result, were less likely to obtain victim help and social support when they doubted, they would be believed (Asiama & Zhong, 2022). Social factors also played a role in the psychological and emotional effects of rape on victims. According to research, poor responses to disclosures and a lack of social support after rape were linked to unfavorable consequences for the victim, including post-traumatic stress disorder (Asiama & Zhong, 2022). The outcome of treatment at the hospital was also impacted by the victims' doubt and myth acceptance.

Rape myths can have a significant impact on the way that medical personnel treat survivors of sexual assault. The early history of medical personnel being involved with victims of sex crimes can be traced back to ancient times. In ancient Greece, physicians were called upon to examine women who claimed to have been raped. They would conduct physical examinations and provide medical evidence to support the woman's claim (Jouk et al., 2021). However, their role was often limited to providing medical evidence to support the woman's claim rather than

giving treatment or support. In some cases, women who reported sexual assault were even punished for "bringing shame" upon their families or communities (Elmohandes, 1970). During the Middle Ages, medical professionals were also involved in investigating cases of sexual assault. They would examine victims for signs of injury and collect evidence for court use. However, their methods were often crude and ineffective. For example, they would use the "treading water" test, in which a suspected rapist would be thrown into a pond or river, and if he floated, he was considered guilty. If he sank, he was considered innocent (Mellinger, 2006).
In the 19th century, medical professionals began to play a more significant role in the treatment of victims of sexual assault. In 1878, a French physician named Auguste Ambrosie Tardieu published a book titled "Etude Medico-Legale sur Les Attentats aux Moeurs" (Medico-Legal Study on Attacks on Morals), which was one of the first works to document the physical and psychological effects of sexual assault (Tardieu, 1878).

In the early 20th century, medical professionals began to develop protocols for the examination and treatment of victims of sexual assault. In the 1970s, the feminist and anti-rape movements led to the establishment of the first rape crisis centers in the United States (DeKeseredy, 2020). These centers provided medical and emotional support to victims of sexual assault and helped raise public awareness.

Today, medical professionals play a critical role in the treatment of victims of sexual assault. They provide forensic medical examinations, collect evidence, and offer support and counseling to victims. Many medical professionals receive specialized training in the treatment of sexual assault victims to ensure that they can provide the best possible care. Additionally, advances in forensic technology have made it possible to collect more accurate and reliable evidence, which can be used to prosecute perpetrators of sexual assault.

The way medical personnel interact with sexual assault victims has evolved as awareness and understanding of sexual assault and trauma have increased. In the past, victims of sexual assault were often not believed, and medical personnel may have approached them with skepticism or even blame. Today, medical personnel are trained to be trauma-informed and to provide compassionate care to victims of sexual assault. They are trained to approach victims sensitively and listen to their concerns and needs. They also understand the importance of preserving evidence for potential legal proceedings (Anderson & Overby, 2020). However, research has found that with the rooted history of rape myths, medical personnel have yet to become educated on how to treat a victim of any sexual abuse due to the myths that have been engraved throughout history (Anderson & Overby, 2020). If medical personnel believe in rape myths, they may unintentionally contribute to victim blaming, stigmatization, and a lack of appropriate care for survivors. A study by Bechtel and colleagues (2008) examined the perceptions of emergency department personnel regarding sexual assault. The study found that many emergency department personnel lacked knowledge about sexual assault and were uncertain how to respond to these cases. The study also found that some emergency department personnel held negative attitudes toward sexual assault survivors, which could lead to inadequate care and support.

An appropriate understanding of sexual assault can influence knowledge of sex trafficking in several ways. Sexual assault is a form of violence that involves the exploitation of someone's body without their consent, and trafficking is a form of exploitation that consists of the recruitment, transportation, and exploitation of individuals for forced labor, sexual exploitation, or other forms of exploitation.

According to the National Human Trafficking Resource Center (Polaris Project, 2006), the difficulty in identifying trafficking victims is due to the spread of misunderstandings about the crime. If medical personnel are confused about the nature and characteristics of trafficking and its victims, myths could make it challenging to identify the victims (Menaker & Franklin, 2013). In contrast to the hardened, promiscuous youngsters who are perceived as willing sex workers, victims of sex trafficking are, for instance, depicted in the media as young, innocent, and defenseless children (Menaker & Franklin, 2013).

Research on rape myths has been extensive, but less is known about how people perceive victims of sex trafficking. Few empirical studies have mainly looked at misconceptions relating to human trafficking up to this point. Similar to rape myths, one study found that men were less likely than women to believe depictions of sex trafficking and more inclined to blame the victim for the crime (Cunningham & Cromer, 2014). Men were also shown to be more supportive of human trafficking myths (Cunningham & Cromer, 2014). The perceptions of sexual assault and sex trafficking may affect how victims are handled in a medical setting. This supports why Labeling Theory would be the best theory to help and guide the research.

Labeling Theory

Before exploring more of the research, it is essential to understand the criminological theory Labeling Theory better. The Labeling Theory posits that individuals assume roles based on societal labels, which can perpetuate deviant behavior (Tannenbaum, 1938). Misunderstandings and labels attached to sexual assault and sex trafficking victims can shape society's response and victim self-blame. Understanding this theory is crucial in guiding the research to protect survivors from sexual abuse.

The Labeling Theory was first introduced in the book Crime and the Community by Tannenbaum (1938). Tannenbaum believed that the process of making a criminal involved identifying and segregating those who were labeled as criminals. This thought festered into the idea that those labeled become or step into the identity in which they have been tagged. This can happen subconsciously among those who are being labeled. During the 1960s and 1970s, this concept garnered more attention as individuals were believed to assume their labeled roles and commit deviant acts based on this identity. Society and social norms would determine what constituted deviant behavior. However, when humans define deviant behavior, there is often bias. There remains a common consensus that abnormal behavior is an act that goes against rule-breaking behavior (Tannenbaum, 1938). Those who break the rules can be labeled deviant. Theorists have argued against the idea that individuals become deviant once society knows they have broken the rules. Tannenbaum believed that if a young person is labeled "evil," they are more likely to act out based on their identity (Tannenbaum, 1938).

Believing a label is problematic because it shapes how society responds to survivors of sexual assault and sex trafficking and is internalized by survivors, leading to self-blame for their assault (Anderson & Overby, 2020). Most survivors open up to at least one person, such as a friend or relative, although the majority do not file formal reports; it is estimated that less than 20% of all assaults are reported (Anderson & Overby, 2020). The likelihood of victim-blaming responses from social service providers like medical professionals may have contributed to this low percentage (Anderson & Overby, 2020).

This theory can apply to the researched topic by showing how perceptions of sexual assault and sex trafficking victims can impact the way they are treated. In this study, Labeling Theory was used to determine if medical personnel adhered to the myths of sexual assault and

sex trafficking in the treatment of victims impacted. The role of education of medical personnel was evaluated to see if their treatment of victims of sexual assault and sex trafficking was affected.

Nursing and Education

An essential and yet unconsidered part of a holistic response is training healthcare professionals on how to recognize, evaluate, and refer potential victims of human trafficking as well as those who may be at risk of being trafficked. Although training programs, in-services, and other educational resources have been created for law enforcement settings, the majority of health professionals have little knowledge of human trafficking and few opportunities to receive education or training that is specific to health providers and health sector responses (Becker & Bechtel, 2015; Chisolm-Straker et al., 2012; Cunningham & Cromer, 2014).

Research on medical personnel responding to victims of human trafficking is a new area of study, but there is a growing recognition of the important role that medical professionals can play in identifying and treating victims of trafficking. One study conducted by Stoklosa and colleagues (2016) surveyed emergency department physicians and nurses in a large urban hospital in the United States and found that most respondents had encountered patients they suspected were victims of human trafficking, but only a tiny percentage had received training on identifying and responding to trafficking. The study also found that many respondents felt unsure about how to report suspected trafficking and expressed concern about potential legal or ethical implications (Stoklosa et al., 2016).

With an emphasis on training, one study evaluated the effectiveness of a training program for medical professionals in identifying and responding to trafficking (Raker, 2020). The study found that the training program improved participants' knowledge and confidence in identifying

and responding to trafficking and increased their likelihood of reporting suspected cases (Raker, 2020). Overall, research suggests that medical professionals can play an important role in identifying and responding to human trafficking but that more training and support are needed to ensure they have the knowledge and skills to do so effectively. Medical professionals can help identify victims of trafficking, provide necessary medical care, and connect them with appropriate resources and support services. It is also vital to provide limited research on college nursing students' knowledge and perceptions of trafficking victims since the current study is centered on this.

In many hospitals and clinics, specially trained nurses called Sexual Assault Nurse Examiners (SANE) are available to provide care to sexual assault victims (Veidlinger, 2016). These nurses have specialized training in collecting evidence, providing medical care, and supporting victims through healing. Medical personnel also work closely with victim advocates and support services to ensure that victims have access to resources such as counseling, legal assistance, and emergency housing.

Studies (Cunningham & Cromer, 2014; Raker, 2020) have also highlighted the importance of medical personnel communicating effectively with sexual assault victims, particularly in terms of explaining medical procedures and ensuring informed consent. Medical personnel should also be aware of the potential for re-traumatization during the examination and should take steps to minimize the risk of further harm. In addition, research has identified the importance of medical personnel working collaboratively with law enforcement and victim advocacy organizations to ensure that sexual assault victims receive comprehensive and coordinated care (Raker, 2020). Another study by Amstadter and colleagues (2016) found that medical personnel who had received training on sex trafficking were more likely to recognize

potential victims of trafficking and provide appropriate care. However, the study also found that many medical personnel lacked awareness and understanding of sex trafficking, leading to missed opportunities to identify victims and aid. With this limited research, it is essential to address what is known to researchers currently.

Current State of Nursing Personnel

As stated above, Human Trafficking is a global problem that affects millions of people, and healthcare providers play a crucial role in identifying and supporting victims of trafficking (Asiama & Zhong, 2022; Becker & Bechtel, 2015; Chisolm-Straker et al., 2012; Cunningham & Cromer, 2014; Polaris Project, 2006). As future healthcare professionals, nursing students need to be knowledgeable about human trafficking and its impact on individuals and communities. Only a handful of studies have explored nursing students' perceptions of human trafficking, including their knowledge, attitudes, and beliefs about the issue. There are opportunities for nurses to make a difference when it comes to helping victims of sex trafficking.

However, as at least one research has shown, these opportunities are frequently passed up. Researchers found that even while 28% of human trafficking survivors in the San Francisco, Los Angeles, and Atlanta areas had contact with medical professionals while they were being held captive, the professionals were unaware that their patients were being trafficked (Sabella, 2011). It is also important to remember that clinicians may run into victims of trafficking in a variety of locations outside of the hospital emergency rooms. For instance, several victims in the previously mentioned study were taken to dentists and doctors' offices (Sabella, 2011). Another study surveyed nursing students and found that many of the students had some knowledge of human trafficking, but their understanding of the issue was limited. Students then expressed a need for more education and training on human trafficking and its signs and symptoms. What the

study found is that the nursing courses did not actually teach the students about trafficking, but it was the media that influenced their knowledge (Scannell & Conso, 2020).

Similar to the last study, Nordstrom (2020) found that nursing students were aware of human trafficking but did not realize that medical personnel often encounter the victims. They also had limited knowledge of healthcare providers' role in identifying and responding to trafficking. It is common for universities to email out training on sexual assault and how to respond if one is in that situation, but since human trafficking is a recent discussion, there is limited training at universities (Nordstrom 2020). To date, no empirical work has examined nursing students' education in identifying victims of sex trafficking.

Current Study

In order to fill the gaps in the current literature, this study investigated nursing students' confidence in knowledge, identification, and treatment of sexual assault and sex trafficking victims. This will be assessed through surveys distributed to a sample of nursing students in their first, second, third, fourth, and fifth semester of nursing school. The current study examines the following research questions:

Table 1
Research Questions and Hypotheses

R1*:* What are nursing students' perceptions of medical personnel's abilities to identify and treat victims of sexual assault and sex trafficking
H1: Nursing students would have a higher perception of medical personnel's ability when it comes to identifying and treating victims of sexual assault and sex trafficking.
R2: How does the adherence to rape myths impact nursing students' knowledge of sexual assault and sex trafficking?
H2: Individuals with higher levels of knowledge about sexual assault and consent were less likely to believe in common rape myths.
H3: Those with lower levels of knowledge were more likely to believe in such myths.

R3: What are the perceptions of nursing students' abilities when it comes to identifying and treating victims of sexual assault and sex trafficking?

H4: Nursing students would have a higher confidence level when identifying and treating victims of sexual assault compared to sex trafficking victims

R4: Are there certain factors that impact the perceptions of nursing students' abilities when it comes to identifying and treating victims of sexual assault and sex trafficking?

H5: Semester in Nursing program and whether one has taken a course at the university addressing sexual assault and sex trafficking will impact perceptions of nursing students.

Chapter Summary

The current chapter touched on the current literature surrounding the topic of awareness of sexual assault and sex trafficking among medical personnel. As previously stated, chapter three addresses the methodology used to investigate the education and perceptions of sexual assault and sex trafficking among nursing students using a quantitative survey design. Chapter four encompasses the result section, which will present the findings of the explored research questions. The fifth chapter will interpret and discuss the results presented in the previous chapter. This section will focus on answering the research questions as well as providing an explanation for the results obtained.

Conclusion

Overall, these studies suggested that nursing students and medical personnel had some knowledge of sexual assault and human trafficking, but their understanding and perceptions of these issues were often limited and skewed. Looking at the history of the child-saving movement and the Anti-rape movement can further understand how to protect others from sexual abuse, whether sexual assault or sex trafficking. History highlights how easy it is for perceptions of sexual assault and sex trafficking to be skewed. Through the Child Saving movement, it was

brought to the public's attention that home abuse is inappropriate. Similarly, the Anti-Rape movement exposed the myths individuals believed about victims of sexual assault and rape. By studying the history of sexual assault, it can help further educate medical professionals. It is also essential to study sex trafficking since it is new in research. By studying the history of sex trafficking, one can better understand the social, economic, and political factors that contribute to its existence. Examining the response to sex trafficking in the past can help researchers identify strengths and weaknesses in addressing sex trafficking in the present and the future. By taking small steps in educating medical personnel and nursing students, appropriate help with identifying and preventing sexual assault and sex trafficking can be achieved.

Chapter 3. Methodology

This chapter describes the methodology used to investigate the knowledge and perceptions of sexual assault and sex trafficking among nursing students using a quantitative survey design. As discussed, the purpose of this study was to understand how nursing students are educated on these topics and to explore their knowledge and perceptions of sexual assault and sex trafficking from a nursing perspective. This chapter will discuss the sampling strategy, including the program to be contacted. Next, it will address the survey instrument, diving into how the survey was constructed. Following, the research questions were broken down to demonstrate how each variable was measured. Lastly, an overview of the proposed plan of analysis and statistical techniques used to test the hypotheses was provided.

Data

Sample

As of 2023, there are 52 nursing schools in Tennessee (Wright, 2023). It was essential to select a sample of nursing students from one of the accredited nursing programs in Eastern Tennessee. The current study utilized both convenient sampling and stratified random sampling in hopes of finding a sample that could best represent the population. A public university in the southeastern United States served as the study's source of participants, with an estimated 450 enrolled on-ground nursing students. Students studying nursing were polled. There are eight hybrid, online, and in-person nursing programs available. To ensure a suitable sample size, the primary researcher surveyed 200 active on-ground nursing students. A stratified random sampling approach was used to represent different levels of nursing education (i.e., first year, second year, third year, fourth year, fifth year). For presently licensed registered nurses, the Southeastern Public University provides a fully online RN to BSN curriculum at the

undergraduate level. Additionally, entirely online, the Master of Science in Nursing program offers several specializations, including nursing administration, psychiatric mental health nurse practitioner, nursing education, and family nurse practitioner. Moreover, the university provides blended/online doctoral programs, such as a Ph.D. in nursing and a Doctor of Nursing Practice.

Survey Instrument

Data was collected using an in-person survey. The voluntary survey consisted of 58 Likert scale questions that covered participants' demographics, knowledge of sex trafficking and sexual assault, confidence levels in treating and identifying victims, and perceptions of these issues (See Appendix 1 for the survey). On average, the survey took ten minutes to complete. The first portion of the survey asked participants to answer eight demographic questions (e.g., age, gender, year in school, and semester in the nursing program). These demographic questions were drawn from the literature that also found that level of education had an impact on the knowledge and perceptions of victims of sexual abuse and sex trafficking (Sabella, 2011).

The second section included nine questions related to enrollment characteristics and nursing students' perceptions of medical personnel identifying and treating victims of sexual assault and sex trafficking. These dichotomous enrollment questions (yes or no) assessed if nursing students have taken a course in their program that covered sexual assault or sex trafficking, whether they are registered in the SANE program, and whether they have learned about sex trafficking outside the nursing program. Such questions were ideal for the study's goal of determining the amount of education on sexual assault and sex trafficking among nursing students at this university. The other half of the second section contained four Likert-scale items (ranging from (1) not equipped at all to (4) very well equipped). Refer to Appendix 1 to see the Likert scale items that were used. As stated above, the goal of asking these questions was to

assess the current perceptions nursing students have of medical personnel and their ability to identify and treat victims of sexual assault and sex trafficking. Research has consistently found that many medical personnel do not feel equipped to identify victims of sexual assault and sex trafficking (Raker, 2020; Scannell & Conso, 2020). One study found that nurses who had received specialized training in identifying and caring for victims of sexual violence felt significantly more confident and prepared to handle such cases than those who had not received such training (Scannell & Conso, 2020).

The third section comprised a series of five Likert-scale items created by the research, related to the level of confidence in terms of identifying sexual assault victims. Items ranged from (1) not confident at all to (5) completely confident. This section was added to gauge the level of confidence among nurses in treating victims of sexual assault. The questions covered the level of confidence when it comes to treating, identifying, protecting evidence, preserving evidence, and collecting evidence from victims. These questions were inspired by the literature that exposed the protocol for nurses once they come in contact with a victim of sexual assault (Bechtel et al., 2008). When nurses who are not SANE (Sexual Assault Nurse Examiners) suspect abuse in their patient, they follow a standard protocol. The nurse reports the suspicion to the physician, nurse practitioner, or physician assistant (Amanda Bucceri Androus, 2023). If the patient is with the suspected abuser, the nurse must separate them. Separating the victim from the pimp in trafficking cases can be difficult, but a study found that nurses can use phrases such as "We need you to sign a paper out in the lobby" to separate them (Amanda Bucceri Androus, 2023). After victims are separated from their potential abusers, the SANE nurse is required to ask them screening questions. If the SANE nurse is unable to see the patient immediately, it is

crucial for the nurse to prevent the patient from using the restroom or removing clothing, as this could lead to loss of evidence (Amanda Bucceri Androus, 2023).

The second half of the survey section, questions 31-37, evaluated the level of knowledge of sexual assault. Bechtel and colleagues (2008) found that it is normal for nurses certified in SANE (Sexual Assault Nurse Examiner) to have been trained on the correct protocol for handling evidence, but nurses who are not certified lack the knowledge when it comes to managing evidence. Questions ranged from "How confident are you that you can define sexual assault" to "I know how to communicate effectively with a patient of sexual assault".

The fourth section comprised nine questions that assessed the myths regarding sexual assault and sex trafficking. These questions were pulled from Anderson and Overby (2020), that researched rape myths among college students. The study found that those who were likely to believe in rape myths such as (i.e., sexual violence is the victim's fault if she dresses "sexy") could impact the way they treated a victim of any sexual abuse (Cunningham & Cromer, 2014). The 9 Likert-scale items ranged from (1) strongly disagree to (5) strongly agree). It is important for nurses to become educated on rape myths so that they can treat victims of sexual violence without stigma. Another study surveyed 175 nurses and found they tended to blame victims of sexual assault for their own victimization and held beliefs that minimized the harm caused by rape (Cunningham & Cromer, 2014). These studies suggested that nurses play a critical role in caring for survivors of sexual assault, but often beliefs about sexual assault prevented nurses from providing the best care.

Lastly, the survey included a section composed of twelve items in which respondents were tasked to assess their level of confidence ((1) not confident at all to (5) completely confident) when identifying and treating victims of sex trafficking. The literature on confidence

levels when identifying victims of sex trafficking is limited, but a small handful of studies found that nursing students who had not received training or education on human trafficking lacked confidence in treating and identifying victims of sex trafficking (Raker, 2020; Sabella, 2011; Scannell & Conso, 2020). The following section will discuss the research questions and recommend the most appropriate level of measurement.

Research Question's

This section covers the established research questions for this study and then discusses how each variable was measured. These questions were centered on knowledge and perceptions of sexual assault and sex trafficking victims from nursing students' perspectives. With this framework, researchers can decide whether different factors like education have an impact on the knowledge and perceptions of victims of sexual assault and sex trafficking.

R1**:** *What are nursing students' perceptions of medical personnel's abilities to identify and treat victims of sexual assault and sex trafficking?*

Research question 1 addresses nursing students' perceptions of medical personnel's abilities to identify and treat sexual assault and sex trafficking victims were measured. This research question was mainly looking at the impact of perceptions. *Perceptions* are measured by referring to the nursing students' beliefs, attitudes, and values related to sexual assault and sex trafficking.

The study measured the variables that determined how nursing students viewed healthcare professionals. The survey included questions such as, "*How well do you think first responders and healthcare professionals are equipped to identify and treat victims of sexual assault and sex trafficking*?" The researcher analyzed the data by running descriptive statistics on the perspectives of nursing students. The survey comprised four questions on the perceptions of

medical personnel. The hypothesis was that nursing students would have a higher perception of medical personnel's ability when it comes to identifying and treating victims of sexual assault and sex trafficking (H1). The descriptive statistics analysis was conducted to determine how nursing students viewed medical professionals already working in the field.

R2: *How does the adherence to rape myths impact nursing students' knowledge, identification, and treatment of sexual assault and sex trafficking?*

Research question 2 sought to understand if the adherence to rape myths impacted nursing students knowledge, identification, and treatment of victims of sexual assault and sex trafficking**.** The dependent variables were *confidence in knowledge of sexual assault and knowledge of sex trafficking and confidence in identification and treatment*, while the independent variable used was *adherence to rape myths* which was eventually coded to *adherence to myths*. Myths were measured by presenting statements like "the victims of rape are always women" or "a woman who willingly drinks alcohol bears some responsibility for being raped" Then the respondent must choose if they ((1) strongly disagree to (5) Strongly agree) to these statements. The statements asked were pulled from a previous study that studied how rape myths can impact how medical personnel care for their patients (Anderson & Overby., 2020). Also, another statement was pulled from Bert's (1980) journal regarding rape myths and cultures, which states "It is acceptable for the nurse or physician to question children in detail about their sexual assault in the emergency department". Bert (1980) emphasized that rape myths could impact the level of treatment. The relationship between knowledge and adherence to rape myths was explored using statistical analysis. It was hypothesized (H2) that individuals with higher levels of knowledge about sexual assault and consent were less likely to believe in

common rape myths. In comparison, those with lower levels of knowledge were more likely to believe in such myths (H3).

R3: *What are the perceptions of nursing students' abilities when it comes to identifying and treating victims of sexual assault and sex trafficking?*

The study analyzes the connection between perceptions and the identification/treatment of victims of sexual assault and sex trafficking. Descriptive statistics and running mean scores were used for research question 3. It was believed that nursing students who were trained to identify and treat victims of sexual assault and sex trafficking were more confident in their own ability to treat and identify victims, while those who had not received training had perceptions that lacked confidence (H4). Perceptions were measured by asking questions and presenting statements on the level of confidence when it comes to identifying and treating victims of sexual assault and sex trafficking. For example, one of the questions asked was "How confident are you in collecting evidence in cases of sexual assault?" ((1) Not confident at all (2) Slightly confident (3) Somewhat confident (4) Fairly confident (5) Completely confident). One of the statements presented was "I am confident with the medical protocol for a sex trafficking victim."

Identification was measured by asking a series of questions such as: "I know how to communicate effectively with a patient suspected of being sex trafficked" and "I know where sex trafficked persons can obtain nonmedical services such as (housing, legal, immigration, employment, and food assistance)." Some of the knowledge-based questions were pulled from a survey researching knowledge of sex trafficking (Cunningham & Cromer, 2014). As previously stated, the data collected from the study was then analyzed using descriptive statistics to determine whether there was a significant difference in perceptions of nursing students' abilities to treat and identify victims of sexual assault and sex trafficking. Similar to research question 2,

a mean score comparison was used here. Descriptives were run on perceptions, identification, and treatment, and then those mean scores were compared to see if there was a relationship between the variables.

R4: *Are there certain factors that impact the perceptions of nursing students' abilities when it comes to identifying and treating victims of sexual assault and sex trafficking?*

Exploring the relationship between different demographic factors, identification, and treatment of sexual assault and sex trafficking victims was evaluated by using a linear regression model. Nursing education that includes training on identifying and treating victims of sexual assault and sex trafficking may better prepare nurses to provide high-quality care to these vulnerable populations. The researcher hypothesized that age, semester in the nursing program, and education on sexual assault and sex trafficking impact knowledge and confidence when treating and identifying victims of sexual assault and sex trafficking (H5). Education was one of the factors measured in the first section of the survey by asking a series of questions such as level of education, whether or not they are in pre-nursing, and if they answered yes, then asked what semester they are in the nursing program: ((1) First semester (2) Second semester (3) Third semester (4) Fourth semester (5) Fifth semester). There was also a series of yes or no questions asking if they had taken a course at the given university on sexual assault or sex trafficking. They were also asked if they had taken a course outside of the University to help educate them on sexual assault or sex trafficking. If they answered (yes) then they were asked where they have learned about sexual assault and sex trafficking ((1) Online resources (2) Training programs (3) Conferences/Events (4) Books and films (5) Community Programs (6) Other). The information from this survey question helps to control outside variables that could impact education. It was

essential to also look at gender, experience in the field, and age to see if those factors had an impact on identification and treatment.

Identification and treatment in this research question were measured by asking a series of questions regarding knowledge of protocols for medical personnel when it comes to identifying and treating victims of sexual assault and sex trafficking. For example, a question used to assess knowledge was: “I understand the psychological health consequences of sexual assault and sex trafficking” or “I know where sexual assault persons can obtain nonmedical services (such as housing, legal, immigration, employment, and food assistance” (1)) Not confident at all (2) Slightly confident (3) Somewhat confident (4) Fairly confident (5) Completely confident). Logistic regression was used to assess if demographic variables affected identifying and treating victims of sexual assault and sex trafficking. These findings could have important implications for nursing education programs, as it informs if specialized training on identifying and treating victims of sexual assault and sex trafficking should be incorporated into nursing curriculums to better prepare future nurses for providing care to these vulnerable populations. To gain an understanding of the findings, it was imperative to analyze each research question.

Analysis

In evaluating the established hypotheses, data analysis proceeded to assess two variables: perceptions (confidence in identifying and treating) and confidence in knowledge. First for research question 1, descriptive statistics were used to summarize the characteristics of the participants and the variables of interest. This includes calculating means, standard deviations, frequencies, and percentages for *gender, age, race, semester in the nursing program, experience in the medical field, taking a course at ETSU that addresses sexual assault, taking a course at ETSU that addresses sex trafficking, learned about sex trafficking outside of ETSU, knowing*

someone who has been sexually assaulted, how soon should one seek medical attention after an assault, and *speed of collecting evidence* (see Table 2 for a comprehensive summary). Doing so allowed for an understanding of data distribution and provided insight into levels of knowledge and perceptions.

Second research question 2 sought to understand if the adherence to rape myths impacted nursing students confidence in knowledge, identification, and treatment of victims of sexual assault and sex trafficking. Composite scores were generated to ensure that the questions surrounding rape myths, knowledge, identification, and treatment, could fit into five categories (myths, confidence in knowledge of sexual assault, confidence in knowledge of sex trafficking, level of confidence identifying and treating sexual assault, and level of confidence identifying and treating sex trafficking). An alpha score was generated for myths to gauge the internal consistency of this scale. For example, adherence to rape myths is a composite measure that was formed by combining items related to myths of sexual assault and sex trafficking A Likert scale was obtained for the sample, ranging from (1) strongly disagree (5) strongly agree) with eight questions total: *The victims of rape are always women, sexual violence can be the victim's fault if she dresses sexy, leads someone on, or says "no" when she really means "yes", The motive for rape is the result of uncontrollable sexual urges, most sexual violence including child sexual violence, is committed by strangers, in cases of child sexual assault, injuries are usually obvious and easy to see, a victim who willingly drinks alcohol bears some responsibility for their rape, a victim who does not report rape within 48 hours will not be able to press charges against the perpetrator due to lack of evidence, and it is acceptable for the nurse of physician to question children in detail about their sexual assault in the emergency department*.

Another composite score was generated to ensure that the questions relating to knowledge of sexual assault would be reliable. The questions that were used to determine the level of knowledge were on a Likert scale that ranged from (1) Not confident at all (5) Completely confident). There were seven questions total: *How confident are you that you can define sexual assault, I am confident with the medical protocol for a sexual assault victim, I know how to communicate effectively with a patient of sexual assault, I am aware of the extent of sexual assault in my state, I understand the psychological health consequences of sexual assault, I know where sexual assault persons can obtain nonmedical services (such as housing, legal, immigration, employment, and food assistance).* An alpha score was generated for *knowledge of SA* to gauge the internal consistency of this scale. The value (α= .894) was above what is generally considered sufficient (.70), showing that the scale is reliable for assessing knowledge of sexual assault.

A composite score was also generated looking at the confidence in knowledge of sex trafficking. Since the survey had different sections on knowledge of sexual assault and knowledge of sex trafficking, it was important to create a separate composite measure. Similar to knowledge of sexual assault, the questions that were used to determine the level of knowledge of sex trafficking were on a Likert scale that ranged from (1) Not confident at all (5) Completely confident). There were seven questions total: *How confident are you that you can define sex trafficking, I am confident with the medical protocol for a sex trafficking victim, I know how to communicate effectively with a patient of sex trafficking, I am aware of the extent of sex trafficking in my state, I understand the psychological health consequences of sex trafficking, I know where sex trafficked persons can obtain nonmedical services (such as housing, legal, immigration, employment, and food assistance).* An alpha score was computed to determine if

the questions could be grouped into one variable. The value (α= .850) was above what is generally considered sufficient (.70), showing that the scale is reliable for assessing knowledge of sex trafficking.

Lastly, composite scores were generated for the questions surrounding confidence in identifying and treating victims of sexual assault and sex trafficking. A Likert scale was created that ranged from (1) Not confident at all (5) Completely confident). There were five questions that were grouped together to create a composite measure of the *Level of confidence in terms of identifying and treating victims of S.A.* The questions consisted of, *how confident are you in identifying a sexual assault victim, how confident are you in treating or caring for a sexual assault patient, how confident are you in collecting evidence in cases of sexual assault, how confident are you in protecting (e.g. clothing from being discarded) evidence in cases of sexual assault, and how confident are you on preserving (swabs of body fluids) evidence in cases of sexual assault.* A reliability score was calculated coming out with an alpha score of (α= .838). This ensures that the questions asked are reliable enough to fit into one variable.

The last composite score that was computed grouped together like variables that looked at confidence levels in terms of identifying and treating victims of sex trafficking. The questions asked were: *how confident are you in identifying a sex trafficking victim, how confident are you in treating or caring for a sex trafficking patient, how confident are you in collecting evidence in cases of sex trafficking, how confident are you in protecting (e.g. clothing from being discarded) evidence in cases of sex trafficking, and how confident are you on preserving (swabs of body fluids) evidence in cases of sex trafficking.* After running a reliability test the alpha score was (α= .891) this affirmed that the questions asked were reliable to access confidence in identifying and

treating victims of sex trafficking. Please refer to Table 3 to see the mean scores of each composite measure.

After obtaining the mean score and running a reliability test, it was important to run correlations between the composite measure *myths, knowledge of sexual assault, knowledge of sex trafficking, level of confidence in terms of identifying and treating sexual assault, and level of confidence in terms of identifying and treating sex trafficking.* Adherence to rape myths was hypothesized to influence knowledge, identification, and treatment. Pearson correlation coefficients were calculated to see if myths, knowledge, identification, and treatment were significant. Correlations are appropriate to determine if there is a significant linear relationship between two interval-ratio level variables. A correlation test produces a Pearson *r* value which ranges from -1 to +1. A Pearson r value of one would determine a perfect positive linear relationship, while a score of -1 would determine not a perfect negative linear relationship. A score of zero would indicate that there is no relationship between the variables. If the value from the correlation will either be positive or negative. A positive value means that as one variable increases, the other will also, or as one variable decreases, the other variable will decrease. If the value is negative, this means that as one value increases, the other will decrease.

Regression analysis was then run for each dependent variable. Regression allows for several independent variables to be analyzed while determining the relative importance of each variable in predicting the dependent variable. Linear regression computes an Adjusted R-squared statistic that determines the variance for all variables in the equation. For each independent variable, a beta score is calculated that allows for comparing each independent variable to all other independent variables in the equation. The current study employs a series of linear

regression analyses for each dependent variable (Knowledge of S.A., Knowledge of S.T., Confidence in S.A., Confidence in S.T.)

The aim of research question 3 was to gauge the abilities of nursing students in identifying and treating victims of sexual assault and sex trafficking. The approach involved calculating the running mean scores for both composite measures, namely the level of confidence in dealing with sexual assault and sex trafficking cases. This methodology was deemed appropriate for addressing the research question and related hypotheses.

Lastly, research question 4 looked at if there was a significant relationship between demographic factors and confidence levels when identifying and treating victims of sexual assault and sex trafficking. Pearson's correlation coefficients were generated for the variables in this research question. Correlations are appropriate to determine if there is a significant linear relationship between two interval-ratio level variables. The variables included in the correlation matrix are race, gender, semester in the nursing program, years in the medical field, taking a course at university that addresses sexual assault, taking a course at university that addresses sex trafficking, learning about sex trafficking outside the university, and if one has known a sexual assault victim.

Limitations

Although this study provided valuable insights into identifying and treating victims of sexual assault and sex trafficking, it has certain limitations. Firstly, the sample obtained for the study was not diverse enough, with most participants being white females (87%). This could lead to a biased finding that males are more confident than females. Therefore, it is crucial to obtain a larger sample of males to validate the results and determine if males are indeed more confident in this area.

The study also desirability bias. However, it provided valuable insights into the then current state of education on sex trafficking and sexual assault in nursing programs. The findings could have helped in the development of evidence-based educational interventions that would equip nursing students with the necessary knowledge and skills to provide effective care for survivors of these crimes. This, in turn, could have had important implications for nursing practice.

Conclusion

This chapter focused on the methods used to better understand if certain demographic factors impact the perceptions, identification, and treatment of victims of sexual assault and sex trafficking. The following chapters will include a result section and a discussion section. The result section will present the findings of the explored research questions. While the fifth chapter will interpret and discuss the results presented in the previous chapter. This section will focus on answering the research questions, as well as providing an explanation for the results obtained. Additionally, the chapter will include limitations of the study, suggestions for future research and recommendations for practical applications of the findings.

The survey design used in this study allowed for a comprehensive understanding of nursing students' knowledge and perceptions of sex trafficking and sexual assault in the nursing community. As the literature suggests, the current knowledge and perceptions on sexual assault and sex trafficking are limited and understudied among nursing students. Some findings suggest that nursing students do not feel confident in their ability to determine a victim of sex trafficking. Since medical personnel are a point of contact for victims of sexual assault and sex trafficking it is important that those going into the medical field are educated on how to identify a victim of sexual assault and sex trafficking. Through education, nursing students' knowledge and

perceptions of these important public health issues can improve. The results of this study may help further expand the literature and research on this topic.

Chapter 4. Results

This chapter will cover the results of the statistical techniques used to answer the previously stated research questions. First, Univariate analysis will be addressed, which provides overall descriptions of the data collected from those who participated in the survey. Following this will discuss the statistics calculated for research question 2 to assert whether or not there is a relationship between adherence to rape myths and knowledge, identification, and treatment of sexual assault and sex trafficking. Next, the analysis for research question 3 will be presented to determine the perceptions nursing students have of their ability to identify and treat victims of sexual assault and sex trafficking. Lastly, research question 4 analysis will be presented to determine whether certain demographic factors impact the perceptions of nursing students when it comes to identifying and treating victims of sexual assault and sex trafficking.

Univariate Statistics

A total of 200 nursing students completed the in-person survey, leaving the final sample of 200 (n=200). In order to understand the characteristics of the sample, descriptive statistics were calculated for the various independent variables, including *gender, age, race, semester in the nursing program, experience in the medical field, taking a course at ETSU that addresses sexual assault, taking a course at ETSU that addresses sex trafficking, learned about sex trafficking outside of ETSU, and knowing someone who has been sexually assaulted*(see Table 2 for a comprehensive summary). The data revealed that 17.0 % (34) of the participants were male, while the remaining 83.0 % (166) were female. Further, 84.5% (169) were white, while the remaining 15.5% (31) were all other. Frequencies were also obtained for the age of the student, with 57.0% (114) being between the ages 19-21, 27.5% (55) between the ages 22-24, 5.5% (11)

between the ages 25-27, 3.5% (7) between the ages 28-30, 2% (4), and lastly ages 31 and above were 6.5% (13) of the sample size. The average age of the sample size was 21.

Table 2
Frequencies

Variable	Frequency	Percent
Gender		
Male	34	17.0%
Female	166	83.0%
Age		
19 – 21	114	57.0%
22 – 24	55	27.5%
25 - 27	11	5.5%
28 – 30	7	3.5%
31 +	13	6.5%
Race		
White	169	84.5%
All others	31	15.5%
Semester in Nursing program		
First semester	1	0.5%
Second semester	49	24.5%
Third semester	71	35.5%
Fourth semester	49	24.5%
Fifth semester	30	15.0%
Experience in the medical field		
Have not worked in the medical field	47	23.5%
Less than 3 years	103	51.5%
3 – 5 years	38	19.0%
5 – 7 years	6	3.0%
More than 7 years	6	3.0%
Sexual assault course		
No	123	61.5%
Yes	77	38.5%

Table 2 *Continued*

Table 2 *Continued*

Sex trafficking course		
No	167	83.5%
Yes	33	16.5%
Learned about sex trafficking outside of ETSU		
No	39	19.5%
Yes	158	79.0%
Known a sexual assault victim		
No	42	21.0%
Yes	158	79.0%

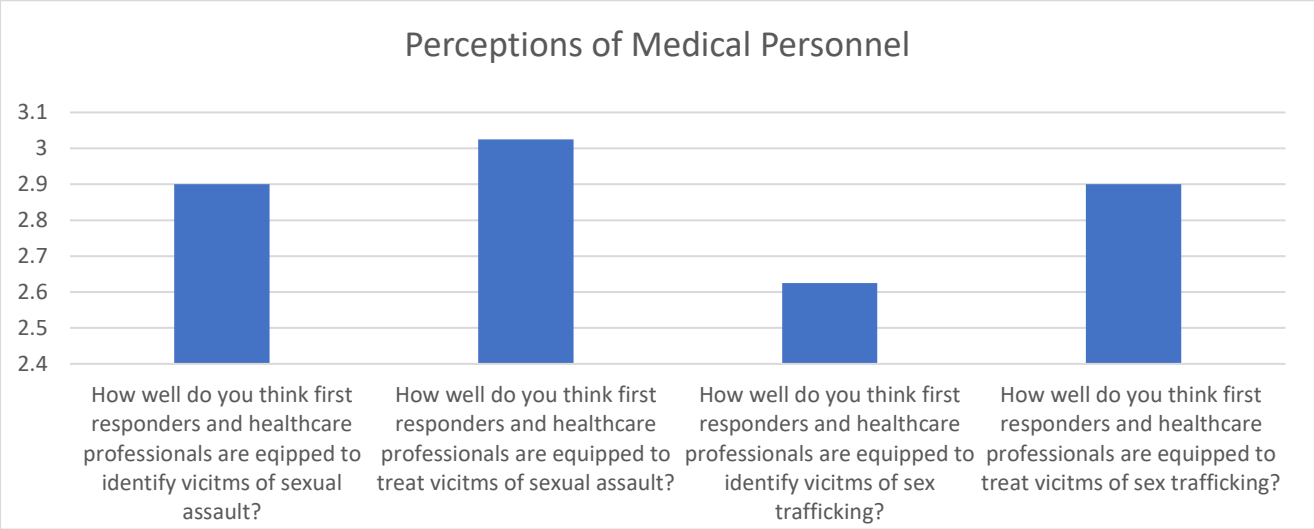
Semester in nursing program was a frequency also obtained by students, with 0.5% (1) in their first semester, 24.5% (49) in their second semester, 35.5% (71) in their third semester, 24.5% (49) in their fourth semester, and lastly 15.0% (30) in their fifth semester. Nearly 52% (103) of the participants stated that they have worked in the medical field for less than three years, while 23.5% (47) stated that they have had no experience in the medical field. Next, a series of dichotomous questions were asked regarding whether or not the student had taken a course at ETSU on sexual assault and sex trafficking. The majority, 123 (61.5%) students, said they had not taken a course on sexual assault at the university, while 77 (38.5%) said they had taken a course there. Since only a few classes in the nursing program cover sexual assault, this could explain why the numbers are different. Similarly, 167 (83.3%) of nursing students said they have not taken a course on sex trafficking at the university. However, 158 (79%) of the sample said they had learned about sex trafficking outside the university. The last frequency shown in the table found that 158 (79%) participants have known someone who has been sexually assaulted.

Research Question 1

Descriptive statistics were also computed for the scales that serve as independent variables in the study. As discussed in previous chapters, nursing students were asked to respond to four questions that evaluated their perceptions of medical personnel's ability to identify and treat victims of sexual assault and sex trafficking. The output of this data was used to help answer research question 1. With that said, it is important to address some of the findings. For example, the question, *how well do you think first responders and healthcare professionals are equipped to identify victims of sexual assault?* (M=2.92) Furthermore, *how well do you think first responders and healthcare professionals are equipped to identify victims of sex trafficking?* (M=2.6) found that most nursing students perceived medical personnel as somewhat equipped when identifying victims of sexual assault and sex trafficking. Interestingly enough, the questions, *how well do you think first responders and healthcare professionals are equipped to treat victims of sexual assault* (M=3.025) and *how well do you think first responders and healthcare professionals are equipped to treat victims of sex trafficking* (M=2.9) were seen to have similar responses from the nursing students (see Bar graph 1 for the complete results).

Bar Graph 1

Perceptions of Medical Personnel



Research Question 2

Research question 2 sought to understand if the adherence to rape myths impacted nursing students' knowledge, identification, and treatment of victims of sexual assault and sex trafficking. Composite scores were generated to ensure that the questions surrounding rape myths, knowledge, identification, and treatment, could fit into five categories (myths, knowledge of sexual assault, knowledge of sex trafficking, level of confidence identifying and treating sexual assault, and level of confidence identifying and treating sex trafficking). An alpha score was generated for myths to gauge the internal consistency of this scale. The value ($\alpha = .745$) was above what is generally considered sufficient (.70), showing that the scale is reliable for assessing adherence to rape myths. A Likert scale was obtained for the sample, ranging from (1) strongly disagree (5) strongly agree) with eight questions total: *The victims of rape are always women, sexual violence can be the victim's fault if she dresses sexy, leads someone on, or says "no" when she really means "yes", The motive for rape is the result of uncontrollable sexual urges, most sexual violence including child sexual violence, is committed by strangers, in cases of child sexual assault, injuries are usually obvious and easy to see, a victim who willingly drinks alcohol bears some responsibility for their rape, a victim who does not report rape within 48 hours will not be able to press charges against the perpetrator due to lack of evidence, and it is acceptable for the nurse of physician to question children in detail about their sexual assault in the emergency department.* The values ranged from 1.2 to 2.7, with a mean of 1.805. The mean implies that, on average, nursing students strongly disagreed/disagreed with common myths about sexual assault and sex trafficking. See Table 2 for the breakdown of the mean.

Another composite score was generated to ensure that the questions relating to knowledge of sexual assault would be reliable. The questions that were used to determine the

level of knowledge were on a Likert scale that ranged from (1) Not confident at all (5) Completely confident). There were seven questions total: *How confident are you that you can define sexual assault, I am confident with the medical protocol for a sexual assault victim, I know how to communicate effectively with a patient of sexual assault, I am aware of the extent of sexual assault in my state, I understand the psychological health consequences of sexual assault, I know where sexual assault persons can obtain nonmedical services (such as housing, legal, immigration, employment, and food assistance).* An alpha score was generated for *knowledge of SA* to gauge the internal consistency of this scale. The value (α= .894) was above what is generally considered sufficient (.70), showing that the scale is reliable for assessing knowledge of sexual assault.

A composite score was also generated, looking at the knowledge of sex trafficking. Since the survey had different sections on knowledge of sexual assault and knowledge of sex trafficking, it was important to create a separate composite measure. Similar to knowledge of sexual assault, the questions that were used to determine the level of knowledge of sex trafficking were on a Likert scale that ranged from (1) Not confident at all (5) Completely confident). There were seven questions total: *How confident are you that you can define sex trafficking, I am confident with the medical protocol for a sex trafficking victim, I know how to communicate effectively with a patient of sex trafficking, I am aware of the extent of sex trafficking in my state, I understand the psychological health consequences of sex trafficking, I know where sex trafficked persons can obtain nonmedical services (such as housing, legal, immigration, employment, and food assistance).* An alpha score was computed to determine if the questions could be grouped into one variable. The value (α= .850) was above what is

generally considered sufficient (.70), showing that the scale is reliable for assessing knowledge of sex trafficking.

Lastly, composite scores were generated for the questions surrounding confidence in identifying and treating victims of sexual assault and sex trafficking. A Likert scale was created that ranged from (1) Not confident at all (5) Completely confident). Five questions were grouped together to create a composite measure of the *Level of confidence in terms of identifying and treating victims of S.A.* The questions consisted of: *how confident are you in identifying a sexual assault victim, how confident are you in treating or caring for a sexual assault patient, how confident are you in collecting evidence in cases of sexual assault, how confident are you in protecting (e.g., clothing from being discarded) evidence in cases of sexual assault, and how confident are you on preserving (swabs of body fluids) evidence in cases of sexual assault.* A reliability score was calculated with an alpha score of (α= .838). This ensures that the questions asked are reliable enough to fit into one variable.

The last composite score that was computed grouped together like variables that looked at confidence levels in terms of identifying and treating victims of sex trafficking. The questions asked were: *how confident are you in identifying a sex trafficking victim, how confident are you in treating or caring for a sex trafficking patient, how confident are you in collecting evidence in cases of sex trafficking, how confident are you in protecting (e.g., clothing from being discarded) evidence in cases of sex trafficking, and how confident are you on preserving (swabs of body fluids) evidence in cases of sex trafficking.* After running a reliability test, the alpha score was (α= .891). This affirmed that the questions asked were reliable to access confidence in identifying and treating victims of sex trafficking. Please refer to Table 3 to see the mean scores of each composite measure.

Table 3
Descriptives

	Mean	Standard Deviation	Minimum	Maximum
Adherence to Common Myths	1.8050	.53352	1.00	5.00
Knowledge of SA	2.9214	.83787	1.00	5.00
Knowledge of ST	2.8157	.84042	1.00	5.00
Level of confidence in terms of identifying and treating victims of S.A.	2.5580	.87663	1:00	5:00
Level of confidence in terms of identifying and treating victims of S.T.	2.3302	.83663	1:00	5:00

Correlation

After obtaining the mean score and running a reliability test, it was important to run correlations between the composite measure *myths, knowledge of sexual assault, knowledge of sex trafficking, level of confidence in terms of identifying and treating sexual assault, and level of confidence in terms of identifying and treating sex trafficking.* It was hypothesized that adherence to rape myths will influence knowledge and confidence in identification and treatment. Pearson correlation coefficients were calculated to see if myths, knowledge and confidence in identification and treatment were significant. Correlations are appropriate to determine if there is a significant linear relationship between two interval-ratio level variables. A correlation test produces a Pearson *r* value, which ranges from -1 to +1. A Pearson r value of one would determine a perfect positive linear relationship, while a score of -1 would determine not a perfect negative linear relationship. A score of zero would indicate that there is no relationship between the variables if the value from the correlation is either positive or negative. A positive value means that as one variable increases, the other will also, or as one variable decreases, the other

variable will decrease. If the value is negative, this means that as one value increases, the further reductions.

As stated above, the variables included in the correlation are *Knowledge of S.A., Knowledge of S.T., Confidence in identifying and treating S.A., Confidence in identifying and treating S.T.,* and the one dependent variable, *myths*. A Pearson coefficient between myths and knowledge of sexual assault (S.A.) revealed a positive correlation that was not significant r(200) = .043, p =.547. In summary, there is no evidence that adherence to myths impacted nursing students' knowledge of sexual assault.

The next Pearson coefficient calculated the relationship between myths and knowledge of sex trafficking (S.T.), and it revealed a positive correlation that was not significant r(200) = .124, p= .081. Based on this data, the adherence to myths did not impact knowledge of sex trafficking. However, the Pearson correlation was calculated for the level of confidence in sexual assault and sex trafficking, and both values were found to be positive and significant. For the level of confidence in terms of identifying and treating sexual assault, r(200) = .163* p=.021, and for the level of confidence in terms of identifying and treating sexual assault, r(200)= .196* p=.005. Based on this data, there is evidence that adherence to myths impacts the level of confidence when identifying and treating victims of sexual assault and sex trafficking.

It is important to address that the Pearson correlation looked at the significance between values but did not control for other variables. To control for other variables, it was important to run regression on the variables: *knowledge of S.A., knowledge of S.T., confidence in identifying and treating S.A., and confidence in identifying and treating S.T.* This next section will discuss the regression analysis and add another table to ensure the data can be identified.

Regression Analysis

Regression allows for several independent variables to be analyzed while determining the relative importance of each variable in predicting the dependent variable. Linear regression computes an Adjusted R-squared statistic that determines the variance for all variables in the equation. For each independent variable, a beta score is calculated to compare each independent variable to all other independent variables in the equation. The current study employs a series of linear regression analyses for each dependent variable (Confidence in Knowledge of S.A., Confidence in Knowledge of S.T., Confidence in identifying and treating S.A., Confidence in identifying and treating S.T.)

Confidence in Knowledge of S.A.

Four separate regression models were created to test the independent variables to explain *knowledge of sexual assault, knowledge of sex trafficking, confidence in identifying and treating sexual assault,* and *confidence in identifying and treating sex trafficking*. The first one discussed and seen in Table 4 is the dependent variable, *Confidence in Knowledge of S.A.* Three independent variables were predicted to impact knowledge: semester in the nursing program, experience in the medical field, and taking a course at the university that teaches sexual assault. Past studies have found that the more experience one has in the medical field can influence the level of knowledge on sexual assault (Smith et al., 2013; Strunk, 2017).

As seen in Table 4 contains a summary of the data generated from the linear regression model seeking to explore the relationship between individual characteristics and nursing students' knowledge of sexual assault. The model was not statistically significant, with an adjusted r-squared value revealing that the individuals' combined characteristics explained approximately 1.4% of the variation in level of knowledge. It was found that *Confidence in*

Knowledge of sexual assault significantly predicted *experience in the medical field* (β = -.147). This indicates that as experience in the medical field increased, knowledge of sexual assault decreased. This finding goes against some of the literature, and it would be essential to understand the why behind this finding in Chapter 5.

Table 4
Confidence in Knowledge of S.A. Linear Regression

Variable	β	Standard Error	Sig.
Race	.022	.172	.767
Gender	-.025	.159	.724
Semester in nursing program	-.032	.059	.650
Experience in the medical field	-.147	.066	.039
Sexual assault course at University	0.89	.122	.212
Adherence to Myths	.058	.115	.432
Known someone who has been sexually assaulted	.130	.154	.084
Adjusted R^2	.014		

*p<.05; **p<.01

As Table 4 suggests, those who *have known someone to be sexually assaulted* approached significance (F=.084). This finding can determine that if the sample size were to increase, there would be a significance between knowledge of sexual assault and knowing someone who has been sexually assaulted. It's important to note that personal connections with survivors of sexual assault can unconsciously affect one's understanding of the issue (Baird & Kracen, 2006). This is referred to as vicarious trauma, which can alter how individuals perceive those who have been impacted by sexual assault (Baird & Kracen, 2006).

Confidence in Knowledge of S.T.

Table 5 contains a summary of the output composed from the linear regression model seeking to explore the relationship between individual characteristics and nursing students'

knowledge of sex trafficking. As previously stated, research question 2 sought to understand how adherence to myths impacted nursing students' knowledge, identification, and treatment of sexual assault and sex trafficking. Linear regression is the best analysis to determine if knowledge, identification, and treatment are significant while adding individual characteristics (constants). It was predicted that there would be a significant relationship between knowledge of sex trafficking and taking a sex trafficking course at university and experience in the medical field.

The model was statistically significant (F= 2.834; p=.00), with the adjusted r-squared revealing that the combined predictors explained (7%) of the variation in knowledge of sex trafficking. With that being said, only *learned about sex trafficking outside the university* was significant with *Adherence to Myths* approaching significance. First, those who *learned about sex trafficking outside of the university* had a score of (β=.261) which was significant at (F=<.001). This indicates that the majority of the sample have learned about sex trafficking outside the university which in turn had an impact on their knowledge of it.

Table 5
Confidence in Knowledge of Sex Trafficking

Variable	β	Standard Error	Sig.
Race	.110	.167	.132
Gender	-.016	.158	.817
Semester in nursing program	.026	.058	.715
Experience in the medical field	-.048	.067	.503
Sex trafficking course at the University	.105	.158	.137
Learned about sex trafficking outside the University	.261	.153	<.001
Adherence to myths	.136	.112	.059
Known someone who has been sexually assaulted	.068	.151	.357
Adjusted R^2	.070		

*p<.05; **p<.01

Another significant predictor was the variable *Adherence to myths* (F=.059) with a score of (β= .136). According to the study, when the belief in myths about sex trafficking is low, individuals tend to have a better understanding of sex trafficking. This finding aligns with existing research that suggests adherence to these myths can negatively impact one's knowledge of sex trafficking (Chang et al., 2020; Smith et al., 2013). Thus, those who do not adhere to these myths are less likely to have their knowledge of sex trafficking impacted.

Level of confidence in identifying and treating S.T.

The level of confidence among nursing students when identifying and treating sex trafficking was predicted to be low if one adhered to myths. The results from Table 6 indicate that with an r-squared (.060), 6% of the combined predictors explained the variation level of confidence when addressing sex trafficking. That being said, there was a significant relationship between confidence in identifying and treating victims of sex trafficking and adherence to myths (p= <.05, β=.183) . Upon further exploration, it was revealed that those who did not adhere to myths had higher confidence levels when identifying and treating victims of sex trafficking.

Table 6 indicates a significant relationship between gender and confidence level (F=0.019). Specifically, male participants exhibited a higher degree of confidence in identifying and treating victims of sex trafficking. However, it is important to interpret this result with caution, as the male sample size within the population was insufficient. Additionally, the variable *learned about sex trafficking outside the university* held significance at (F=.020). This indicates that those who have learned about sex trafficking outside the university have greater confidence in identifying and treating victims of sex trafficking. The literature is small surrounding this finding, however, there is some that supports this result.

Table 6

Level of Confidence in Identifying and Treating S.T. Regression

Variable	β	Standard Error	Sig.
Race	-.030	.183	.678
Gender	-.169	.173	.019
Semester in nursing program	-.006	.064	.927
Experience in the medical field	.048	.073	.502
Sex trafficking course at the University	.070	.173	.323
Learned about sex trafficking outside the University	.173	.168	.020
Adherence to myths	.183	.122	.012
Known someone who has been sexually assaulted	-.002	.165	.980
Adjusted R^2	.060		

*p<.05; **p<.01

Level of Confidence in Identifying and Treating S.A.

Lastly, the level of confidence when identifying and treating victims of sexual assault was analyzed using Linear Regression, as seen in Table 7. With an adjusted r-squared of (.056), This indicates that the combined predictors explained (5.6%) of the variation in the level of confidence when identifying and treating victims of sex trafficking. The beta value for *gender* (-.169) indicated that out of the sample, males were more confident when identifying and treating victims of sex trafficking. This will be further explored in Chapter 5.

Since the study was mainly female and white, this could have skewed the results obtained from generating a model assessing an interaction between the two variables. The beta value of adherence to myths was 0.139, which approached significance with an F-value of 0.057. This suggests that if the sample size was increased, there could be a significant correlation between adherence to myths and the level of confidence in identifying and treating victims of sexual assault. These findings are consistent with previous research that examined the impact of adhering to myths on identification and treatment of sexual assault.

Table 7
Level of Confidence S.A. Regression

Variable	β	Standard Error	Sig.
Race	.005	.179	.942
Gender	-.160	.166	.026
Semester in nursing program	-.008	.061	.905
Experience in the medical field	-.064	.069	.366
Sexual assault course at university	.127	.127	.709
Adherence to myths	.139	.120	.057
Known someone who has been sexually assaulted	.014	.160	.850
Adjusted R^2	.056		

*p<.05; **p<.01

Research Question 3

Research question three sought to understand the perceptions of nursing students' abilities when it comes to identifying and treating victims of sexual assault and sex trafficking. As stated earlier, composite measures were created for both levels of confidence when identifying and treating victims of sexual assault and sex trafficking. With an alpha score of (.838) and (.891), it was determined that the questions regarding confidence levels for both sexual assault and sex trafficking were reliable.

Table 3 shows the mean scores for both composite measures, level of confidence S.A. and level of confidence S.T. First, level of confidence when identifying and treating victims of S.A. had an overall mean score of (M=2.5580). This means that out of a sample size of 200, the average nursing student's perceptions of their ability when identifying and treating victims of sexual assault ranged from *slightly confident to somewhat confident.*

Similarly, Table 3 shows that the mean score for the level of confidence when identifying and treating victims of sex trafficking is (M=2.3302). This indicates that nursing students were *slightly confident* in their ability to treat and identify victims of sex trafficking. The literature

supports this idea that confidence levels would be lower for sex trafficking victims compared to sexual assault victims (Beck et al., 2015). Chapter 5 will go into more detail on the literature that supports or argues the data found.

Research Question 4

Research question 4 observed if there was a significant relationship between demographic factors and confidence levels when identifying and treating victims of sexual assault and sex trafficking. Pearson's correlation coefficients were generated for the variables in this research question. Correlations are appropriate to determine if there is a significant linear relationship between two interval-ratio level variables.

Correlation

The variables included in the correlation matrix are race, gender, semester in the nursing program, years in the medical field, taking a course at university that addresses sexual assault, taking a course at university that addresses sex trafficking, learning about sex trafficking outside the university, and if one has known a sexual assault victim. As seen in the correlation matrix, gender shares a significant negative relationship with Confidence in identifying and treating S.A. (r=-.180*) victims and Confidence in identifying and treating S.T. victims. (r=-.173*) This indicates that as gender decreases (male), confidence levels increase.

The findings here do not support the hypothesis that a semester in the nursing program, years in the medical field, and taking a course on sexual assault and sex trafficking would impact the level of confidence when identifying and treating sexual assault and sex trafficking victims. However, Chapter 5 will look into why males are more confident when it comes to identifying and treating victims of sexual assault and sex trafficking.

Table 8
Pearson Correlation Matrix

	Confidence in identifying and treating S.A. victim	Confidence in identifying and treating S.T. victim
Race	.033	-.002
Gender	-.180*	-.173*
Semester in nursing program	-.017	-.012
Years in the medical field	-.056	-.011
S.A. course at University	.040	.089
S.T. course at University	.092	.091
Learned about S.T. outside university	.056	.133
Know S.A. victim	-.016	-.005

*= p <.05 ** = p<.01

Chapter Summary

In this chapter, the statistical models' results were presented to evaluate the four research questions of this study. Unfortunately, the models did not provide much support for the hypotheses. However, further information regarding the findings will be discussed in Chapter 5. The Pearson Correlations, on the other hand, offered some support for the hypothesis that the knowledge of the participants was influenced by their semesters in school and years of experience in the medical field. Additionally, it was found that gender had a significant association with the confidence levels of the participants in identifying and treating victims of sexual assault and sex trafficking. However, there is a possibility of skewed data since 83% of the sample is female. Chapter 5 will discuss the importance of analyzing these findings in-depth, taking into account the supporting and opposing literature.

Chapter 5. Discussion

This study aimed to access the knowledge and perceptions of sexual assault and sex trafficking among nursing students using a quantitative survey design. Additionally, it sought to determine if certain demographic factors such as race, years of medical experience, and education on sexual assault and sex trafficking impacted knowledge and perceptions. Finally, it examined the influence of knowledge on confidence levels when identifying and treating victims of sexual assault and sex trafficking. The previous chapter presented the results from various statistical analyses used to test the research questions. This chapter seeks to discuss the meaning of the findings within the context of the surrounding literature. In addition, it discusses the limitations of the study, policy implications, and potential directions for future research.

Research Question 1

In order to comprehend nursing students' attitudes towards medical professionals' ability to identify and treat victims of sexual assault and sex trafficking, research question one was posed. Research indicates that healthcare providers lack knowledge and awareness of such issues (Bechtel et al., 2008; Beck et al., 2015). Given this, it was hypothesized that nursing students would share a similar perspective towards medical personnel. Four questions were posed to nursing students to gauge their viewpoints on medical professionals' ability to identify and treat victims of sexual assault and sex trafficking. The data gleaned from this was utilized to address research question one. Chapter Four revealed that nursing students did not believe that medical personnel were equipped to identify victims of sexual assault and sex trafficking (M=2.92 / M=2.6). However, nursing students did believe that medical personnel were better equipped to treat such victims (M=3.025 / M=2.9).

Based on prior research, Nordstrom (2020) found that nursing students were aware of human trafficking but did not realize that medical personnel often encounter the victims. They also had limited knowledge of healthcare providers' role in identifying and responding to trafficking. The information gathered confirms that medical personnel are often ill-equipped to identify and treat victims of sexual assault and sex trafficking. This is primarily due to the lack of appropriate training and education, as well as the difficulty for some medical personnel to recognize if they have come into contact with such victims (Long & Dowdell, 2018; Richie-Zavaleta et al., 2021).

Notably, nursing students believe that medical personnel are better equipped for treatment than identification. This perspective may stem from emphasizing education and training related to treatment rather than identification. As highlighted by (Bono-Neri & Toney-Butler, 2023), it is common for medical facilities to lack specific training for identifying sexual assault and sex trafficking victims. Still, protocols for treating such victims do exist. It is essential to be able to provide appropriate care for victims of sexual assault and sex trafficking. However, the ability to identify a victim is equally important. According to a study by Richie-Zavaleta and colleagues (2021), healthcare professionals are able to treat victims of physical and sexual abuse but often fail to recognize signs of trafficking. This lack of awareness could lead to medical complications for the victim. Failure to identify such issues could result in victims not receiving a thorough examination, potentially causing further harm. For instance, a victim of sexual assault or trafficking may seek medical attention for a broken arm, overdose, or sexually transmitted disease, among other symptoms, but the treating physician may only focus on treating the specific symptom without being able to identify the underlying victimization. This

could result in inadequate treatment and a missed opportunity to provide necessary care to the patient.

Research Question 2

The objective of Research Question 2 was to investigate whether nursing students' adherence to myths associated with rape, sexual assault, and sex trafficking impacted their confidence in their knowledge and their confidence in the ability to identify and treat victims of sexual assault and sex trafficking. The question had two main objectives. Firstly, it aimed to determine whether there was a significant correlation between adherence to myths and confidence levels regarding the sample's knowledge of sexual assault and sex trafficking. Secondly, it sought to identify if there was a significant relationship between adherence to myths and confidence levels in identifying and treating sexual assault and sex trafficking. The information will be presented separately for each variable.

Myths and Confidence in Knowledge of S.A. and S.T.

When examining the adherence to myths and confidence in Knowledge of S.A., findings revealed no statistically significant relationship. This indicates that there was no evidence that adherence to myths impacted confidence in knowledge of sexual assault. Although students did not adhere to myths about sexual assault, it did not impact their limited knowledge of the topic. One possible reason why students' knowledge of sexual assault is limited despite not adhering to myths could be due to the lack of personal experience or exposure to discussions and resources related to sexual assault. This in turn could impact their level of knowledge on such issues.

After running regression on the variable *Confidence in Knowledge of S.A.*, it was found that *Confidence in Knowledge of sexual assault* significantly predicted *experience in the medical field.* This indicates that as experience in the medical field increased, knowledge of sexual

assault decreased. This finding was unexpected, but it did align with research. For example, there is a common phrase used in psychology called the experience-knowledge gap. This phenomenon exposes how individuals with more experience often realize they know less as they learn more. For example, people with more experience might struggle to understand a new way of thinking (Angotti & Kaler, 2013; Gupta, 2006). Additionally, there is a common phrase "the more you know, the less you know" this idea can be used to answer why we find this result (Betz, 2006). This concept emphasizes that as people gain expertise, they tend to become more aware of the complexities and nuances within a subject, leading to a more accurate perception of their own knowledge gaps.

It is worth noting, that the variable *have known someone to be sexually assaulted* approached significance (F=.084), which means that the variable was close to reaching significance at (F=.01). As stated earlier, if the sample size increases, there may be a significant relationship *between knowledge of sexual assault* and *knowing someone who has been sexually assaulted.* There are a few possible answers as to why this finding approached significance. As briefly mentioned in Chapter 4, vicarious trauma can affect individuals who know someone whose been impacted by a crime. Vicarious trauma can unconsciously affect one's awareness of such issues (Baird & Kracen, 2006). Research suggests that individuals who know someone, particularly someone who has experienced sexual assault, can naturally raise awareness about the topic (Baird & Kracen, 2006). This can be attributed to the fact that conversations around this topic typically arise after someone has experienced assault, and if the individual knows someone who has been through it, they are likely to have been informed. Such discussions are valuable in raising awareness of sexual assault.

Additionally, findings revealed that most students in the sample did not take a course that discussed sexual assault. Nurses are usually the first to interact with victims of sexual assault. Ideally, a trained sexual assault nurse examiner (SANE) or a physician with knowledge of post-sexual assault care should be available. Unfortunately, many hospitals, especially those in rural areas, do not have immediate access to SANE nurses. As a result, patients are cared for by staff with limited knowledge of appropriate treatment for sexual assault-related trauma (Bono-Neri & Toney-Butler, 2023).

The relationship between myths and confidence in Knowledge of sex trafficking (S.T) revealed a positive correlation that was not significant. However, after running a regression on Confidence in Knowledge of sex trafficking, the results showed that there was a significant relationship between the two variables: *learned about sex trafficking outside the university* and *Adherence to Myths.* This finding supports the literature that when the belief in myths about sex trafficking is low, individuals tend to have a better understanding of sex trafficking (Chang et al., 2020; Smith et al., 2013). This finding aligns with existing research that suggests adherence to these myths can negatively impact one's knowledge of sex trafficking (Chang et al., 2020; Smith et al., 2013). Those who reject these myths are more likely to understand sex trafficking.

Additionally, it was found that individuals who gained awareness about sex trafficking outside of the University possessed more confidence in knowledge on this topic. The majority of the sample did not take a course at the University that addressed sex trafficking, which aligns with previous research conducted by Bono-Neri and colleagues (2023) on nursing students' knowledge of and exposure to human trafficking content in undergraduate curricula across the United States. Which found that out of a sample of 542 students, 96.3% of respondents reported that they had never participated in a human trafficking course (Bono-Neri & Toney-Butler,

2023). Only 3.7% of respondents had experienced an HT course. This suggests that many undergraduate nursing students are not being educated about human trafficking in their courses, however, many have been informed through various online platforms.

Social media is a platform that has been used to share important information, but it is important to note that social media can also misinform individuals (Bono-Neri & Toney-Butler, 2023). Concerning sex trafficking, the media has portrayed stereotypical versions of sex trafficking such as being kidnapped and transported overseas, but it should be noted that while this type of trafficking does occur, it is not the typical way in which individuals are trafficked, especially in the East Tennessee region. This misinformation could affect the identification and treatment of sex trafficking victims, as well as knowledge.

Myths and Confidence in Identifying and Treating S.A. and S.T

In order to assess the relationship between confidence in identifying and treating sexual assault and sex trafficking victims, a Pearson correlation was conducted. The results showed that there was a positive and significant relationship between adherence to myths and level of confidence in identifying and treating sexual assault and sex trafficking victims. When examining the variable myths and confidence in identifying and treating sexual assault and sex trafficking victims. This supports research that shows that adherence to myths impacts the level of confidence when identifying and treating victims of sexual assault and sex trafficking (Asianma & Zhong, 2022; Elmohandes, 1970; Jouk et al., 202; Zavaleta et al., 2021). By examining this issue, the research aimed to improve nursing education and training by examining the complex relationship between myths and nursing practices. Asianma and Zhong (2022) found that victims who were blamed for the crime committed against them were less likely to obtain help and support. Also, throughout history, myths surrounding rape, sexual assault, and

sex trafficking have impacted how medical personnel treat survivors of sexual assault (Elmohandes, 1970; Jouk et al., 2021). For example, in ancient Greece, physicians were called upon to examine women who claimed to have been raped. In some cases, women who reported sexual assault were even punished for "bringing shame" upon their families or communities (Elmohandes, 1970). Similarly, a study by Richie-Zavaleta and colleagues (2021) interviewed 22 survivors of sex trafficking and twelve of the victims confessed that medical personnel did not take them seriously due to them working on the street as sex workers. Myths surrounding rape and sexual assault often blame the victim for putting themselves in a “compromising” position. If medical personnel adhere to these myths, they may be less likely to believe the victim.

When victims are not believed, there are practical repercussions. One significant conclusion is that victims were less likely to disclose and, as a result, were less likely to obtain victim help and social support when they doubted they would be believed (Asiama & Zhong, 2022). According to the National Human Trafficking Resource Center (Polaris Project, 2006), the difficulty in identifying trafficking victims is often due to the spread of misunderstandings about the crime. A study conducted by Menaker and Franklin (2013) revealed that half of the 22 medical personnel they interviewed were uncertain about the true nature and characteristics of trafficking, as well as the characteristics of its victims. Furthermore, they believed that victims were typically individuals from foreign countries or those who were kidnapped by strangers. The literature identifies several characteristics of sex trafficking victims, including homelessness, a history of abuse or trauma (physical, emotional, or sexual), and involvement in juvenile correction or child welfare systems (Polaris Project, 2006; Menaker & Franklin, 2013). Other significant findings were determined after running a regression on confidence in identifying and treating victims of sexual assault and sex trafficking.

The findings also revealed that males within the sample were more confident in their ability to identify and treat victims of sexual assault and sex trafficking ($\beta = -.169$; $\beta = -.160$). Notably, males constituted only 17% of the sample, yet displayed higher confidence levels than their female counterparts. While research on gender differences on confidence levels is lacking, when identifying and treating victims of sexual assault and sex trafficking, there is related research on gender differences in healthcare. For example, a study conducted by Kovacs et al. in 2020 aimed to investigate the impact of overconfidence among healthcare workers on the quality of healthcare provided. Measuring confidence can be challenging and ensuring that individuals are truthful is difficult. However, the study compared healthcare providers' performance with their self-assessment and found that 37% of them could be categorized as overconfident regarding their clinical practice efforts. The study did not reveal any significant differences in confidence levels between genders, but it did demonstrate that overconfidence had a negative impact on the quality of healthcare provided (Kovacs et al., 2020). Research has shown that both men and women tend to be overconfident, but men are typically more overconfident than women (Jakobsson et al., 2013).

Research Question 3

Research question 3 sought to understand the perceptions of nursing students' abilities when it comes to identifying and treating victims of sexual assault and sex trafficking. The findings regarding confidence levels tie into research question 3 by exposing that nursing students were slightly confident in their ability to identify and treat victims of sexual assault and sex trafficking. The overall mean scores found that nursing students ranged from slightly confident to somewhat confident when identifying and treating victims of sexual assault and sex trafficking. The literature supports this idea that confidence levels would be lower for sex

trafficking victims compared to sexual assault victims since sex trafficking is less likely to be addressed in the medical field (Beck et al., 2015).

Research Question 4

Research question 4 aimed to understand if there were certain factors that impacted the perceptions of nursing students' abilities to identify and treat victims of sexual assault and sex trafficking? The findings indicated that gender had a significant negative relationship with confidence levels in identifying and treating victims of sexual assault (S.A.) and sexually transmitted diseases (S.T.). The correlation coefficient (r) for both the relationships was -0.180* and -0.173*, respectively. This means that as the respondent's gender shifts towards male, their confidence levels increase. These findings do not support the hypothesis that a semester in the nursing program, years in the medical field, and taking a course on sexual assault and sex trafficking would impact the level of confidence when identifying and treating sexual assault and sex trafficking victims.

This finding is consistent with what was stated previously, that suggests that overconfidence in the workplace can be influenced by gender (Jakobsson et al., 2013; Kovacs et al., 2020). However, it is important to note that determining if overconfidence is occurring in this study would require more extensive analysis and a larger sample size. In light of the findings outlined in the preceding section, it is critical to consider implementing policies that can provide assistance.

Policy Implications

The study's findings have a number of policy implications. Firstly, most of the sample had not been taught about sexual assault and sex trafficking in their undergraduate nursing courses. Recent research has revealed that student nurses are not receiving sufficient training to

care for vulnerable populations, which can result in missed opportunities to identify and treat victims of sexual assault and sex trafficking. This lack of preparation can contribute to worsening physical and mental health conditions for victims, making it crucial for nursing programs to prioritize education and training in this area (Bono-Neri & Toney-Butler, 2023).

The study also revealed that males were more confident than females in their abilities to identify and treat victims of sexual assault and sex trafficking. Overconfidence can have serious consequences on how victims are treated, especially in a workplace setting. This is because overconfidence can lead to assumptions and complacency, according to research by Jakobsson et al. (2013) and Kovacs et al. (2020). It is important to note that having confidence in treating and identifying victims of abuse does not necessarily mean that one is properly equipped to do so. Healthcare providers, who often come into contact with victims, need to be trained to identify and treat them properly. Although not all nurses specialize in caring for survivors of sexual assault, it is essential that all nurses receive some type of training since there are limited numbers of SANE (Sexual Assault Nurse Examiner) nurses available.

To date, no undergraduate nursing programs offer courses on human trafficking. Furthermore, it is important to provide nursing students with training on how to identify and treat victims of sexual assault and sex trafficking. This can be incorporated into the undergraduate curriculum to better equip students before they enter the workforce. The findings revealed that students with more experience in the medical field had less confidence in their knowledge and ability to identify and treat patients. It is essential to understand that training programs should not just impart knowledge but also provide practical experience to individuals. This can be achieved by making the training interactive. A possible solution would be to include mandatory courses for all nursing students that focus on identifying signs of sex trafficking. The course could

include real-life scenarios that teach the students the proper protocol to follow, the best ways to communicate with patients, and the red flags to be aware of when suspecting victims of sexual abuse or sex trafficking, and myths surrounding sexual assault and sex trafficking. This is important since often times nurses are a point of contact for sexual assault and sex trafficking patients (Bono-Neri & Toney-Butler, 2023). As previously stated, many hospitals, especially those in rural areas, do not have immediate access to SANE nurses. As a result, patients are cared for by staff with limited knowledge of sexual assault-related trauma (Bono-Neri & Toney-Butler, 2023). Although education and implementation are important, this study only assessed confidence in knowledge and identifying/treating, which naturally created limitations.

Limitations

Although this study provided valuable insights into identifying and treating victims of sexual assault and sex trafficking, it has certain limitations. Firstly, the sample obtained for the study was not diverse with most participants being white females (87%). This could lead to a biased finding that males are more confident than females. Therefore, it is crucial to obtain a larger sample of males and diverse races to validate the results and determine if males are indeed more confident in their ability to identify and treat victims of sexual assault and sex trafficking.

The second limitation is that the sample only included a nursing program at one university, thus, the findings cannot be generalized to all nursing programs in the United States. Additionally, the survey did not include a knowledge test, but rather asked about nursing students' confidence in their own knowledge; therefore, confidence in their knowledge and their actual knowledge of the subject may differ. It is important to also note that the study was based on self-reported data, which may have been affected by recall or social desirability bias. This means that some of the answers provided by participants may not be entirely truthful,

particularly when it comes to their knowledge and perceptions. However, despite these limitations, the study offers valuable insights into the current state of education on sex trafficking and sexual assault in nursing programs. This could inform the development of evidence-based educational interventions that better prepare nursing students to care and treat survivors of these crimes.

Future Research

This study found that nursing students possess little confidence in knowledge and confidence in identifying and treating victims of sexual assault and sex trafficking. However, future research should extend this study by comparing medical students' knowledge and confidence levels to those of nursing students. This would allow for a comparison of healthcare professionals' knowledge and confidence levels, potentially highlighting the need for additional training in medical school versus nursing school. It would be helpful to conduct a qualitative study by interviewing practicing nurses to evaluate their knowledge and confidence in identifying and treating victims of sexual assault and sex trafficking. Learning from those actively in the field can provide insight into whether there is sufficient training on sexual assault and sex trafficking in hospital settings for nurses. In addition, It would also be important to compare multiple nursing programs to determine which ones provide training on these issues.

Further research could investigate whether Human Trafficking (HT) education is included in Registered Nurse (RN) training programs, and its impact on nurses knowledge and confidence in identifying and treating HT survivors (Bono-Neri & Toney-Butler, 2023). Another interesting area of study would be to conduct interviews with HT survivors in order to understand their interaction frequency with medical personnel, experience with medical personnel, and which settings they are more likely to have come in contact with them. Lastly, it

would be beneficial to examine whether overconfidence is prevalent among nursing students and if it could affect patient care, particularly for those who are victims of sexual crimes.

Conclusion

Despite limitations, the current study provided a deeper understanding of the level of knowledge and confidence among nursing students in identifying and treating victims of sexual assault and sex trafficking. This topic is still underexplored, especially as it has only recently been brought to light by the media. The research aimed to address the gaps in literature by conducting an in-person survey to assess the knowledge and confidence among nursing students in regard to sexual abuse and sex trafficking. The findings of the study exposed that most nursing students did not feel confident in their knowledge and ability to identity and treat victim of sexual assault, especially those who have worked longer in the medical field. This implies that there is a need for training that focuses on applying knowledge. Most students at the studied university have not learned about sexual assault or sex trafficking, relying instead on potentially unreliable online platforms for information. Additionally, the research found that adhering to myths impacts confidence when identifying and treating victims. This emphasizes the importance of sharing accurate information about victims of sexual assault and sex trafficking. Furthermore, as there is limited research on this subject and this study has yielded new insights, it is crucial that this topic is further explored. This research should encourage undergraduate nursing programs to understand the significance of educating their students about the implications of sexual assault and sex trafficking in the field of medicine.

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APPENDIX: Survey

To begin a series of demographic questions will be asked. As a reminder, this information is for research purposes and your answers will be kept confidential.

1. What is your gender?
   - ○ Male
   - ○ Female
   - ○ Other _____

2. How old are you?
   _____

3. How would you describe your racial identity? (select all that apply)
   - ○ White
   - ○ Black or African American
   - ○ Asian
   - ○ Native Hawaiian or Pacific Islander
   - ○ American Indian or Alaska Native
   - ○ Biracial/Multiracial
   - ○ Other (please specify) _____

4. What is your marital status?
   - ○ Single
   - ○ Married
   - ○ Divorced
   - ○ Widowed
   - ○ Other _____

5. What year are you in school?
   - ○ Freshman
   - ○ Sophomore
   - ○ Junior
   - ○ Senior
   - ○ Other_____

6. If you are in the nursing program, what semester are you in?
   - ○ First
   - ○ Second

- ○ Third
- ○ Fourth
- ○ Fifth

7. How many years have you worked in the medical field?

- ○ Less than 3 years
- ○ 3-5
- ○ 5 to 7 years
- ○ More than 7 years
- ○ Have not worked in the medical field

8. What nursing program are you pursuing?

- ○ Accelerated BSN
- ○ ETSU/HVMC Accelerated program
- ○ Traditional BSN
- ○ RN -BSN
- ○ LPN – BSN
- ○ MSN
- ○ Other _____Wednesday, September 13, 2023

9. Are you currently enrolled in the SANE (Sexual Assault Nurse Examiner) program?

- ○ Yes
- ○ No

10. Have you ever taken a course at ETSU that addresses sexual assault?

- ○ Yes
- ○ No

11. Have you taken a course at ETSU that addresses sex trafficking?

- ○ Yes
- ○ No

12. Have you learned about sex trafficking outside of ETSU?

- ○ Yes

- ○ No

13. If yes, where have you learned about sex trafficking? (Select all that apply)

- ○ Online resources
- ○ Training programs
- ○ Conferences/events
- ○ Books and films
- ○ Community programs
- ○ Other (please specify) _____

14. Have you known someone that has been sexually assaulted?

- ○ Yes
- ○ No

15. How soon after a sexual assault do you think an individual should seek medical attention?

- ○ Within 24 hours
- ○ Within 48 hours
- ○ Within 72 hours
- ○ Other _____(please specify)

16. Do you think the speed at which an individual seeks medical attention after a sexual assault impacts the likelihood of collecting forensic evidence?

- ○ Yes
- ○ No
- ○ Not sure

17. How well do you think first responders and healthcare professionals are equipped to identify victims of sexual assault?

- ○ Not equipped at all
- ○ Not very well equipped
- ○ Somewhat equipped
- ○ Very well equipped

18. How well do you think first responders and healthcare professionals are equipped to treat victims of sexual assault?

- ○ Not equipped at all
- ○ Not very well equipped
- ○ Somewhat equipped
- ○ Very well equipped

19. How well do you think first responders and healthcare professionals are equipped to identify victims of **Sex Trafficking**?

- ○ Not equipped at all
- ○ Not very well equipped
- ○ Somewhat equipped
- ○ Very well equipped

20. How well do you think first responders and healthcare professionals are equipped to treat victims of **Sex Trafficking**?

- ○ Not equipped at all
- ○ Not very well equipped
- ○ Somewhat equipped
- ○ Very well equipped

21. How much do you think the following factors impact an individual's decision to delay seeking medical attention after a sexual assault?

	Do not impact at all	**Slightly impact**	**Somewhat impact**	**Fairly impact**	**Completely impact**
22. Shame or embarrassment	○	○	○	○	○
23. Fear of the medical examination process	○	○	○	○	○
24. Lack of access to transportation	○	○	○	○	○

25. Concern about cost	○	○	○	○	○

The next set of questions will focus on your level of confidence in terms of identifying Sexual Assault. Please fill in the circle that applies to you.

	Not confident at all	**Slightly confident**	**Somewhat confident**	**Fairly confident**	**Completely confident**
26. How confident are you in identifying a sexual assault victim?	○	○	○	○	○
27. How confident are you in treating or caring for a sexual assault patient?	○	○	○	○	○
28. How confident are you in collecting evidence in cases of sexual assault?	○	○	○	○	○
29. How confident are you in protecting (e.g.	○	○	○	○	○

clothing from being discarded) evidence in cases of sexual assault?					
30. How confident are you in preserving (swabs of body fluids) evidence in cases of sexual assault	○	○	○	○	○
31. How confident are you that you can define sexual assault	○	○	○	○	○
32. I am confident with the medical protocol for a sexual assault victim	○	○	○	○	○
33. I know how to communicate effectively with a patient of sexual assault	○	○	○	○	○

34. I am aware of the extent of sexual assaults in my state	○	○	○	○	○
35. I understand the physical health consequences of sexual assault	○	○	○	○	○
36. I understand the psychological health consequences of sexual assault	○	○	○	○	○
37. I know where sexual assault persons can obtain nonmedical services (such as housing, legal, immigration, employment, and food assistance)	○	○	○	○	○

The next set of questions are designed to analyze the knowledge you have on sexual assault.

Please fill in the circle that applies to you.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
38. The victims of rape are always women	○	○	○	○	○
39. Sexual violence can be the victim's fault if she dresses sexy, leads someone on, or says "no" when she really means "yes".	○	○	○	○	○
40. The motive for rape is the result of uncontrollable sexual urges.	○	○	○	○	○
41. Most sexual violence, including child sexual violence, is committed by strangers.	○	○	○	○	○
42. In cases of child sexual assault, injuries are usually	○	○	○	○	○

obvious and easy to see.					
43. A victim who willingly drinks alcohol bears some responsibility for their rape.	○	○	○	○	○
44. A victim who does not report rape within 48 hours will not be able to press charges against the perpetrator due to lack of evidence.	○	○	○	○	○
45. It is acceptable for the nurse or physician to question children in detail about their sexual assault in the emergency department.	○	○	○	○	○
46. When a child has possibly been sexually assaulted, child protective services must be notified even if you think the	○	○	○	○	○

assault did not occur	

The next set of questions will focus your level of confidence in terms of identifying Sex Trafficking. Please fill in the circle that applies to you.

	Not confident at all	Slightly confident	Somewhat confident	Fairly confident	Completely confident
47. How confident are you in identifying a sex trafficking victim?	○	○	○	○	○
48. How confident are you in collecting evidence in cases of sex trafficking?	○	○	○	○	○
49. How confident are you in protecting (clothing from being discarded) evidence in cases of sex trafficking?	○	○	○	○	○

50. How confident are you in preserving (swabs of body fluids) evidencing in cases of sex trafficking?	○	○	○	○	○
51. How confident are you in treating or caring for a sex trafficking patient?	○	○	○	○	○

	Not confident at all	**Slightly confident**	**Somewhat confident**	**Fairly confident**	**Completely confident**
52. I can define sex trafficking.	○	○	○	○	○
53. I am confident with the medical protocol for a sex trafficking victim	○	○	○	○	○
54. I know how to communicate effectively	○	○	○	○	○

	with a patient suspected of being a sex trafficked person					
55.	**I am aware of the extent of sex trafficking in my state**	○	○	○	○	○
56.	**I understand the physical health consequences of sex trafficking**	○	○	○	○	○
57.	**I understand the psychological health consequences of sex trafficking**	○	○	○	○	○
58.	**I know where sex trafficked persons can obtain nonmedical services (such as housing, legal, immigration, employment, and food assistance)**	○	○	○	○	○

Congratulations you have finished the survey! Just as a reminder, all the information will be kept confidential and will be shredded once the survey data has been collected. Thank you for your participation!

Principle researcher,

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VITA

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