

Educating Emergency Department Staff on Sex Trafficking Victim Identification:

A Quality Improvement Project

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Abstract

Objective: Nearly 90% of sex trafficking victims will come into contact with an emergency department healthcare provider during his or her period of exploitation. Yet, victim identification by healthcare providers remains inadequate. The purpose of this quality improvement project is to improve emergency department healthcare providers' confidence and ability to identify sex trafficking victims through staff education centered around sex trafficking. **Method:** A quality improvement project, guided by the Social Cognitive Theory, was implemented in an Arizona emergency department. ED staff were provided with a 40-minute education video about sex trafficking, including victim identification and appropriate responses. Participation in this project was open to all current healthcare workers employed at this emergency department. Stakeholders within the facility assisted with recruitment via weekly staff emails over a three-week period. A pre- and post-survey, consisting of a self-evaluation Likert scale, was used to assess confidence in identifying victims. Case studies were included to measure the participants' ability to identify victims of trafficking. All aspects of this project were approved by Arizona State University's and the organization's Institutional Review Board. **Results:** One hundred percent of staff agreed to feeling confident in their ability to identify sex trafficking victims post intervention. However, there was no improvement in staff's actual ability to identify victims through case studies post intervention. **Conclusions:** Education can be a valuable tool to improve confidence in identifying victims of sex trafficking in an emergency setting.

Keywords: sex trafficking, human trafficking, emergency department, education, victim identification

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Sex Trafficking has been referred to as the modern-day slavery and awareness of this topic has amassed over the past two decades (Donahue et al., 2019; U.S. Department of State, 2000). Greenbaum (2016) asserts that 88% of sex trafficking victims come into contact with a healthcare professional during their period of exploitation, specifically in an emergency department setting. Yet, identifying victims in this clinical setting proves to be a sensitive and difficult task for the clinicians involved (Beck et al., 2015). As there is an increasing recognition of sex trafficking as a growing healthcare epidemic, addressing this topic is vital to alter the potential detrimental healthcare outcomes of this vulnerable population (Greenbaum, 2016; Beck et al., 2015; U.S. Department of State, 2000).

Problem Statement

Sex trafficking is the recruitment, harboring, transportation, or soliciting of a person or persons for the purpose of commercial sex acts using force, fraud, or coercion (U.S. Department of State, 2000; Nguyen et al., 2018). Currently, 40.3 million people, a majority women or young girls, are victims of forced sexual exploitation throughout the world (U.S. Department of State, 2000; Cole et al., 2018). Often, victims are coerced through physical and emotional violence, including rape, torture, imprisonment or starvation into performing sexual acts for monetary gain (U.S. Department of State, 2000). Due to the nature of this exchange, victims are often left with health conditions that require medical attention, thus providing an opportunity for prompt identification and intervention (Cheshire, 2017; Beck et al., 2015; Dols et al., 2019). However, identifying these victims can prove difficult. Often accompanied by their trafficker, victims are highly unlikely to identify themselves out of fear of judgement or repercussion, making a clinician's knowledge and screening of these individuals vital (Leslie, 2018; Nguyen et al., 2018). Nguyen et al. (2018) affirm that the sensitivity and distressing nature of the subject in combination with unfamiliarity and lack

of resources for the provider may lead to hesitance or refusal of healthcare professionals to screen potential sex trafficking victims, leaving many cases undetected.

Purpose and Rationale

As aforementioned, sex trafficking has a global impact on public health. Yet, the clandestine nature of this modern-day slavery has made identifying and documenting sex trafficking victims in emergency departments problematic (Dols et al., 2019). Failing to identify victims of sex trafficking reduces opportunities to intervene in this physically and psychologically traumatic disposition. Therefore, the purpose of this project is to heighten victim identification of potential sex trafficking victims and improve appropriate intervention by emergency department healthcare providers through implementation of staff education regarding trafficking.

Background and Significance

Nature of Sex Trafficking

Sex trafficking is the forced sexual exploitation of a person by another for monetary gain and is one of two subtypes of human trafficking. Labor trafficking, another type of human trafficking, relates to the forced manual labor of an individual through a variety of violent methods (U.S. Department of State, 2000). Sex trafficking accounts for 71% of human trafficking and can include, but not limited to, elicited massages, pornography, prostitution, and rape (Polaris, 2019; U.S. Department of State, 2000). In 2019, there was 4,585 verified cases of sex trafficking reported to a U.S. hotline, in addition to over 20,000 cases under investigation in the United States alone (Polaris, 2019). Notably, each case may include hundreds of individuals (Polaris, 2019). However, due to the nature of this oppressive industry, exact statistics are difficult to compute and, thus, are likely severely underreported (Lamb-Susca & Clements, 2018; Polaris, 2019).

Individuals of any gender, age, race or socioeconomic status are at risk of becoming victims of sex trafficking. However, evidence suggests that women and girls have a higher instance of victimization,

accounting for 91% of the trafficked population (Long & Dowdell, 2018; Polaris, 2019; U.S. Department of State, 2000). Additionally, many trafficked persons come from vulnerable populations such as minors from troubled homes, runaway teenagers, ethnic minorities or illegal refugees with language barriers, persons dependent on illegal substances, and people living in poverty (Long & Dowdell, 2018; Polaris 2019; Dols et al., 2019). By carefully selecting vulnerable victims, traffickers work to ensure that fear of repercussion, language barriers, or fear of law enforcement prevent victims from seeking help, thus making identification of victims challenging (U.S. Department of Homeland Security, 2020; U.S. Department of State, 2000). However, due to the violent and hazardous nature of this industry, victims commonly seek emergency care for treatment of sexually transmitted infections, injuries from assaults, or possible drug overdose, therefore providing an opportunity for appropriate identification and intervention by emergency healthcare staff (Kaltiso et al., 2018; Beck et al., 2015, Greenbaum 2016; Lamb-Susca & Clements, 2018).

Sex Trafficking's Impact on Arizona

Consistent with the nation as a whole, trafficking numbers in Arizona have significantly increased over the past two decades (Roe-Sepowitz et al., 2017). It is difficult to decipher if the prevalence of cases results from increased notoriety of the topic or actual occurrences of sex trafficking. A report conducted by Roe-Sepowitz et al. (2017) accounted for over 2000 recovered victims receiving placement or resources by 30 sex trafficking service organizations during year 2017 with the expectation of an increase per year by hundreds of recovered trafficked persons. Roe-Sepowitz et al. (2017) assert that this data does not accurately represent the number of persons being trafficked in the state of Arizona as an exact number is difficult to obtain. Congruent with literature, rationale for this lies in the obstacles associated with victim identification (Roe-Sepowitz et al., 2017). Roe-Sepowitz et al. (2017) contribute lack of awareness to the topic of sex trafficking, the clandestine nature of the industry, fear of self-identification, and a lack of validated screening tools being utilized in Arizona as reasons for healthcare providers difficulty in

identifying victims. Thus, it is apparent that literature for sex trafficking as a whole can be generalized to the population of Arizona.

Emergency Departments Role in Identifying Victims

Based on reports from sex trafficking survivors, it is known that a large majority of victims receive emergency medical treatment during their course of imprisonment (Kaltiso et al., 2018; Beck et al., 2015; Greenbaum, 2016; Lamb-Susca & Clements, 2018). Emergency departments continue to be the point of contact for victims with a healthcare provider, yet evidence suggests that healthcare providers are underprepared to appropriately identify victims and adequately intervene (Beck et al., 2015; Hachey & Phillippi, 2017). In fact, a nationwide study found that only 5% of emergency department physicians felt confident in their ability to identify victims of trafficking (Roe-Sepowitz et al., 2017).

Reasons for emergency providers' lack of prompt victim identification consist of an absence of a standard screening tool utilization, lack of education, and discomfort of providers in screening potential victims (Beck et al., 2015; Long & Dowdell, 2018; Donahue et al., 2019). In support, recent studies have shown promising results using screening tools as a method to identify sex trafficking victims that present to the emergency department (Kaltiso et al., 2018; Bepalova et al., 2016). In only a short time period, Kaltiso et al. (2018) use of a screening tool was shown to have high sensitivity and specificity in identifying sex trafficking victims amongst the pediatric population. With a sample size of 203 children and a time frame of six months, the researchers were able to identify 11 victims of trafficking, 10 of which screened positive using their screening tool (Kaltiso et al., 2018). Moreover, other successful pediatric screening tools have been discussed in recent literature. Yet, although promising, these validated screening tools are only representative of the pediatric population and, hence, make implementation into our organization challenging. To date, there has yet to be a validated screening tool for use in potential victims aged 18 years or older applicable to an emergency department setting (Dols et al, 2019; United States Department

of Health and Human Services, 2018; Kaltiso et al., 2018). Nevertheless, there appears to be some promising advances in securing a screening tool for the adult population currently under analysis.

Mumma et al. (2017) acknowledged the aforementioned statement, validating the lack of screening tools appropriate for an emergency department setting. Their pilot study sought to bridge this gap as they researched the efficacy of their screening tool versus physician concern of trafficking. Their screening questions succeeded in a higher sensitivity than that of physician concern but lacked specificity (Mumma et al., 2017). However, the authors did find that a single question, "Were you, or anyone you worked with, ever beaten, hit, yelled at, raped, threatened, or made to feel physical pain for working slowly or for trying to leave?" had 100% sensitivity and 62% specificity in identifying sex trafficking victims (Mumma et al., 2017). They did note limitations to this study, including generalizability, and included that utilizing the single question as a stand-alone question required further research prior to implementation as a screening tool. However, Mumma et al. (2017) elaborate that, at the very least, this question provides a catalyst for the difficult conversation of sex trafficking screening.

In addition, a positive correlation with educating emergency department staff on sex trafficking and comfort in screening potential victims does exist and may be an effective strategy to improve recognition of potential victims (Donahue et al., 2019; Arizona Trafficking Council, 2018; Dols et al., 2019). In fact, the Emergency Nurses Association released a position statement urging emergency providers to seek educational opportunities regarding this topic, emphasizing their important role in identification of victims (Long & Dowdell, 2018). For instance, Egyud et al. (2017) revealed a 75% increase in competence levels post educational interventions of their emergency department staff compared to pre-intervention in sex trafficking victim identification. The authors additionally indicated identification of one trafficking victim along with multiple victims of other forms of abuse post intervention (Egyud et al., 2017). Furthermore, Cole et al. (2018) implemented a 50-minute, interactive, and educational workshop to improve emergency providers' recognition and care of potential trafficked patients. The authors utilized

case studies, consisting of different age groups, to place their sample of emergency providers in scenarios that involved screening and caring for trafficked victims (Cole et al., 2018). Cole et al. (2018) succeeded in demonstrating significant improvements post workshop in their subjects' ability to identify high risk signs of trafficking and implement a care plan to assess and manage potential victims. In addition, they supported that their case studies provided a tangible method of evaluating education's impact on actual victim identification within a limited period of time. Thus, there is support that an educational intervention can have a positive correlation with victim identification of a diverse age group within an emergency department setting (Cole et al, 2018).

Many factors exist that impede identification of potential trafficking victims. Yet utilization of screening tools and provider education provide promising results in increased detection of trafficked persons. Further, it is evident that exposure to scripted screening questions can be effective in easing a healthcare provider's comfort in initiating the trafficking conversation. However, age restrictions prove to limit utilization of an actual screening tool and impede generalizability to the adult population (Dols et al, 2019). In contrast, educational interventions for emergency department providers still demonstrate success in improving competency of victim recognition, thus providing opportunity for rescue for prospective victims of sex trafficking in the emergency department setting.

Internal Evidence

Located in northern Phoenix, Arizona, an emergency department that serves all demographic variables acknowledges a gap in identifying potential victims of sex trafficking. The organization emphasizes that supporting their community and advocating for their patients is an important part of their organization's vision. Therefore, any instances of failing to identify sex trafficking victims that present to their emergency department is a missed opportunity to advocate for a patient in need. Unfortunately, the standing director admits to post-incident knowledge about her clinicians failing to identify a victim of sex trafficking in their ED setting, indicating a problem in need of addressing. Informal interviews from key

stakeholders in the organization indicate a general lack of education regarding sex trafficking, with an emphasis on identifying and intervening. They include concern for lack of screening tools to guide them in identifying potential victims, as they admit unfamiliarity with common presentations of persons at risk. In addition to lack of screening guidance, comfort level in interacting with potentially assertive or aggressive persons who accompany victims was a common concern amongst stakeholders as well. As the organization lacks any standing policy that guides the staff through screening and intervention in regard to sex trafficking victims, actions to take once a victim has been identified further contributes to the discomfort in caring for a trafficked person. Moreover, placing statistical data on this topic has proven to be challenging as the ED staff must first identify victims prior to obtaining objective data, which is where the gap lies. Thus, this inquiry has led to the relevant clinical question, in emergency department providers that care for potential victims of sex trafficking (P), does implementing education for staff (I) versus no education (C) lead to increased identification of potential victims (O)?

Search Strategy

An exhaustive literature search was performed using the electronic databases PubMed, Cumulative Index of Nursing and Allied Health Literature (CINAHL), and the Cochrane Library. All three databases were chosen for the applicability to the topic of sex trafficking in the healthcare setting. Initial keywords used were pertinent to the aforementioned PICO question. These words included *sex trafficking, human trafficking, emergency department, emergency room, education, identify, victim identification, and screening* and were limited to literature originated in the past five years. This initial search yielded 17 results in PubMed, 6 in CINAHL, and 4 in Cochrane Library. Eight of the 27 total results were duplicated in either two or all three electronic databases. Therefore, to expand result quantity prior to appraising, the following keywords were added to the initial search: *ER, ED, healthcare providers, providers, prostitution, modern slavery, sexual exploitation, teaching, learning, knowledge, and recognition*. In addition, grey literature including government publications and dissertations related to the topic were included in the

search. The final search yielded 80 results in PubMed, 49 in CINAHL, and 3 in Cochran Library. After reviewing titles and abstracts, the results were further filtrated by using an inclusion criterion of articles that were primary studies pertaining to staff education regarding sex or human trafficking in the emergency department setting. Qualitative studies were less preferential compared with quantitative or systematic reviews, however, were considered for their insight into barriers staff face in identifying potential victims. Initial exclusion criteria included articles published prior to year 2015, articles that did not address sex trafficking or human trafficking in an emergency department setting, that were not primary studies, duplicate articles, and articles that did not pertain to education as an intervention. However, after a quick evaluation of resulted studies, an ancestral search method exposed relevant and applicable studies that predated the five-year exclusion criteria. Therefore, the inclusion criteria extended to articles published from 2010 to present time. After a rapid critical appraisal for quality and validity of qualifying studies, 10 studies were selected for in depth evaluation (see Appendix A, Table A1).

Critical Appraisal and Synthesis

The selected ten studies were appraised using Melnyk and Fineout-Overholt's (2019) Rapid Critical Appraisal Questions for validity and reliability. All studies were ranked three or greater on their level of evidence and consisted of one Systematic Reviews (SR), two Randomized Clinical Trials, one observational cohort study, and six Non-Randomized Clinical Trials (Melnyk & Fineout-Overholt, 2019). Only two studies extended past the five-year limit of current evidence and were included for their high level of evidence (see Appendix A, Table A1). No obvious biases were reported by all ten studies; however, four of the ten studies failed to disclose financial assistance for their research project (see Appendix A, Table A1). Besides the on SR, which implemented strict inclusion criteria, sample sizes throughout the ten studies were adequate (see Appendix A, Table A2). All research articles were manufactured in the United States (USA) with the exception of Viergever et al. (2015) who conducted initial research for their study outside of the USA.

As specified in the inclusion criteria, all studies' subjects consisted of emergency department staff, with the exception of McMahon-Howard and Reimers (2013), thus asserting significant homogeneity of the demographic samples (see Appendix A, Table A2). McMahon-Howard and Reimers (2013) study concentrated on social workers and was included for its high level of evidence and significant findings (McMahon-Howard & Reimers, 2013). Additionally, as social workers scope may include an emergency department setting, this article does contribute insight to the aforementioned PICO question.

With the exception of Donahue et al. (2019) and McMahon-Howard and Reimers (2013), independent variables throughout the studies comprised of a live educational intervention regarding sex trafficking and was aimed at emergency department staff (see Appendix A, Table A2). In contrast, the abovementioned authors utilized online approaches of education in lieu of in person teachings as their method of intervention (see Appendix A, Table A2). Important to note is Armstrong (2017) and Mamma et al. (2017) do not implement education as an intervention. Instead, the author uses research to support the use of screening tools as a method to increase identification of potential sex trafficking victims in an emergency department setting. Armstrong's (2017) and Mamma et al. (2017) were included in this literature review as their findings support the positive effects of screening tools on victim identification and appease the project sites preference. Dependent variables were consistent throughout and included confidence in identifying, knowledge about, confidence in treating, and actual identification of potential victims of sex trafficking (see Appendix A, Table A2).

Furthermore, 70% of the studies implemented a pre-posttest design to measure outcomes of their research (see Appendix A, Table A2). Within that 70%, a majority utilized a Likert Scale as a tool to gauge differences between pre and posttest results (see Appendix A, Table A2). Finally, 20% of the studies fail to indicate or imply their methods of outcome measurements (see Appendix A, Table A2).

Subsequently, reliability and validity can be assumed for all the selected studies due to high level of evidence, clear methodology, homogeneity of sample subjects and measurement tools, and the prevalence of statistically significant results.

Conclusions from Evidence

Emergency department staff play a vital role in impeding the continuation of sex trafficking by identifying potential victims that present in their healthcare setting. In addition, evidence undeniably supports that emergency department staff education on sex trafficking has a significant impact on the healthcare worker's confidence in identifying and treating potential victims. As a pre and posttest method was the most common modality utilized to measure outcomes, initial concerns may exist with how confidence in identifying potential trafficking victims translates into actual victim identification. Still, three articles succeed in demonstrating actual victim identification utilizing staff education as an intervention (see Appendix A, Table A2). Evidence further supports that screening tools can be a valuable tool to guide victim identification of children and adolescents. However, due to the scarcity of validated screening tools for the adult population in an emergency department setting, concern for generalizability to adult concentrated organizations is present. Nevertheless, conclusions are made that education about sex trafficking that contains useful screening questions can ease the healthcare providers comfort in initiating the difficult conversation of sex trafficking during the screening process. This heightened comfort will ensure more victims are screened. Thus, it is evident from literature that educating emergency department staff on sex trafficking improves identification of potential trafficked victims and should be implemented in emergency departments globally.

Theoretical Framework

To comprehend the relationship between variables and hypothesize outcomes, a theory is recommended to guide the process of change (Melnik & Fineout-Overholt, 2019). The theoretical framework provides a systematic approach to explaining a behavior or phenomenon and offers

navigation through the complexity of change progression (Melnyk & Fineout-Overholt, 2019).

Therefore, application of the Social Cognitive Learning Theory (SCLT) was selected to guide this project (see Appendix B, Figure B1). The SCLT suggests that individuals have a higher probability of performing a desired behavior if they obtain the necessary skills and capacity to perform this behavior, that behavior is modeled by others, and benefits arise from completing this action (Health Communication Capacity Collaborative, 2020).

This theory correlates with internal data obtained from the project site. Frontline staff at the organization conveyed that the absence of exposure or training on the topic of sex trafficking played a vital component in their lack of confidence and inability to identifying potential victims. Evidence further supports that educating healthcare staff on the topic of sex trafficking increases their skill in identifying potential victims, thus, improving their confidence in doing so (Fraley et al., 2020).

Therefore, as framed by the SCLT, preparing the emergency department staff with the needed skills to perform an intervention will ensure they are more likely to implement that intervention.

Porter-O'Grady and Malloch (2018) assert that change is generated from the center outward and cannot be sustained if the point of service does not deliver. Accordingly, the SCLT supports this assertion indicating that the modeling of change by those on the forefront of change process will be a catalyst of change in others. In other words, as frontline healthcare workers of this organization begin to implement interventions to improve accuracy in victim identification, their actions will facilitate other members of the network to do the same. Ultimately, this process of change will lead to project goal of improved victim identification, which is a reward to their actions. Thus, the SCLT is a useful tool to navigate this change process.

Implementation Framework

Once evidence is synthesized and a theoretical understanding is obtained, a framework model can help guide implementation of evidence-based change. Rosswurm and Larrabee's Model for Change

proves relevant for use in this particular scenario (Rosswurm & Larrabee, 1999). The model systematically navigates the process of change via six clearly defined steps (see Appendix B, Figure B2). Beginning with assessing the need for change and ending with application and evaluation of the change process, the Model for Change correlates well with the plan needed to implement educational interventions into an emergency department setting. Using this organizations identified problem as an example, stage one through three consist of an acknowledged need to better recognize sex trafficking victims, an exhaustive literature search for evidence-based interventions regarding the topic, and a synthesis of the evidence obtained. Sequentially, Rosswurm and Larrabee (1999) emphasize the importance of stage four in successfully navigating stages five and six. The importance of this stage lies in the preparation of the intervention. Stage four consists of the project design, where required resources and funding for resources are identified, the construction of the intervention, and the description of measurable outcomes (Rosswurm & Larrabee, 1999). In this particular project, the educational intervention would be constructed, and the method of delivery would be scheduled during stage four. The final two stages of Rosswurm and Larrabee's (1999) Model of Change guide the user through implementation of the intervention, measurement of the outcomes, and maintaining the progress of change within the organization. Thus, the relationship with the organization's champion becomes fundamental during the final stage of the model as the sustainability of change must be nurtured after the project implementation has been completed.

Implication for Practice Change

It is evident that victims of trafficking will come into contact with an emergency healthcare provider in their period of exploitation (Greenbaum, 2016). Yet, healthcare workers frequently fail to identify this population. Qualitative literature supports that lack of training holds a substantial placeholder as a barrier to identifying victims (Long & Dowdell, 2018). Furthermore, there has been significant success

in implementing live or virtual educational interventions to increase confidence in sex trafficking victim identification. In fact, evidence affirms that a healthcare provider's confidence in identifying victims is translatable to actual victim identification, which is the ultimate goal (Beck et al., 2015; Egyud et al., 2017; Grace et al., 2014). Thus, to promote change in our organization we must implement an educational intervention. Getting the site director and other leadership of the organization to encourage participation will increase likelihood of compliance. Subjects would include the key stakeholders of the organization: doctors, nurses, nurse practitioners, physician assistants, medics, registration, and social workers. Evidence indicates that using a virtual teaching method or a live teaching method increases actual victim identification versus confidence in identification ability (Beck et al., 2015; Egyud et al., 2017). Evidence supports using interactive teachings, either via case studies or role play, to strengthen information retainment (Cole et al., 2018). The homogeneity of measurement tools utilized in literature indicate that the use of a pre and posttest would be the best method of measuring outcomes. Providing a pretest prior to intervention allows insight to current knowledge about the subject while a posttest measures growth in knowledge and aptitude. Implementing case studies that require the subject to identify which case is a potential trafficked victim, before and after intervention, would be a tangible way to gauge the healthcare providers ability to identify potential victims without utilizing months to obtain data from actual patient care. Measurable outcomes would include providers knowledge regarding sex trafficking as a pandemic and signs of a potential trafficked person, the providers confidence in identifying potential victims, the ability for a provider to actually identify victims utilizing case studies, and the ability of the provider to identify the correct reporting process post victim identification. Finally, encouraging the director to uphold an environment of change is vital to ensure the process of change continues after the intervention is completed.

Methods

This quality improvement project examined the efficacy of an evidence-based sex trafficking educational video in improving emergency healthcare workers' confidence and ability to identify victims of sex trafficking.

Participants

Participation in this project was open to all currently employed emergency department staff within this organization who were able to read and write in English. The targeted population consisted of emergency department nurses, medics, registration staff, unit secretaries, physicians, physician assistants, and nurse practitioners. Exclusion criteria for participation in this project included those under the age of 18, those not currently employed in the emergency department of this organization, and those that did not consent to participation. Recruitment of participants was obtained through a series of approved emails sent out by stakeholders within the organization over a three-week period. Only work emails were used for contact. The final two emails contained a link and password to the project medium where the intervention could be accessed. Participants were informed that involvement in this project was voluntary and would not have any effect on their employment. Prior to initiation of this project, participant protections and all other ethical considerations underwent a full review that resulted in an approval by the organization's Institutional Review Board (IRB) and an exempt status by Arizona State University's IRB.

Intervention

A 40-minute educational video was tailored to meet the aforementioned objective by providing insight to the following topics regarding sex trafficking and healthcare: definition, red flags, screening questions, the reporting process, intervention tools, and local resources. The video used evidence-based education, interviews with local representatives from the sex trafficking community, and provided local resources for the clinician to assist in screening and reporting cases of sex trafficking. Pre and posttest, self-evaluation Likert scales were used to measure staff confidence in identifying potential victims of trafficking (see Appendix C). A case study, with corresponding questions, was delivered before and after

the educational intervention. The case study consisted of common emergency department presentations and scenarios of trafficked victims and was used to measure staff's ability to identify victims of sex trafficking. In addition, the case study aimed to address admitted concerns by the organization's staff. In doing so, the case studies covered and tested on intervention techniques in the setting of potentially aggressive persons, the reporting process, and knowledge of local resources. Lastly, using a Likert scale, the participants were asked to evaluate the usefulness of this educational intervention within their clinical setting. Total completion time of this project was estimated to be one hour.

Data Collection

Qualtrics, an online survey application, was used as a medium for the educational intervention and testing questions. Participants consented electronically via Qualtrics prior to initiating the intervention. If a participant chose not to consent to participation, the module closed, and continuation of the intervention was disabled. The online survey application remained accessible for a three-week time period in which the participant could complete the intervention. All data inserted into Qualtrics was programmed to be de-identified to ensure anonymity. Once the three-week time period lapsed, the application was closed, and all results were compiled within the online medium.

Funding

No funding was received for this project. Video production was completed through an in-kind donation from a local videographer.

Results

Descriptive analysis, using percentages, was the chosen method of analysis. A total of 10 participants accessed Qualtrics. Of those 10 participants, two did not consent to participation in this project and were not able to continue to the intervention. One of the remaining eight participants did not complete the pre or posttest Likert scale, but did complete the pre and posttest case study and its correlating questions. Therefore, they were omitted from the measurement of staff confidence but were

included in calculation of the staff ability. This resulted in seven total participants for measurement of staff confidence to identify victims of trafficking (n=7) and eight total participants for measurement of staff ability to identify victims of trafficking (n=8). As a result of this small sample size, descriptive analysis was used to analyze data.

Staff Confidence

Prior to the educational intervention, at 86%, a majority of participants reported having a general understanding of what sex trafficking entails. However, only 71% of staff reported feeling confident in identifying red flags that a patient was potentially a victim of trafficking, and just 57% of participants felt confident in initiating a conversation to screen for instances of trafficking. In addition, less than 50% of the participants admit knowledge of local resources for victims of sex trafficking. Lastly, those that reported an understanding of the state required reporting process of potential trafficked victims barely made the majority at 57%. These findings were consistent with internal data obtained from the organization. As 100% of the participants asserted their high likelihood of encountering a potential victim of sex trafficking, it was even more evident that there was a need to address this educational gap (see Appendix D, Graph D1).

In contrast, when reviewing post-intervention findings, it was evident that education on sex trafficking had a significant impact on improving staff confidence in identifying and screening for victims of trafficking. When repeating the same self-evaluation Likert scale that was completed pre-intervention, 100% of participants post-intervention agreed to feeling confident in identifying red flags of trafficking, starting the screening process for victims of trafficking, knowing local resources, and understanding the state mandated reporting processes (see Appendix D, Graph D2). These findings are consistent with evidence from literature that education aimed at healthcare workers about sex trafficking will improve staff confidence in identifying and screening potential victims of trafficking (Beck et al., 2015; Egyud et al., 2017; Donahue et al., 2019).

Staff Ability

Although all participants agreed that their confidence and self-perception of their ability to identify victims of sex trafficking increased post-intervention, the results for participants' ability to actually identify a victim of trafficking via a case study was not as promising. In fact, compared to pre-intervention, 13.5% less of the participants were able to correctly identify a victim of trafficking. In addition, there was no change in staff ability to correctly report suspected trafficking of a minor or to successfully navigate interaction with an aggressive trafficker with 75% answering correctly pre- and post-intervention to both scenarios. Furthermore, participants failed to identify a victim of trafficking in immediate danger 12% more post- intervention compared to pre-intervention. However, there was a favorable increase in staff ability to correctly report suspicion of trafficking of an adult patient by 13% post-intervention.

Discussion

As previously discussed, sex trafficking is a public health concern (Greenbaum, 2016). This growing pandemic causes detrimental consequences to the victim's well-being (Nguyen et al., 2018). Stakeholders of the organization assert that barriers to identifying potential victims consist of a knowledge deficit pertaining to sex trafficking and a lack of confidence in identifying potential victims. Identification of potential victims is vital to patient advocacy, an essential component of this organization's mission. Evidence consistently asserts that educational interventions aimed at healthcare workers on the topic of sex trafficking improves staff confidence and ability to identify victims of sex trafficking that present to their emergency department (Cole et al., 2018; Donahoe et al., 2019; Lutz, 2018). Thus, implementing an educational intervention would not only prepare emergency department staff to accurately identify potential victims and initiate the process of recovery, but would also exemplify the mission of the organization.

Yet, the findings of this quality improvement project are concerning and inconsistent with the above-mentioned literature. Literature has shown a positive correlation between staff confidence in

identifying victims of sex trafficking and actual victim identification (Egyud et al., 2017; Mumma et al., 2017; Viergever et al., 2015). In addition, case studies have proven to be an effective, tangible, and rapid method of measuring healthcare workers ability to identify a victim of sex trafficking (Beck et al., 2015). Yet, this particular project showed difficulty in connecting these two variables. It is irrefutable that staff confidence increased significantly post-intervention, yet the results showed either no impact or a negative correlation between confidence and actual ability to identify victims of trafficking.

In addition, although 100% of participants revealed an understanding of reporting guidelines within their state post-intervention, this subjective understanding was poorly reflected within the case study. Concerns are held in the importance of the reporting process in removing the person, specifically minors, from the situation of exploitation, as guided by Federal and Arizona State Law (U.S. Department of State, 2000). As this project's educational intervention was guided by evidence-based material, closer examinations should be made on the project's limitations that may have influenced the outcomes.

Limitations

Certain limitations were present that may have made this project an outlier compared to similar projects in literature.

Sample Size

Although this project enlisted leadership in recruitment of participants, the overall sample size was small. This presented difficulty in proving reliability of this quality improvement project's findings as it may contain outliers not representative of the population as a whole. Thus, this project has poor generalizability and may fail to represent all emergency department healthcare workers within the state of Arizona.

COVID Distancing

Approaches to recruitment and intervention methods were limited related to the global pandemic, COVID-19. Due to social distancing, restrictions were placed on in person meetings,

recruitment, and interventions. In considering the number of participants, it was clear that recruitment was affected by social distancing which led to the aforementioned disparities. Furthermore, literature on the subject of sex trafficking and staff education support that an interactive approach to teaching, using case studies and role play, help staff retain the information and increase likelihood of role modeling the behavior successfully (Cole et al., 2018). As social distancing required any intervention to be performed virtually, role play, and interactive case studies were not an option. This decreased opportunities to ensure teachings were conducive to learning and may have influenced the project's findings.

Video Length

Informal data prior to initiation of the intervention indicated that the video length and method of delivery may have been a deterrent to learning. Informal interviews indicated that staff felt online learning modules did not meet their learning needs and were often unable to hold the viewers' attention. The 40-minute video length and utilization of an online module format to deliver the intervention may have had an impact on the project's findings. However, a formal survey, approved by IRB, would need to be completed to gain better insight on this matter.

Implications for Practice

Although this project showed difficulty translating staff confidence into actual victim identification, it was successful in accomplishing important goals that have been shown to increase positive outcomes for victims of trafficking and improve healthcare workers ability to care for their patients.

Foremost, this quality improvement project identified a gap or problem that needed to be addressed within this organization. Rosswurm and Larrabee (1999) include assessing the need for change within an organization as the first step in their model for change. Without bringing attention to this issue, the process of change would not have been initiated and outcomes for victims of trafficking would not improve. In addition, the results of this project did show promising findings in improving staff confidence. The Social Cognitive Theory used to guide this project implies that by increasing staff confidence in

screening and identifying victims of sex trafficking, we are providing them with the tools required to better identify victims of trafficking and will increase their likeliness to screen (Health Communication Capacity Collaborative, 2020). Thus, we provide more opportunities for this organizations staff to refine their skills in victim identification leading to improved ability to identify a potential victim. Evidence consistently reports that simply exposing healthcare works to the topic of trafficking is enough to start the process of victim identification and can result in better outcomes for those being exploited (Cole et al., 2018; Donahoe et al., 2019; Lutz, 2018). Lastly, in the project's shortcomings, we can find a catalyst for more research on the topic of staff education and how to better convert staff confidence to identify victims of sex trafficking into ability to identify victims of sex trafficking.

Sustainability and Recommendations for Future

As previously mentioned, change is generated from the center outward (Porter-O'Grady & Malloch, 2018). Thus, it is important to consider the input of those at the frontline of transformation in order to facilitate and sustain the progression of change and innovation. Therefore, sustainability will result by ensuring leadership remains interactive with staff at the frontline of sex trafficking victim identification within their organization and can adapt to their identified needs.

It bears repeating that emergency healthcare workers will come into contact with a victim of sex trafficking in their clinical setting (Greenbaum, 2016). In addition, it is evident that education is a powerful tool in improving victim identification by healthcare workers (Cole et al., 2018; Donahoe et al., 2019; Lutz, 2018). However, this project exemplified how learning modalities may play an influential role in information retention. Thus, healthcare organizations should evaluate how their staff are best educated on the topic of sex trafficking to ensure they are able to deliver education to their staff in a method that is conducive to learning. In doing so, they will not only increase staff confidence in victim identification, but also improve staff ability to identify victims of sex trafficking that present to their clinical setting.

Conclusion

Emergency department healthcare workers are on the frontline in battling the industry of sex trafficking as they play a key role in victim identification. However, in order to better intervene and care for this vulnerable population, emergency department healthcare workers must be prepared with the necessary knowledge and tools to do so. As education continues to be a feasible and effective tool against trafficking, continued staff education on the topic will lead to better outcomes for victims of trafficking and result in a healthier community.

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Appendix A

Table A1

Evaluation Table

Citation	Theory/ Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement/ Instrumentation	Data Analysis	Findings/ Results	Level/Quality of Evidence; Decision for practice/ application to practice
<p>Armstrong. (2017). Instruments to identify commercially sexually exploited children: Feasibility of use in the emergency department setting.</p> <p>Funding: No funding identified.</p> <p>Bias: Declares no bias or conflict of interest.</p> <p>Country:</p>	<p>No specific theory identified</p> <p>Inferred Theoretical Conceptual Model</p>	<p>Design: SR (SLR)</p> <p>Purpose: To examine the CSEC screening instruments that are in existence today and evaluate the feasibility of their use in an ED setting.</p>	<p>N= 6 instrument studies</p> <p>DS: PubMed, CINAHL, Scopus, and EBSCOhost</p> <p>IC: Studies with any instrument that screened only for sexual exploitation or CSE of children 18 or younger; used I health care facility.</p> <p>EC: Studies with any instrument that included</p>	<p>IV: Screening tools for identifying STV</p> <p>DV1: Validity of screening tools</p> <p>DV2: Feasibility for use in ED setting</p>	<p>Not clearly stated.</p> <p>Appear to use validity measurements off the studies rather than their own.</p>	<p>Descriptive Statistics (scales).</p>	<p>Findings confirm very few screening instruments exist. 2/6 screening tools are feasible for use in the ED setting with high validity; however, both studies focus on adolescents and leave out younger age groups and lack evidence of reliability.</p>	<p>LOE: I</p> <p>Strengths: Accumulated study review of validated screening tool for STV; Outlined deficit in subject; SR.</p> <p>Weaknesses: No funding disclosed; Measurements not clearly stated.</p> <p>DFP: Strong evidence supporting one particular screening tool that could assist in identifying STV in ED setting. Would be feasible to use in practice.</p>

Key: ANCOVA- Analysis of Covariance; CG- control group; CSEC- commercial sexual exploitation of children; DFP- decision for practice; DS- databases searched; DV- dependent variable; EC- exclusion criteria; ED- emergency department; EI- educational interventions; EMR- electronic medical record; FTF- face to face; HCP- health care providers; HT- human trafficking; IC- inclusion criteria; IG- intervention group; IV- independent variable; LOE- level of evidence; LR- literature review; MP- medical providers (MD, DO, NP, PA, RN); N- number of studies (if SR) or participants in study; NP- Nurse Practitioner; NRTC- Non-Randomized Clinical Trial; POI- post intervention; PP- PowerPoint; PRI- pre-intervention; PRISMA- Preferred Reporting Items for Systematic Reviews and Meta-Analyses; QOS- quality of study; RCT- Random Clinical Trials; SR- Systematic Review; STV- sex trafficking victims; VHT- victims of human trafficking

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USA			screening for labor trafficking, adults, or not used in health care setting.					
Beck et al. (2015). Medical providers' understanding of sex trafficking and their experience with at risk patients. Funding: Wisconsin Medical Society Foundation, Inc.; Children's Research Institute; Clinical and Translational	No specific theory identified Inferred Theoretical Cognitive Model	Design: Quasi-experimental (survey) NRCT Purpose: Evaluate knowledge gaps and training needs to highlight importance of training in identification of STV.	N= 168 responses (500 studies sent, 168 returned; 34%) Setting: HCP in southeastern region of Wisconsin Demographic: Occupation: MP- 44% SW-56% Specialty: Academia- 25% ED- 41%	IV: EI DV1: Knowledge scores DV2: Ability to identify STV EI: Clinical education vignettes to those with STV training and W/O	Vague instrument and measurement description. "Validated survey" reported 12-point scoring system, where 1 point given for right answer.	Nonparametric Tests; Fisher's Exact Test P of 0.01 considered significant	Those with training had significantly higher knowledge scores than those without (p 0.001) Those with training were significantly more likely to identify STV (67% vs 37%; P0.001)	LOE: III Strengths: Significant results; high return rate from ED HCPs Weaknesses: Although STV education was a component of study, it was not an intervention. Education was not done in this study, instead they used it as a stratifying factor; low survey return rate; more description of measurement tools

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Science Institute Bias: No potential bias or conflict of interest disclosed Country: USA			With STV training- 38% Without STV training-62% IC: Practicing HCP that would come into contact with STV EC: Medical students, residents, fellows; Wanting currently practicing providers					needed; poor graph demonstration DFP: The study was only performed in one state. However, with their significant findings, it is clear that education has an important role in identification of STV and would be easily applicable in clinical setting.
Cole et al. (2018). A theory-based didactic	Cognitivist Theory	Design: Quasi-experimental (pre & posttest)	N= 19 emergency Physicians and residents	IV: EI DV:	4-point Likert Scale	Cronbach’s alpha used for scoring pre and posttest.	Results were significant (p< 0.001) in that education	LOE: III Strengths:

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<p>offering physicians a method for learning and teaching others about human trafficking.</p> <p>Funding: Report no relevant funding to disclose.</p> <p>Bias: None recognized.</p> <p>Country: USA</p>	Educational Theory and Instructional Principles	<p>NRCT</p> <p>Purpose: To increase knowledge and skills required to recognize and care for HTV in ED and employ techniques to teach learners so they may teach.</p>	<p>Setting: An annual meeting for Society for Academic Emergency Medicine.</p> <p>IC: None disclosed</p> <p>EC: None disclosed</p>	<p>Ability to identify high risk signs of trafficking</p> <p>EI: 50-minute interactive workshop using case studies and student interaction; Utilized role play</p>		t-Test	<p>increases ability to identify high risk signs of potential HTV</p> <p>Effect Size: 0.57-0.62</p>	<p>Clearly stated theory guided intervention; utilized role play; focus on ED providers; significant results.</p> <p>Weaknesses: Small sample size; not RCT; vague information on measurement. No identified IC or EC</p> <p>DFP: With an emphasis on ED HCP, this study demonstrated that education can have an impact on identification of VHT. This would be feasible and applicable to my clinical setting.</p>
<p>Donahue et al. (2019). Educating</p>	No specific theory identified	Design: Quasi-experimental	<p>N=75 ED HCP</p> <p>Setting:</p>	IV: EI	Likert Scale Questionnaire	Descriptive Statistics	EI significantly increased confidence in	<p>LOE: III</p> <p>Strengths:</p>

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<p>emergency department staff on the identification and treatment of human trafficking victims.</p> <p>Funding: None stated</p> <p>Bias: None recognized</p> <p>Country: USA</p>	<p>Inferred Theoretical Cognitive Model</p>	<p>(pre & posttest) NRCT</p> <p>Purpose: To educate ED HCPs to increase staff confidence in recognizing and treating VHT.</p>	<p>ED HCP in two suburban hospitals near a northeast metropolitan city.</p> <p>Demographic: Nurses- 66% Other HCPs- 34%</p> <p>IC: None stated</p> <p>EC: None stated</p> <p>25% attrition rate</p>	<p>DV1: Confidence in identification of VHT</p> <p>DV2: Confidence in treating VHT</p> <p>EI: Learning module containing PP, case studies, and identification and treatment guidelines.</p>	<p>(Scale 0-10, with 0 being “not confident” and 10 being “very confident”)</p>	<p>(scaled, percentages)</p>	<p>posttest compared to pretest in identification (4/10 to 7/10) and in treatment (4/10 to 8/10) of VHT</p>	<p>Use of evidence-based education as an intervention; Focused on ED HCP; increase in identification confidence</p> <p>Weaknesses: High attrition rate; not RCT; sample IC and EC not disclosed; funding not disclosed.</p> <p>DFP: With an emphasis on ED HCP, this study demonstrated that education can have an impact on identification of VHT. This would be feasible and applicable to my clinical setting.</p>

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<p>Egyud et al. (2017). Implementation of human trafficking education and treatment algorithm in the emergency department.</p> <p>Funding: No funding identified.</p> <p>Bias: No bias identified.</p> <p>Country: USA</p>	<p>Johns Hopkins Nursing Evidence-Based Practice Model and Everett M. Rogers Change Model.</p>	<p>Design: Quasi-experimental (pre & posttest) NRCT</p> <p>Purpose: To improve identification and rescue of VHT through education and screening tools</p>	<p>N= 102 HCPs</p> <p>Setting: Trauma emergency department in Pennsylvania</p> <p>Demographics: Percentage not defined</p> <p>Nurses, physicians, social services, registration, and radiology.</p> <p>IC: Employees of hospital. Not well clarified.</p> <p>EC: None stated</p>	<p>IV: EI</p> <p>IV2: Screening Tool</p> <p>DV1: Confidence in identification of VHT</p> <p>DV2: Identification of VHT</p> <p>EI: Live training given at mandatory staff meetings and informational binder with meeting information.</p>	<p>Not clearly stated.</p> <p>Anonymous survey sent out to measure confidence, however, not well defined. Utilized EMR review to measure screening tool effect on identification of VHT</p>	<p>Descriptive Statistics (percentages, number of identified victims)</p>	<p>DV1: 74% stated an improvement in confidence and competence in identification of VHT</p> <p>DV2: 1 confirmed VHT identified.</p>	<p>LOE: III</p> <p>Weaknesses: Not RCT; Poorly defined measurement. Bias or funding not disclosed; sample IC and EC not disclosed. Analysis poorly defined.</p> <p>Strengths: Longitude of study. Clearly defined Conceptual Framework. Emergency Specific. Screening questions provided. Documented identification of a trafficking victim.</p> <p>DFP: Only study thus far with a direct link between education</p>

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				Screening Tool: If red flags presented as discussed in EI, a list of screening questions were to be asked.				and identification of victims. However, would not utilize in future practice due to poor quality of study.
Grace et al. (2014). Educating health care professionals on human trafficking. Funding: Community Partnerships Department at Lucile Packard Children’s Hospital. US Department of Justice Grant.	No specific theory identified Inferred Theoretical Cognitive Model	Design: RCT (pre & posttest) Purpose: To determine whether an educational presentation to ED providers increased recognition of individuals seen who may be VHT.	N= 258 141 in intervention group 117 in control group Setting: 20 hospitals in the San Francisco Bay Area. Demographics: ED physicians, nurses, and social workers.	IV: EI DV: Knowledge regarding identifying VHT. EI: 25 min PP presentation by local law enforcement and MD who specializes in HT.	Survey using 5-point Likert scale (Scale 1-5, with 1 being “strongly disagree to 5 being “strongly agree”)	2 sample t-Test for normally distributed measures Wilcoxon rank sum test for nonnormally distributed measures Fisher exact test for categorical variables.	Self-rated knowledge increased by 1.42 points in IG versus -0.15 in CG (1.57[1.02-2.12], P<0.001)	LOE: II Strengths: RCT; well defined methodology, analysis, and results. Large sample size. Significant results. ED focus. Declared funding source. Weaknesses: Greater than five years study. Focused on pediatric population.

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Citation	Theory/ Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement/ Instrumentation	Data Analysis	Findings/ Results	Level/Quality of Evidence; Decision for practice/ application to practice
<p>Bias: Declare no bias or conflict of interest.</p> <p>Country: USA</p>			<p>IC: HCP of 20 selected hospitals. HCP</p> <p>EC: Excluded if did not get IRB approval or if shared HCP with other hospitals.</p>					<p>DFF: With an emphasis on ED HCP, this study demonstrated that education can have an impact on identification of VHT. This would be feasible and applicable to my clinical setting.</p>
<p>Lutz (2018). Human trafficking education for nurse practitioners: Integration into standard curriculum.</p> <p>Funding: No funding identified.</p> <p>Bias:</p>	<p>No specific theory identified.</p> <p>Inferred Theoretical Cognitive Model</p>	<p>Design: Quasi-experimental (pre & posttest) NRCT</p> <p>Purpose: Evaluate the effectiveness of an educational intervention regarding HT on student NPs.</p>	<p>N= 73 NP students *non-probability sampling</p> <p>Setting: During class of large American University</p> <p>Demographics: 100% NP students</p>	<p>IV: EI</p> <p>DV1: Knowledge regarding HT</p> <p>DV2: Ability to identify victims of HT</p> <p>DV3: Ability to correctly treat a victim of HT</p>	<p>Likert Scale Questionnaire (Scale 1-4, with 1 being “really not confident” and 4 being “really confident”)</p>	<p>T-test</p> <p>P of 0.05 considered significant</p>	<p>DV1: EI significantly improved knowledge regarding HT PRI- 0.77 (SD) POI-0.50 (SD) t-Test 14.883 p < 0.001</p> <p>DV2: EI significantly improved ability to identify PRI- 0.52(SD) POI-0.49(SD)</p>	<p>LOE: III</p> <p>Strengths: Significant results; clear methodology</p> <p>Weaknesses: Bias not disclosed; not RCT; sample EC not disclosed; funding not Disclosed; nonprobability sampling; study from one specialty and one school</p>

Key: ANCOVA- Analysis of Covariance; CG- control group; CSEC- commercial sexual exploitation of children; DFF- decision for practice; DS- databases searched; DV- dependent variable; EC- exclusion criteria; ED- emergency department; EI- educational interventions; EMR- electronic medical record; FTF- face to face; HCP- health care providers; HT- human trafficking; IC- inclusion criteria; IG- intervention group; IV- independent variable; LOE- level of evidence; LR- literature review; MP- medical providers (MD, DO, NP, PA, RN); N- number of studies (if SR) or participants in study; NP- Nurse Practitioner; NRTC- Non-Randomized Clinical Trial; POI- post intervention; PP- PowerPoint; PRI- pre-intervention; PRISMA- Preferred Reporting Items for Systematic Reviews and Meta-Analyses; QOS- quality of study; RCT- Random Clinical Trials; SR- Systematic Review; STV- sex trafficking victims; VHT- victims of human trafficking

Table A1

Evaluation Table

Citation	Theory/ Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement/ Instrumentation	Data Analysis	Findings/ Results	Level/Quality of Evidence; Decision for practice/ application to practice
No bias identified. Country: USA			5.5% with previous HT training 94.5% without previous HT training IC: Present in scheduled class. EC: No EC identified.	EI: 1-hour lecture style with PP, discussion, and videos.			t-Test 20.783 p < 0.001 DV3: EI significantly improved ability to correctly treat PRI- 0.61(SD) POI-0.54(SD) t-Test 14.920 p < 0.001	DFF: Although limited sample demographics, significant results. This would be feasible and applicable to my clinical setting.
McMahon-Howard & Reimers. (2013). An evaluation of child welfare training program on the commercial sexual exploitation of children (CSEC).	No specific theory identified. Inferred Theoretical Cognitive Model	Design: RCT (pre & posttest) Purpose: Evaluate the effectiveness of a training program that was designed to improve knowledge and	N= 123 participants Demographics: 100% Social Workers CG: 52 participants IG: 71 participants	IV: EI DV: Knowledge on identification of CSEC EI: 90 minute live interactive webinar	5-point Likert Scale (Scale 1-5, with 1 being “strongly disagree” and 5 “being strongly agree”)	ANCOVA Paired t-test to show difference between pre and posttest.	Significant increase in knowledge regarding CSEC and identifying risk factors of CSEC ([F(1, 118)=20.63, P,.01]) HOWEVER,	LOE: II Strengths: RCT; well defined methodology, analysis, and results. Large sample size. Significant results. Weaknesses: Focused on Social workers, not ED HPC.

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Citation	Theory/ Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement/ Instrumentation	Data Analysis	Findings/ Results	Level/Quality of Evidence; Decision for practice/ application to practice
<p>Funding: Emory Center for Injury Control, CDC Injury Control Research Center Grant.</p> <p>Bias: No bias stated.</p> <p>Country: USA</p>		identification of CSEC.	<p>Setting: Social service staffing online study.</p> <p>IC: Social worker at facility.</p> <p>EC: No EC identified.</p>				Study did not find significant changes in referrals out for concerns about CSEC between control and intervention group ([F(1, 118)=2.46, p=0.6])	<p>Greater than five-year study. No EC stated.</p> <p>DFP: Although it did not emphasize ED HCPs and did not show and increase in appropriate referral between the two groups, this study demonstrated that education can have an impact on identification of VHT. This would be feasible and applicable to my clinical setting.</p>
Mumma et al. (2017). Screening for victims of sex trafficking in the emergency department: A pilot program	No specific theory identified.	<p>Design: Observational Cohort Study</p> <p>Purpose: To characterize the feasibility of using a screening</p>	<p>N=143 participants</p> <p>Demographics: Female patients aged 18-40, most at risk for being trafficked</p>	<p>IV: Screening tool</p> <p>DV: Victim Identification</p>	14 question screening survey based on published recommendations.	Descriptive statistics using Stata Version 14.1.	Sensitivity of the screening survey was better than physician concern for identifying victims of sex trafficking.	<p>LOE: IV</p> <p>Strengths: Succeeded in identifying victims of trafficking, large sample size, ED setting, focused on</p>

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Evaluation Table

Citation	Theory/ Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement/ Instrumentation	Data Analysis	Findings/ Results	Level/Quality of Evidence; Decision for practice/ application to practice
<p>Funding: Grant funding through the National Center for Advancing Translational Sciences and National Institutes of Health</p> <p>Bias: No bias reported</p> <p>Country: USA</p>		survey to identify adult victims of sex trafficking in the ED compared to physician concern	<p>Setting: California Emergency Department</p> <p>IC: 18-40 age, female, ED patient within this academic year, medically stable, speak English, and able to provide consent</p> <p>EC: Minors and those in custody of law enforcement</p>					<p>healthcare provides, screening tools</p> <p>Weaknesses: Low level of evidence, tools not validated in an ED setting, sampling method</p> <p>DFP: More research into this screening tool would be needed to validate its efficacy in an ED setting.</p>
Viergever et al. (2015). Health care providers and human trafficking: What do they	No specific theory identified. Inferred Theoretical	Design: Quasi-experimental (pre & posttest) NRCT	<p>N= 165 HCP</p> <p>Demographics: (Nurse, MD, Social Worker, Psychologist,</p>	<p>IV: EI</p> <p>DV: Increase knowledge in</p>	<p>Not clearly identified.</p> <p>Survey. Had some free text aspect.</p>	Descriptive Statistics	Poor data reporting. Report an increase in knowledge in identifying HTV	<p>LOE: III</p> <p>Strengths: Showed lack of knowledge about HT. Addressed topic.</p>

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Citation	Theory/ Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement/ Instrumentation	Data Analysis	Findings/ Results	Level/Quality of Evidence; Decision for practice/ application to practice
<p>know, what do they need to know? Findings from the Middle East, the Caribbean, and Central America.</p> <p>Funding: United Nations Global Initiative to Fight Trafficking in Persons. U.S. Department of State Office to Monitor and Combat Trafficking in Persons.</p> <p>Bias: No bias identified.</p>	Cognitive Model	<p>Purpose: To provide lessons to help care providers identify and refer victims and provide care for survivors.</p>	<p>Health educator, Counselors, Hospital managers...)</p> <p>Setting: Two-day training course in multiple countries.</p> <p>IC: HCP that would likely encounter VHT and those already working within counter trafficking referral networks.</p> <p>EC: No EC identified.</p>	<p>identifying HTV.</p> <p>EI: Utilized a handbook “Caring for Trafficked Persons” Unclear how this was delivered to the subjects.</p>			<p>but give no comparable percentages.</p> <p>Identifies that 5% of HCP had interactions with HTV.</p>	<p>Large sample size. Diverse sample subject group.</p> <p>Weaknesses: Sample subjects were already involved with potential VHT; poor measurement; ill described methodology; not initially intended to be study. Did not answer purpose well. Vague description of results.</p> <p>DFP: The poor quality of the study makes it hard to utilize for practice. However, does exemplify the lack of education regarding HT.</p>

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Evaluation Table

Citation	Theory/ Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement/ Instrumentation	Data Analysis	Findings/ Results	Level/Quality of Evidence; Decision for practice/ application to practice
Country: Researchers from USA. Study performed in multiple countries								

Key: ANCOVA- Analysis of Covariance; CG- control group; CSEC- commercial sexual exploitation of children; DFP- decision for practice; DS- databases searched; DV- dependent variable; EC- exclusion criteria; ED- emergency department; EI- educational interventions; EMR- electronic medical record; FTF- face to face; HCP- health care providers; HT- human trafficking; IC- inclusion criteria; IG- intervention group; IV- independent variable; LOE- level of evidence; LR- literature review; MP- medical providers (MD, DO, NP, PA, RN); N- number of studies (if SR) or participants in study; NP- Nurse Practitioner; NRTC- Non-Randomized Clinical Trial; POI- post intervention; PP- PowerPoint; PRI- pre-intervention; PRISMA- Preferred Reporting Items for Systematic Reviews and Meta-Analyses; QOS- quality of study; RCT- Random Clinical Trials; SR- Systematic Review; STV- sex trafficking victims; VHT- victims of human trafficking

Table A2

Synthesis Table

Author	Armstrong	Beck	Cole	Donahue	Egyud	Grace	Lutz	McMahon-Howard	Mumma	Viergever
Year	2017	2015	2018	2019	2017	2014	2018	2013	2017	2015
SR: LOE I	X									
RCT: LOE II						X		X		
NRCT: LOE III		X	X	X	X		X			X
Observational									X	
Demographics										
N=	6 studies	168	19	75	102	258	73	123	143	165
Nurses		X		X	X	X				X
Nurse Practitioners		X			X	X	X			X
Doctors		X	X		X	X				X
Social Workers		X				X		X		X
Other		X			X					X
ED Staff	X	X	X	X	X	X	X		X	X
Non-ED Staff		X					X	X		X
Setting										
USA	X	X	X	X	X	X	X	X	X	
Outside USA										X
IV										
Live EI		X	X		X	X	X			X
Online EI				X				X		
Mixed										
Screening Tool	X				X				X	
DV										
Confidence in identifying STV		X	X*	X*	X	X	X*	X*	X	X
Knowledge about STV		X*					X*	X*		X

Key: *- statistically significant; **EI**- educational intervention; **LOE**- level of evidence; **N**- sample size; **NCS**- not clearly stated; **NRCT**- Non-Randomized Clinical Trial; **RCT**- Randomized Clinical Trial; **SR**- Systematic Review; **SST**- specialized screening tool; **STV**- sex trafficking victims

EDUCATING EMERGENCY STAFF ON SEX TRAFFICKING

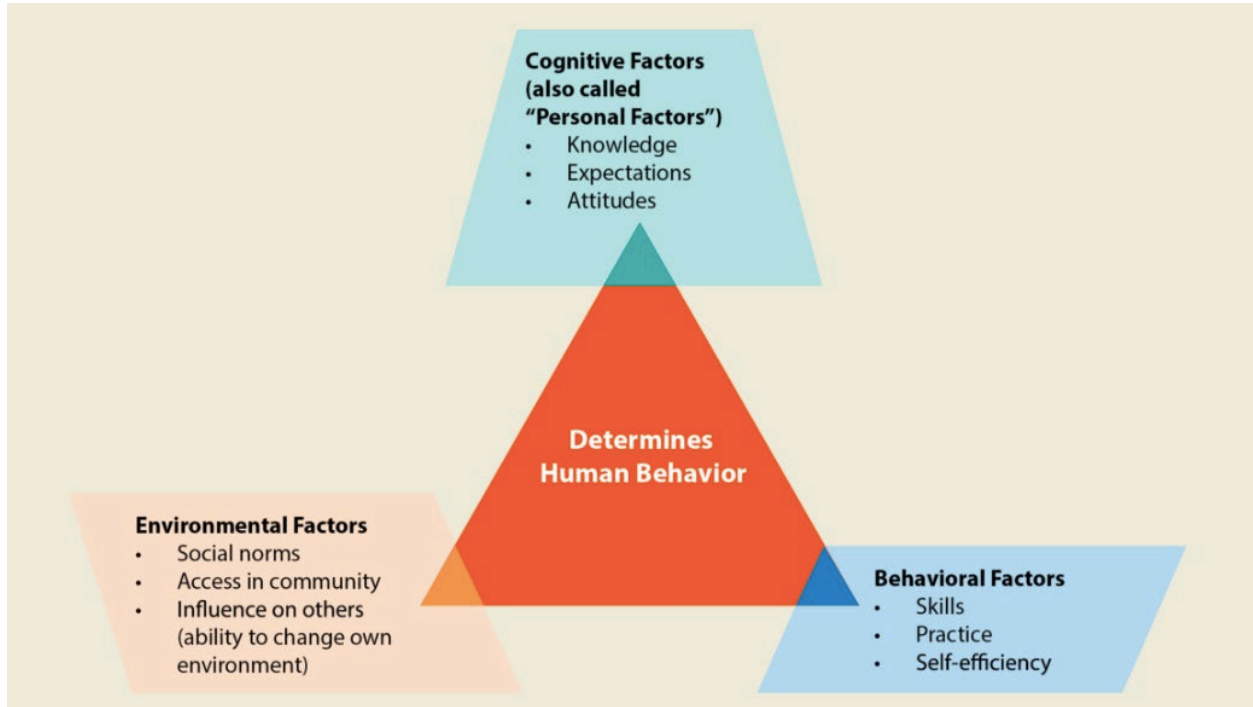
Confidence in treating STV				X*			X*			
Identification of STV	X	X Identified in case study			X				X	
Measurement Tool										
Pre-Post Test			X	X	X	X	X	X		X
Likert Scale			X	X		X	X	X		
SST									X	
NCS	X	X			X					X

Key: *- statistically significant; **EI**- educational intervention; **LOE**- level of evidence; **N**- sample size; **NCS**- not clearly stated; **NRCT**- Non-Randomized Clinical Trial; **RCT**- Randomized Clinical Trial; **SR**- Systematic Review; **SST**- specialized screening tool; **STV**- sex trafficking victims

Appendix B

Figure B1

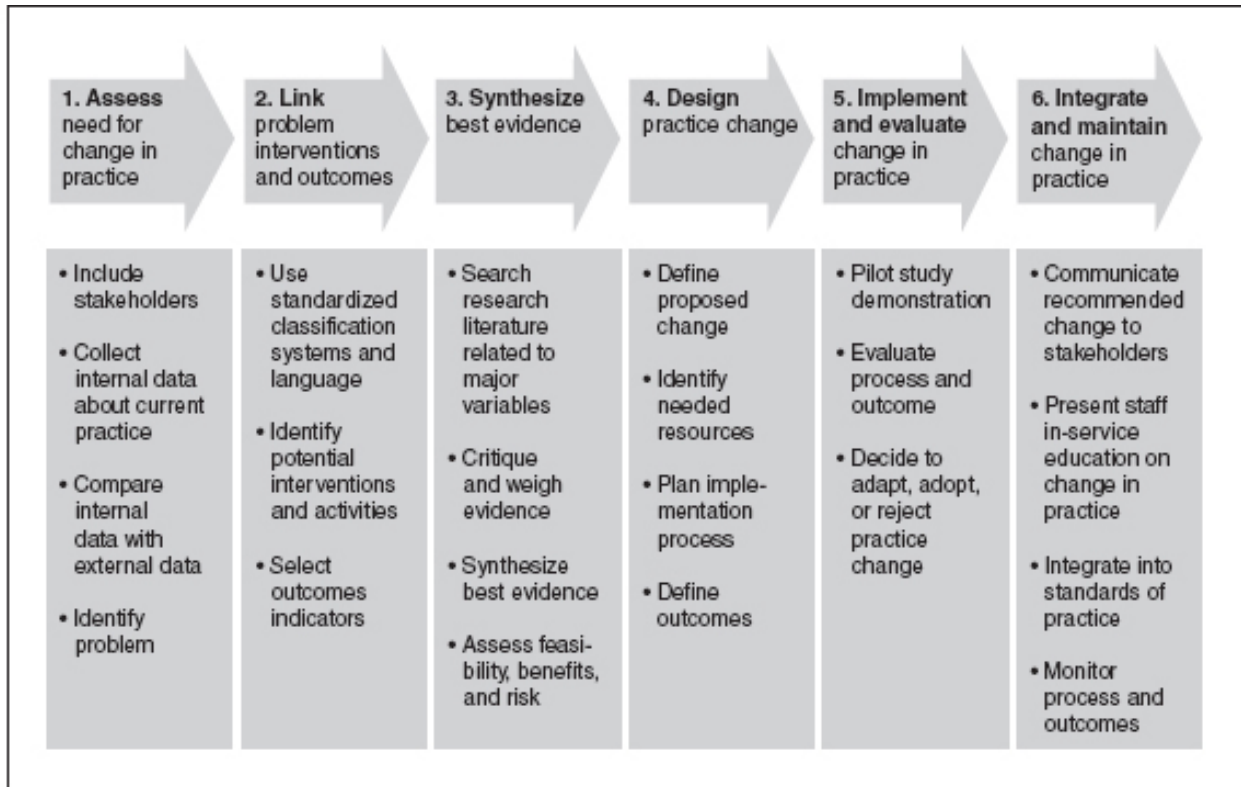
Social Cognitive Learning Theory Model



Health Communication Capacity Collaborative (2020)

Figure B2

Rosswurm and Larrabee’s Model for Change



Rosswurm and Larrabee (1999)

Appendix C

Self-Evaluation of Confidence Measurement

Pre-test

Please complete the following survey as it pertains to yourself.	Somewhat Agree	Agree	Somewhat Disagree	Disagree
I have a comprehensive understanding of what sex trafficking is.				
I am likely to encounter a patient who is being sex trafficked in my emergency department.				
I feel confident that I can identify "red flags" of a person that is potentially being trafficked that presents to my emergency department.				
I feel confident in addressing the discussion of trafficking if I have suspicion that a patient is being trafficked.				
I am aware of the reporting guidelines in my facility and the state of Arizona				
I know the local and state resources available to potential sex trafficking victims.				

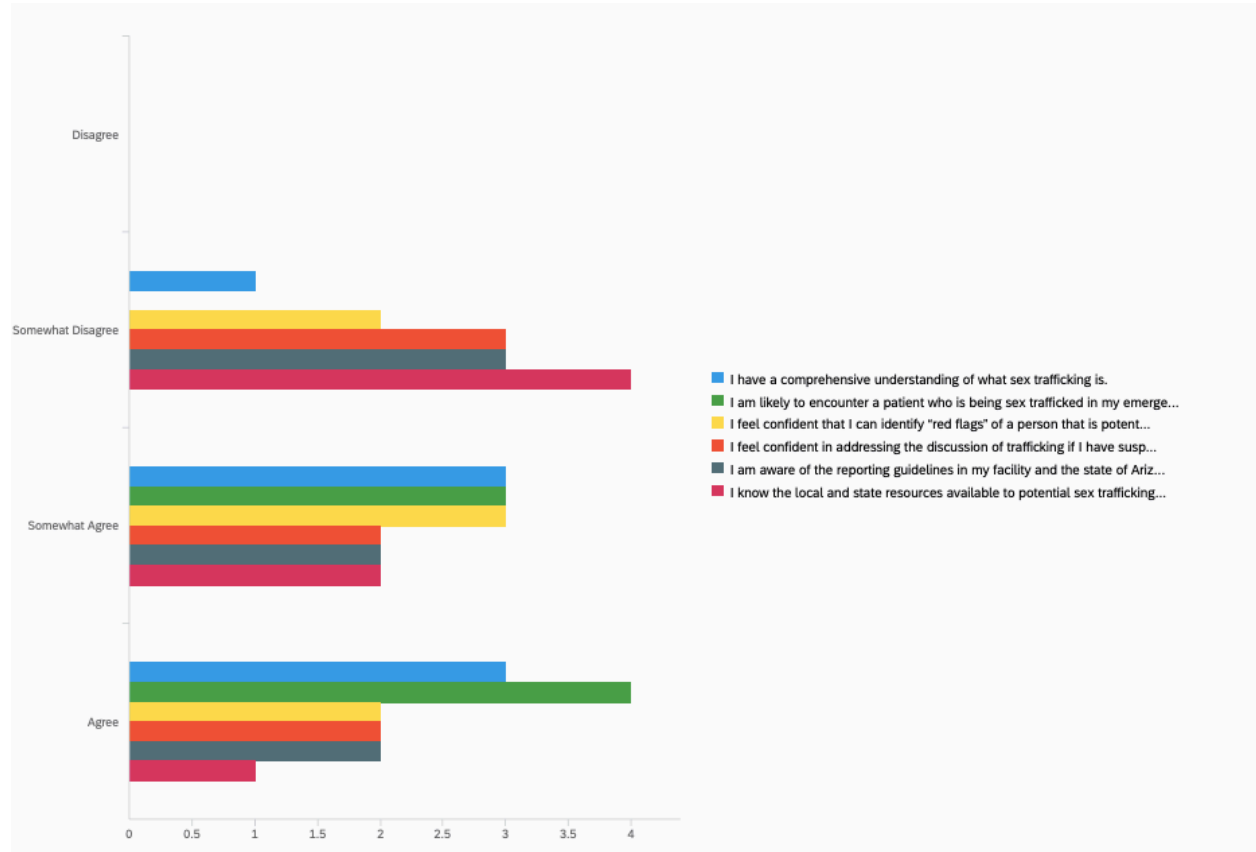
Posttest

Please complete the following survey as it pertains to yourself.	Somewhat Agree	Agree	Somewhat Disagree	Disagree
I have a comprehensive understanding of what sex trafficking is.				
I am likely to encounter a patient who is being sex trafficked in my emergency department.				
I feel confident that I can identify "red flags" of a person that is potentially being trafficked that presents to my emergency department.				
I feel confident in addressing the discussion of trafficking if I have suspicion that a patient is being trafficked.				
I am aware of the reporting guidelines in my facility and the state of Arizona				
I know the local and state resources available to potential sex trafficking victims.				
I found this educational module useful for my clinical practice and setting.				

Appendix D

Graph D1

Self-Evaluation of Confidence Measurement Pre-Test



Graph D2

Self-Evaluation of Confidence Measurement Post-Test

