7-24-2021

Will implementing human trafficking education and screening tools increase the number of identified trafficked victims and survivors in the healthcare setting?

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Paper Submitted in Partial Fulfillment Of the Requirements for the Degree Of Master of Science

Physician Assistant Studies Augsburg University

07/24/2021

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Abstract

Introduction: Eighty-eight percent of human trafficking survivors report seeking healthcare while trafficked, yet less than 10% of physicians have been trained to identify human trafficking victims. The United States Department of Health and Human Services acknowledge the serious problem of health professionals lacking the education to identify and treat human trafficking patients. Healthcare providers are missing opportunities to intervene partially because of the barrier to identify human trafficking patients.

Background: Currently, there is no required standard for curriculum on human trafficking. Analysis of pre- and post-survey responses demonstrated a significant increase of confidence in identifying and caring for trafficked patients.

Methods: The goal was to frame a research question that associated human trafficking with health care. The study was then designed to the study to analyze if the implementation of human trafficking education and use of screening tools would result in an increased identification of trafficked patients.

Discussion: All the educational studies discussed demonstrated a lack of consistency in education structure and timing. The need for education and screening tools was highlighted as a significant barrier to care for human trafficking patients. Considering simulated patient learning environments are controlled and interactive, it gives students the opportunity to make errors but develop their skills.

Conclusion: Implementing human trafficking education and screening tools will increase the confidence of providers in identifying trafficked victims and survivors in the healthcare setting. Future studies are needed to quantify the identification of human trafficked victims and survivors in healthcare.

Introduction

As reported by the United Nations Office on Drug and Crime, human trafficking is a global violation of human rights by enslaving victims for sexual exploitation, forced labor, domestic servitude and other forms of exploitation. Human traffickers prey on vulnerabilities such as members of socially marginalized and low economic status.[1] Unfortunately, poverty is anticipated to increase for the first time in decades secondary to the crisis of the Corona Virus Disease 2019; thus there will be an increase of individuals vulnerable to human trafficking.[1] In low economy countries, half of the victims are children enslaved for labor.[1] Countries with higher economic standing overall, children were trafficked with the purpose of sexual exploitation, crime or begging.[1] In the last decade, there has been a rise in detection of victims being trafficked domestically.[1] Overall in the victims identified in 2018, of every ten, two were girls and five were adult women.[1] However, quantifying the exact number of human trafficking victims and survivors is difficult secondary to the crime secrecy and fear of reporting.

Healthcare settings are a unique opportunity to intervene for human trafficking victims and survivors. Eighty-eight percent of human trafficking survivors report seeking healthcare while trafficked, yet less than 10% of physicians have been trained to identify human trafficking victims.[2] It is crucial to meticulously evaluate why trafficked patients are not being identified and subsequently not given resources or other means of help. The United States Department of Health and Human Services acknowledge the serious problem of health professionals lacking the education to identify and treat human trafficking patients.[3] To serve human trafficking victims and survivors in healthcare, first we must acknowledge the issue. Secondly, healthcare providers need to understand human trafficking better or at the very least know how to identify patients. Healthcare professionals have the duty to provide optimal care to all patients and to do so we

must educate ourselves. Healthcare providers are missing opportunities to intervene partially because of the barrier to identify human trafficking patients. Will implementing human trafficking education and screening tools increase the number of identified trafficked victims and survivors in the healthcare setting? This will be assessed by evaluating human trafficking education, human trafficking screening tools and how these factors impact identification.

Conceptual definitions of terms used throughout the thesis:

Human trafficking/trafficked patient: Sexual exploitation, forced labor, domestic servitude and other forms of exploitation. Modern day slavery. Encompasses sex and labor trafficking as one term.[1]

Survivor: An individual who was trafficked and is no longer under the control of a trafficker.[4]

Victim: An individual who is currently being trafficked and/or is under the control of a trafficker.[4]

Trauma informed care: Highest quality of care that demonstrates awareness, sensitivity and understanding to the current impacts past trauma(s) have on the patient. Give the patient control and a voice of care to ensure safety of the patient and provider. Shown to reduce potential triggers caused by the provider.[5]

Red flags/high risk complaints: Accompanied by controlling companion, companion refusing to allow patient speak in private, companion holding patient's identification or documentation, patient is non-English speaking, rushing to receive service, inappropriate speaking, runaway, forced out of home, homeless, foster child, welfare, orphaned, acute sexual assault/abuse, traumatic assault, frequent urinary tract infections, suicide attempt, suicidal ideation, homicidal ideation, behavioral complaints, frequent transmitted sexual infections, homosexual orientation, transgender, queer community members, history of medical clearance, history of substance

abuse, history of legal issues, history of violence, vaginal/penile discharge, pelvic/genital pain or history drug or alcohol abuse.[6-8]

Background

Currently, there is no required standard for curriculum on human trafficking. Studies on human trafficking curriculum have shown through immediate post- surveys that knowledge and confidence increase on the topic after education is given. Providing care for human trafficking victims and survivors requires that health professional comprehend the complexity of the trauma(s) and skills necessary to provide alleviating treatment.[9] Researcher suggests that difficulty in identifying human trafficking patients stems from the providers lack of knowledge and adequate tools. Human trafficking education for students has been delivered in multiple forms such as case studies, lecture based, online modules, simulated sim-patient encounters and hybrid modules.

In the United States, 298 family medicine residency program directors were surveyed about human trafficking.[10] Ninety-six programs had required content, 61.5% required only sex trafficking and 38.5% required sex and labor trafficking.[10] Of the 404 healthcare professionals were surveyed and 68% noted feeling very responsible in identifying and appropriately caring for human trafficking patients.[11] While 57% reported feeling slightly or not at all confident in identifying trafficked patients in their practice. Data showed that 56.5% had none to only slight confidence in the management of trafficked patients. The study found that very few of the providers incorporated human trafficking screening questions. Majority of participants were not confident in the steps for reporting an identified patient. 94% were not familiar with the human trafficking protocol in their place of practice. 89% were not aware of any protocol in place for

human trafficking patients. However, 79.3% of participants responded that they had interest in partaking in a protocol for human trafficking patients.[11]

In the United States, 184 physician assistant-certified (PA-C) were surveyed, finding 84.8% supported the need for PA schools across the United States to include sex trafficking education in their curriculum.[3] 75% participants reported having no education or training as current PA-Cs or as student in PA school. Of the PAs, 90.2% reported lack of confidence in managing patients victim of sex trafficking, despite the fact that 96.4% agreed that they held a responsibility in caring for this population. Bivariate logistic regression showed a statistical association between past training, required curriculum, specialty, patient population served, region of practice and years of practice. The results were significant in finding association of PA confidence in identifying and caring for trafficked patients affected by past training and required curriculum and not the other variables.[3]

In contrast to previous studies, Lutz's study evaluated clinical phase nurse practitioner students instead of medical students. Proficiency was measured in human trafficking definitions, laws, prevalence, identification, management and resources via pre- and post-surveys with a 1-hour lecture in between. Lecture presentation was interactive with discussion and videos. The lecture was presented during a scheduled class period and were given the option to not participate at any point without affecting their grade. Students reported no previous treatment education for victims in human trafficking. The response mean for pre-surveys proficiency was 1.51 - 2.29 and significantly increased to 3.10 - 3.62. As the years of nurse experience increased, the proficiency decreased.[12]

In Texas, a study by Recknor FH, Gemeinhardt G, Selwyn BJ, 44 interviews were conducted with healthcare professionals. Some of the challenges impeding adequate trafficking

identification were the lack of provider awareness and proficiency, protocol in care management, lack of knowledge the provider held and insufficient resources to refer patients.[13] By not having the appropriate knowledge to identify victims of human trafficking, instantly, the treatment for these patients are limited. Therefore, this paper will address if integration of human trafficking education and screening tools will increase identification of human trafficking victims and survivors that present to healthcare settings. There are different formats of education such as case studies are structured, simulated patients simulate real life provider encounters, continued education is for those already graduated needing supplemental education and screening tools correlate high-risk responses to positive screens.

Case Study for Education

When human trafficking is addressed in curriculum, it is a more of a briefly overview. Baylor College of Medicine is a comparable example of the approach most medically oriented programs have taken by incorporating the topic with other material. The Social Determinants of Health Orientation Program (SDHOP) gave first year students 1 case about human trafficking and was 1 of 6 cases that were addressed in 1 hour.[14] The case involved an 18-year female patient presenting to the emergency department with a "boyfriend" and other red flags. The case allowed students to choose the course they would take during the encounter based on different prompts. Students were debriefed, given basic information on how to address the encounter and management for these patients by their proctor. Students stated the proctor's real-life experience allowed the case to be more authentic, intense and informative. The pre- and post-SDHOP survey consisted of open-ended questions and questions on a 5-point Likert scale were completed by 111 students. Data collected from the surveys showed an overall improvement in

familiarity in terminology, knowledge and comfort discussing topics. Specific to the human trafficking case, 90% of the participants reported statisfication.[14]

While satisfaction rates are important, it is also important to explore knowledge retention after interventions are delivered. Second year medical students at Geisinger Commonwealth School of Medicine were educated on the correlation between human trafficking and adverse childhood experiences (ACE) and how to lead encounters using trauma informed care.[15] Students engaged in peer driven scenarios such as role-playing patient encounters. Post-surveys showed over a 75% increase in knowledge and comfort in caring for trafficked patients.[15] Although students showed an increase from their baseline, it's important to explore other teaching methods programs utilized for human trafficking such as standardized simulated patients.

Standardized Simulated Patient Use

Third year medical students at the University of Arizona (UA) were required to learn about human trafficking during the final week of their obstetrics and gynecology clerkship.[16] First, students were assigned an online learning module about human trafficking. Afterwards, students partook in the simulated standardized patient encounter. The detail that the patient was a victim of human trafficking was not revealed to the students prior to encounter. It was expected that with the student's history taking, the human trafficking factor were revealed. Students received performance feedback from the standardized patient, completed a reflective writing assignment and participated in group faculty/peer debrief. Overall, participants reflected feelings of disappointment, helplessness and sadness during the simulation.[16] In addition, participants expressed desire for more educational opportunities for providing higher quality of care to trafficked patients.[16-17] Analysis of pre- and post-survey responses demonstrated a significant

increase of confidence in identifying and caring for trafficked patients. The findings showed use of standardized patients for human trafficking was an effective learning method.[16]

The study by Weiss AL, Kiluk V at the University of South Florida (USF) medical school introduced a learning activity to third year students with the same components but in different order from the UA's study. During the first half of the academic year, USF started with a case scenario including a standardized patient. The patient presented with several human trafficking red flag and the students were not prefaced of this prior to encounter. Then students completed a pre-survey assessing their baseline of attitude, skills and knowledge about human trafficking. Next, a human trafficking online learning module was completed. Upon completion, a post-survey was required to give students the opportunity to reevaluate their patient encounter. 69 students completed the pre-survey and only 10% included human trafficking in their differential diagnosis. Other differential diagnoses students reported were domestic violence, rape/trauma/abuse and physical findings of cigarette burn and concerning tattoo. Pre-survey responses showed 74% participants reported that they did not have adequate training on the subject. Only 72 students completed the post-survey and 79% stated they now had adequate training on the subject. During the second half of the academic year, the study reported that the students were more likely to include human trafficking in their differential diagnosis and identify physical findings associated with the diagnosis,[2] which will improve awareness and identification of human trafficking.

Development of Medical Student Instruction In Global Human Trafficking (M-SIGHT) was influenced by aspects of simulation-based medical education.[18] M-SIGHT was created for the third-year medical student curriculum. Students started with standardized, simulated encounters and then afterwards were debriefed on their communication with the patient, not

disclosing the factor of human trafficking. The online learning module was then completed as the final step. M-SIGHT also gave students information on local resources to refer patients.[18] University of South Florida and Harvard University are some of the medical schools that have since adopted M-SIGHT.[19] Data collection for this study has not been published yet, however, this blueprint curriculum shows there are many formats human trafficking education can utilize simulations such as use of mannequins, role of simulated patients and traffickers or mixing of elements for interactive education. [18]

Continued Education

Health providers attend additional medical training as a requirement and gain innovative skills to address patients. Trafficked patients are a unique population that require skill to identify, care and treat. Human trafficking training should be added as a required continued medical education, otherwise patients will continue to go unidentified. Nordstrom's study utilized a version of the Provider, Responses, Treatment and Care for Trafficked People that followed the recommendations of essential education by HEAL Trafficking Education and Training Committee.[20] Specifics on how the continued education was delivered to participants was not stated. Of 237 participants, 75.9% had no previous education in human trafficking. Those who reported prior education, reported general information, definitions, types of trafficking, red flags and risk factors were the main topics previously taught. In addition, previously, the least taught categories were resources, referral sources, trauma informed approach and associated health issues for trafficked patients. Prior to the education, 16 participants reported that they had clinically encountered a confirmed or suspected trafficked patient in the last three months. After the education, an additional 77 participants reported they had encountered a trafficked patient in the clinical setting within the last 3 months. The difference in pre- and post-survey responses to

encountering a human trafficking patient was significant, $p < .05$. There was also a significant increase in knowledge and confidence from pre-education to post education. However, results showed no significant change in confidence from the immediate post-education in 2018 and second post-education survey in 2019.[20] Other educational training must be evaluated to eventually create a science-based standard of curriculum.

Lee and colleagues evaluated the CME-accredited training, Learn to Identify and Fight Trafficking (LIFT) for physicians, physician assistants, nurse practitioners, nurses, social workers and students.[21] LIFT was provided over a single four-hour session. First portion was given via a PowerPoint presentation and the second portion consisted of panel discussion by members engaged in human trafficking work. Training was led by 1 of 4 LIFT physician trainers who also followed a script to assure key points were taught. There was a pre-survey that was given 24-48 hours prior to the training and then two post-surveys that were completed one week and six months following the session. Pre-test scores were higher in physicians than in students, $55.6 \pm 14.4\%$ vs. $49.7 \pm 12.5\%$, $P = .01$. Of the 422 trainees, 224 completed the first post-test; results showed a significant improvement of knowledge in comparison to the pre-test results, $P < .001$. The second post-survey was administered at 6 months. 62 trainees completed the third assessment, showing a significant decrease in retention of education from the first post test, $P < .001$. There was a significant increase in overall knowledge and attitude score about human trafficking in the 62 participants when comparing the first and third test, $P < .001$. Findings demonstrated that the LIFT curriculum was effective in improving knowledge.[21]

While working through identifying a trafficked patient, providers should approach human patients with sensitivity and skill. Trauma informed care training for 76 healthcare professionals and students managing human trafficking patients resulted in increased participant confidence.[5]

The 90-minute training covered medical, emotional and mental needs of survivors, health consequences and key points on trauma and triggers of traumatic stress in healthcare environments and trauma informed care information and application. Initially, 82.9% reported having no previous trauma informed care or human trafficking training. 69.8% reported none to not very much in their skill to incorporate informed care. Post-surveys showed 60.7% of the participants reporting knowing either "a lot" or a "great deal" in applying trauma-informed care to their practice. There was a positive correlation between trauma informed care knowledge and the confidence incorporating it to practice, $p = .004$. The correlation between knowledge of what could potentially trigger a human trafficking patient during a clinical examination and knowledge of trauma informed cared showed to be positive, $p = .000$. 3 months after the training, 5 participants partook in a 90-minute focus group for researchers to understand the experience from the participant perspective. All 5 participants subjectively expressed an increased in awareness of human trafficking and knowledge of trauma informed care and barriers to apply trauma informed cared to trafficked dental patients.[5] Once again, showing that healthcare settings are a unique location for intervention.

Education can be customized for the busy schedules of providers.[5,22] A 50-minute workshop was created specific for emergency physicians and was carried out during the 2018 Society for Academic Emergency Annual Meeting in Indianapolis, Indiana.[22] Ten minutes were dedicated to a PowerPoint of an introduction to human trafficking. Participants paired up for three cases, ten minutes each, that required role playing of "teacher-learner". Case studies had script guides and did not require a facilitator, designed to encourage the "teacher" to concurrently learn and teach. Electronic versions of the script guides were provided for later resource use during medical practice. Nineteen participants, attending and resident emergency

physicians completed a retrospective pre-post survey. The survey required professionals to rate their abilities on a 4-point Likert Scale. Results from the single workshop showed an increase in confidence to identify, manage and distinguish different forms of human trafficking cases.[22] Resources for suspected or identified patients also should play a role in human trafficking training.

The Baylor College of Medicine Anti-Human Trafficking Program was created to educate healthcare professionals and community agencies that encounter the trafficked population in Houston.[23] Their agenda covered, "individual, community, and societal vulnerabilities; barriers to care; clinical red flags or indicators of trafficking; trauma-informed interviewing; treatment plan development; and resource provision for patients."[23] Training was offered several times a month in person and online and was tailored to the disciplinary population receiving it. The program reported an increase in referrals of patients admitting to history of human trafficking. During the first year of the pilot, there were 125 patients referred for trafficking secondary to the patient's disclosure or someone suspected the patient was or is being trafficked. The next year, 175 patients were referred after disclosure or suspicion. Initially, 64% of the patients disclosed and by the second year, 77% of patients disclosed their trafficking experience. Overall, the program reported 71% of positive identification and 475 referrals. 64% of the referrals were from the Harris Health system which included over 20 community clinics, Ben Taub Hospital's emergency center, inpatient psychiatric unit, outpatient clinics and medical floors.[23] Conservely, exploring other studies that also provided resources to the trainees is important to review for levels of knowledge and confidence.

In another study completed in Texas, 104 residents in family or internal medicine were taught through 60 minutes sessions about human trafficking by trainers who worked with

trafficked patients.[24] Trainers had extensive education and training on the topic. Training sessions were lecture based or use of trauma informed care role playing with simulated patients. Information was primarily covering human trafficking in the United States, in addition residents were given some information of global trafficking. Definitions, prevalence, types, signs, risks of human trafficking and how to apply trauma informed care, victim centered care, work up and treatment for trafficked patients was covered in this training. The training also included common descriptors of traffickers, community resources and adequate referring for trafficked patients. One key criterion was that the participants had to have zero education or training on human trafficking prior to the study. Post intervention, there was a significant, $p < .01$, increase in knowledge after the intervention. On a Likert scale, 72% to 88% responses were in favor of gaining confidence from the training. There was a significant increase, $p < .05$, in responses changed to the correct answer secondary to the information given through the intervention.[24] Residents were 22.8 times more likely to have an advanced competency level who graduated from programs that required trafficking content versus those who graduated from programs that had none.[10] Competency and duration of education were independently and significantly associated in comparing annual training of more than three hours to less than three hours.[10] Residents that completed training of more than three hours were 8.21 times more likely to have advanced competency level.[10]

The response to HTEmergency.com, an evidence based online training module tailored to be completed in about twenty minutes was analyzed by Donahue S, Schwien M, LaVallee D.[8] The online training consisted of PowerPoint presentation, two case studies and linked guidelines for identifying and treating human trafficking patients. Participants were given a screening tool containing questions to ask, red flags and physical signs for trafficked patients to aid in the

screening process for suspected trafficked patients (Figure 1).[8] A flowchart with the steps needed to care for the suspected patient and the phone number to the Human Trafficking National Hotline was also provided to participants (Figure 2).[8] Both case studies directed health professionals to contact the National Hotline once it was determined the patient was identified as a potential victim of human trafficking. The study included 75 emergency department employees, consisting of physicians, physician assistants, nurse practitioners, nurses, registration and emergency room technicians. Of the 75 participants, only 53 completed the pre-survey and post survey. Surveys included Likert Scale questions to assess the participants comfortability in identifying and treating human trafficking patient pre- and post-education. Participants who had no previous education on human trafficking made up 89% of the sample. After training, the post survey showed a 93% increase of understanding as well as a significant increase of confidence in identifying and treating human trafficking patients. 96% of the participants reported satisfaction with their training. Study found an increase in confidence in identifying and treating trafficked patients' after completing the training that included readily available screening tools.[8]

Screening Tools

Awareness and knowledge of trafficking is only the first part of identifying patients. The use of screening tools assists in identifying associated responses to positive screens for trafficking. Secondary to not having a science based, universal or standard validated screening tool, each tool is different and does not encourage screening. In the absence of screening, physicians have a 40% sensitivity in identifying trafficked patients.[8] In areas with high human trafficking, 27 emergency leaders reported that few trafficking victims were identified.[25] Of the 27 leaders, 40.7% specifically screened for trafficking in adults and 37% specifically screened children for trafficking.[25] The most common screening tool found for this literature review was

created by Greenbaum VJ, Dodd M, McCracken C.[26] for pediatric patients and was further evaluated by other studies with slight changes of the age and item criteria. The prevalence of research for effective screening tools in pediatric population is potentially because most trafficked individuals are recruited between ages 11 - 14.[7]

A screening tool was created to identify human trafficking, victims, ages 12 - 18, consisting of a six items questionnaire for patients.[26] History questions covered in the screening tool are related to substance abuse, law enforcement encounter, runaway, fractured bones, significant wound, loss of consciousness from trauma, sexually transmitted disease and more than five sexual partners. If there was a reported "yes" to two or more items, the screening was then considered positive. A total of 108 of the child patients were screened, 25 were either sexually exploited or sex trafficked (CSEC/CST) and 83 were acutely sexually assaulted or abused (ASA). The six-item tool had a sensitivity of 92%. CSEC/CST and ASA victims differed significantly across several variables including sexually transmitted diseases, experience with violence, reproductive history and high-risk behaviors.[26]

Prior to utilizing the short screening tool,[26] researchers compared patients with common complaints of CST to patients with complaints of ASA ages 12 - 18 without evidence of commercial sexual exploitation.[27] Researchers evaluated the screening tool in a pediatric emergency department on 203 patients for 4 months, a total of 426 hours. Secondary to provider concern, 31 patients were included. The screening tool was used on 10 - 18-year-old English-speaking male and female patients presenting with complaints associated with CST or the provider was concerned secondary to their social or sexual history. There was a total of 100 patients with positive screens. Within the last 6 months during the encounter, 55% admitted to seeing a medical provider. There were no complaints significantly correlated to CST. Eleven

were identified as CST; exchanged sexual acts for money, employment, food, shelter, clothing, luxury items, drugs, alcohol or self-identification. The screening tool (Table 1) identified 10 of the 11 patients and 8 were newly identified as CST.[27] The screening tool exhibited 90.9% sensitivity and 53.1% specificity. Increasing the positive screen minimum decreased the sensitivity (Table 2).[27]

The use of the six-item screening tool created by other researchers,[26] was implemented via an electronic tablet for minors at risk for sex trafficking at a pediatric emergency department for 13 months.[7] The surveys were available in English and Spanish for 12 - 17-year-old patients presenting with complaints associated with high risk of sex trafficking. The sample size of the study included 212. Results showed that 26 patients were identified as sexually trafficked by the screening tool or social workers. Of the 26, 84.6% screened positive and 15.4% screened negative. Of the 212 patients, 46.7% were confirmed true negatives and 41.0% had false positive screens. Sensitivity was measured at 84.6% and specificity at 53.2% (Table 3).[7] Through confidential screening reported via electronic tablets, 12.3% more patients were detected at risk for trafficking than in previous studies.[26,27]

Kennedy and colleagues reviewed the six-item screening tool for sex trafficking[26] and ACE but applied it to adults, ages 18 - 24.[6] For their study, the six-item tool was modified to five items, in attempts to reduce false positives secondary to a high reporting of sexual activity from abuse. Participants recruited by local service providers accounted for 96 participants who self-identified as sex trafficking victims. There were 78.4% victims who screened positive and when adding the sixth item the positive screens increased to 91.6%. There was also a positive correlation, the higher the ACE score, the higher the chance of a positive screen. The prevalence was high in trafficked victims to have a high ACE score. An ACE score is from a 10-item

questionnaire about several childhood adversities and scores of 4 or higher and linked to negative health outcomes.

Another study conducted by Greenbaum, created a 17-item screening tool from previous studies.[28] Initially, 9 item were asked and if the child answered "yes" to "Have you ever had sex of any type?" then an additional 8 items were asked (Figure 3 and Figure 3.1).[28] A positive response to any 2 or more questions was considered a positive screen. 11 - 17-year-old English Speaking youth were screened throughout 16 sites in the United States. Participants from emergency departments needed to present with the complaint related to sexual violence. A total of 810 patients were screened: 48.8% from child advocacy sites, 40% from teen clinics and 11.52% from emergency departments. There was a total of 40% false positive screens. 90% of patients were identified as CST victims. From the positive screens, 84.4% were from CST victims. The tool had a sensitivity of 84.4% and specificity of 57.5% in the 810 patients screened. Sensitivity and specificity varied at the sites (Table 4)[28]. Secondary to results showing no true correlation to broken bones or cuts and CST, the question was removed. With removal of the question, sensitivity stayed relatively the same, however, specificity increased (49.4% - 61.4% to 58.7% - 70%). The specificity of the study suggests that around 30% - 40% patients will have false positive screens.[28]

Kaltiso et al created their own screening tool of eleven items by selecting and editing items into their own tool (Table 5).[29] The screening tool was made available in the electronic medical record system for users in an emergency room. This study included English and non-English speaking patients by including certified language interpreters. Through January 21, 2019, to December 31, 2019, 26,974 adult patients were screened in an emergency department. 189 patients were screened as a positive result for human trafficking. 22.2% of those patients

admitted to history of sex trafficking, 19.6% admitted of current trafficking and 2.5% confirmed human trafficking experience but were currently in a safe situation. 8 of the 37 human trafficked patients were discharged to a safe house. Over the remaining 29 trafficked patients, 2 felt safe going home, 2 felt safe discharged to stay with a family member or friend, 1 was in custody of police, 5 were admitted to the hospital, 4 eloped prior to housing placement, 10 declined help and 4 had no documentation of their discharge. Area under the curve was measured at 0.85. 8 of the 11 items were considered statistically significant odds ratios for positive screens. The tool can be shortened without the loss of sensitivity. While there were high false-positive screens, 147, occurred from positive screens and patients not disclosing their trafficking status.[29]

Methods

After reviewing 60 articles' abstracts, I found education and screening tools were mentioned more often than health outcomes of trafficked patients. The goal was to frame a research question that associated human trafficking with health care. Thus, the study was designed to analyze if the implementation of human trafficking education and use of screening tools would result in an increased identification of trafficked patients presenting in a clinical setting. The United Nations Office on Drugs and Crime released its fifth global report, "Global Report on Trafficking in Persons 2020" providing key concepts and data on this crime against humanity. The literature search was conducted using Google Scholar. Search terms included human trafficking and sex trafficking. The initial search produced no literature focusing on the correlation with human trafficking and health care. I further searched with the following terms: Native American human trafficking, Mexican trafficking, PA trafficking, student education trafficking, medical education trafficking, human trafficking curriculum, trafficking education outcomes, impact of trafficking education, impact of education on human trafficking, screen for

trafficking in health setting, short screening tool, screen for trafficking in healthcare setting screening tools and trafficking victim identification tool. To enhance relevance and validity, inclusion criteria was set for 2018 to 2021 of publication date and peer review narrowing it down to 28 articles and 1 United Nations Global Report. Exclusion was not considered for earlier than 2018, except for the addition of 1 article about trafficking education published in 2017. 96% of the references were published from 2018 and after. Upon narrowing the publication date, the articles on human trafficking in Native American or other ethnicities were scarce. Articles reviewed for this study were read in their entirety, unlike the beginning literature search of solely reading abstracts.

Discussion

Need for Innovation

In the previous years, human trafficking seemed to be viewed as more of a criminal justice issue and not an issue in the scope of medicine. The volatile circumstances of human trafficking potentially led to increased intensity or prolongation of negative health outcomes and survivors left vulnerable to additional exploitation.[30] Vast number of hospitals, medical residency programs[24] and other graduate medical programs provide limited to no education about human trafficking. PA-Cs and other healthcare professionals often reported lack of awareness, knowledge or confidence and insufficient resources to provide quality care to trafficked patients.[3,8,11,13] Medical residency program directors noted that not every program required education on human trafficking.[10] Of note, as years of experience increased, the proficiency decreased, suggesting an immediate need for implementing human trafficking material early in health professional education.[12] All the educational studies discussed thus far in comparison demonstrated a lack of consistency in education structure and timing. Hence, urging the need for

standard curriculum and continued medical education be created. At the time of this paper, there was still the absence of a standard required curriculum and screening tool for human trafficking. Due to the lack of the requirement, it has allowed individuals to go unnoticed, unsupported and untreated. Not all education is created science-based or delivered equally. Consequently, non-validated training has the potential to cause mental or physical harm regardless of the provider's good intentions or even lack of action(s). The need for education and screening tools was highlighted as a significant barrier to care for human trafficking patients.

Secondary to the allotted curricular time for already established objectives, programs are met with the challenge of incorporating human trafficking. The case studies are designed to stand alone and can be modified to better fit the institution's curriculum. Song and colleagues' study demonstrated that including new material in an already established program is feasible with a logistical outline. The challenge continues if the institution does not have faculty member(s) with human trafficking experience and would then require more administrative work for recruitment. As many programs face the challenge to add additional material and potentially overload the students with information, M-SIGHT replaced pediatric clerkship activity, a core undergraduate curriculum and other simulation cases that lacked socio-economic complexities.[18] Other schools teaching health professionals can adopt M-SIGHT like University of South Florida and Harvard University or use these programs as an example that implementing human trafficking curriculum is feasible. Once data from the studies are published pertaining to the receptiveness and success of M-SIGHT, it may lead to its validation or be a step closer to being a validated curriculum.

Case Study Education

First and foremost, environments are an essential component in either improving or hindering learning experience. Nonjudgmental environments would allow for learners to freely

ask questions and challenge their own beliefs when presented with opposing belief(s). It is also important to be aware that human trafficking victims and survivors present in a variety of clinical setting.[23] Care for trafficked patients is complex and requires collaboration of different professional fields. Effective training should be designed individually to the intended audience and while including resources for additional support they need such as legal, psychiatric and social services.

Case-based discussions are designed as supplemental to education.[14] In order to create more equipped providers, students and professionals need to develop awareness and knowledge of social issues such as human trafficking and confidently apply their new skills; as these patient encounters are unavoidable. Human trafficking is a complex subject. Some case studies were brief and potentially served as a steppingstone to invoke awareness on human trafficking. For example, students were given 25 minutes for a human trafficking case yet students still reported satisfaction of the intervention and increased knowledge.[14] Their satisfaction in part may be contributed to the expert on the topic facilitating the intervention. Including human trafficking expert(s) for educational interventions could be of benefit. However, graduated professionals could benefit from a similar format as it is assumed they have a larger foundation of knowledge, experience and skills that may facilitate the learning process.[8,22] Participants volunteered to be part of these studies, leaving room for potential participants' biases, hence the participants interest in the trafficking or in the idea of teaching unfamiliar material. More research on implementing human trafficking via case studies would be beneficial to show effectiveness.[8,14,15,22] Overall, participants reported feeling confident in identifying and managing human trafficking victims and survivors after case studies or scripted role playing.[8,14,15,22]

Use of Simulated-Patient for Education

In simulated patient encounters, students suspected some sort of trauma but did not have human trafficking in their differential diagnosis.[2] Which suggests that students are armed with the medical foundation, however, need the additional education to identify and manage care. Research showed that patient encounters are a proven supplement for the traditional didactic setting by developing practice skills, interpersonal skills and obtaining personalized feedback on performance.[19] Simulated patients give students and trainees the ability to learn, make errors and receive feedback in real time and is superior to traditional clinical medical education.[18] The trial and error aspect of simulated patients provides a realistic feature of what will be encountered in a learning environment prior to encountering the high risk patient in practice.[18]

Considering simulated patient learning environments are controlled and interactive, it gives students the opportunity to make errors but develop their skills. It seems more beneficial to not know the complaint going into the encounter and using history taking and physical exam as guidance. In one study, reflective writing was required[16] and perhaps, the use of this instead of medical documentation evoked emotions, making the education more memorable and easier to retain. Some studies, [2,16,18] shared similarities but their elements were arranged in different orders. More studies need to be carried out to show if there is a particular order that results in better identification of trafficked patients. Comparing pre- and post-surveys there are notable increases in confidence to identify and support human trafficked patients.[2,16] These findings suggest that simulated patients in addition to other education style formats is an effective education intervention for human trafficking. Interactive learning keeps students engaged and while case studies provide a level of engagement, simulated patient encounters provide students real feedback as to how they apply their knowledge. The use of case studies that provide a more structured discussion approach may be used as more of an educational purpose while simulated

encounters may be used as evaluation of skills. Review of current literature indicates that human trafficking education is focused more on medical students and there are no studies evaluating human trafficking education on Physician Assistant students. Various roles interact with human trafficking victims and survivors, thus, all that work in healthcare settings need to be educated.

Continued Education

Human trafficking education needs to reach professionals already practicing because they are in a unique role to intervene and provide support. A study had their participants take two post surveys, one immediately after and the other 3 months after intervention. Data showed significant increase in confidence and knowledge immediately after intervention but there was no significant change between the first and second post surveys.[20] There was significant increase of reported encountered human trafficking victims and survivors in the healthcare setting within the last 3 months from the initial data reported in the pre-survey. Which suggests, at the minimum, short term effectiveness of the intervention. There was a significant decrease in knowledge from first and second post surveys.[20] Similar results in another study showed there was a significant decrease for the third assessment.[21] The potential explanation and suggestion these findings show is that human trafficking education need additional time and ongoing education. Even though the LIFT curriculum had a slight decrease at the 6-month assessment, it was still considered significantly higher than scores pre-intervention. Only 2 studies of continuing education evaluated their participants a third time.[5,21] However, only 5 participants partook in the third evaluation, reporting a sustained increase in awareness and knowledge. Thus, showing the need for future studies to show the statistical validity of those results. Data showing decrease of third assessments also validates the already required need for continued medical education for all providers. Previously, human trafficking was not covered in programs' curriculum and others

have briefly covered the topic, continued medical education should require human trafficking education as a staple to ensure no more patients go unidentified.

Learning the skill of trauma-informed approach is beneficial for a variety of patients. After trauma-informed care training, participants expressed being more patient centered and aware of the trafficked patient's needs.[23] Implementing trauma-informed care with human trafficking victims and survivors may decrease the triggers or additional trauma caused in clinical settings. Participants noted that throughout the training, they progress from being aware to action but indicated the need for continued training.[23] Majority of participants experience increased confidence in identifying trafficked victims and survivors.[5,20,21,23,24] Trauma-informed approach allows patients to feel more comfortable and potentially disclose more information to screening questions.

Screening Tools

Screening tools need to be validated prior to enforcing a universal tool that effectively identifies human trafficking victims and survivors in clinical settings. In order for screening tools to be used, they must be easily accessible. Feasibility of screening tools can encourage healthcare professionals to use them. Favored access could be strategic placement in the physical workplace or incorporating the tool in the electronic health record. Advancements in technology and society's involvement with technology can be utilized to better identify trafficked patients.

Electronic tablets were given to Spanish and English-speaking patients to fill out the screening tool. The study showed that 12.3% more trafficked patients were identified using the electronic tablet.[7] The increase in identification of human trafficked victims and survivors is a study that needs to be replicated to provide more evidence on its efficiency. The increase could be related to qualifying more patients to take the screening tool in comparison to other studies.

However, including other languages other than English would likely increase number of identified patients because non-English speaking is a red flag for human trafficking and more patients will be reached. Administering a screening tool via an electronic tablet may have potential in busy clinical settings to identify those at risk or are being trafficked who otherwise would go unnoticed. Responding to an electronic device may be more comfortable to disclose truthful responses than to a stranger. Another study used interpreters for their Non-English speaking patients[29] and though not as private as answering questions to an object. There is comfort in communicating in your preferred language with someone when in need and surrounded by others not of the same speaking language. The screening tool items used were from previously created tool by Greenbaum et al.[26] The screening tool was sensitive in identifying patients who were victims and survivors of human trafficking which suggests it's an effective form to screen.[6,7,26,27] Specificity was low and produced false-positives.[6,7,26,27] However, this screening tool still needs adjustments for improving to identify all ages or should be approved for only a certain pediatric age range. Failure to identify is worse than the extended effort in determining a patient produced a false-positive result.

Resources

Participants with prior exposure to human trafficking information stated the least taught categories were resources, referral sources, trauma informed approach and associated health issues for trafficked patients,[20] which all have to do after the identification is made. Incorporating resources in education could be as simple as providing local resources like in M-SIGHT or Lo et al study. Another style of implementing resources into education may be providing copies of screening tool, print out of flow chart demonstrating steps to take after identification and the Human Trafficking National Hotline number.[8] Owning an education resource, for example the

flowchart, can help better instill the knowledge needed to address trafficked patients. It would have been of benefit to follow up with these participants for a second post intervention quiz to evaluate whether or not keeping the flowchart helped them retain information and identify trafficked patients. The Baylor College of Medicine Anti-Human Trafficking Program enhanced the network for human trafficking victims and/or survivors to obtain all the resources necessary and aided providers with the information to refer. It was reported to have increased referrals each year and referred a total of 475.[23] Incorporating other screening tools or components with higher sensitivity may lead to more positive screens. There may be a correlation with providers' motivation to identify even after having the knowledge and tools to do so and what resources are available for them to provide care. Even if patients decide to not accept resources or follow up with the resources provided to them, most likely, patients will receive the message that staff is there to help.

Conclusion

There is an educational gap students and healthcare providers are experiencing in the ability to identify human trafficking victims and survivors. Human trafficking education and screening tools are necessary to eliminate the provider barriers. All studies reviewed were essentially aimed to increase understanding of human trafficking and to elaborate the unique role healthcare professionals were in to aid trafficked patients. In most studies reviewed, there was an increase in knowledge and confidence to identify human trafficking victims and survivors. Studies that provided secondary post-assessments after their intervention showed the need for ongoing education. There are many published articles with different education and screening tools for human trafficking. It is recommended that future studies analyze multiple published components of education and screening tools. Potentially, combining effective components from

studies of student education, continued education and screening tool will lead to the creation of a standard curriculum and screening tool for human trafficking. Challenges of time and money for curriculum, training and employers will always be an issue. Limitation for all studies is that actual practice changes were not evaluated. Once healthcare professionals can identify trafficked patients, they need to treat accordingly which in part involves giving resources or referring patients. Healthcare needs to push for an interdisciplinary network for human trafficking victims and survivors for better patient outcomes because it may encourage patients to identify human trafficking victims and survivors knowing they have the means to treat. At this time, findings are that implementing human trafficking education and screening tools will increase the confidence of providers in identifying trafficked victims and survivors in the healthcare setting. Combining education and use of screening tools will further increase the number of identified victims and survivors in the healthcare setting. Future studies are needed to quantify the identification of human trafficked victims and survivors in healthcare. Lastly, there are 275 PA programs, multiple programs should take innovative measures to implement human trafficking into their curriculum to then be able to publish evidence-based findings and go to the Physician Assistant Education Association.

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Appendix

Figure 1 Human Trafficking Screening: Questions, Red Flags and Physical Signs[8]

Human Trafficking Screening Important:

Patients may not identify themselves as victims, so look for multiple red flags.

Questions to Ask:

- Is anyone forcing you to do anything that you do not want to do?
- Is anyone forcing you to work or have sex against your will?
- Where do you work and what type of work do you do? Have you ever been lied to about your type of job?
- Are you allowed to freely leave your house/work?
- Has anyone threatened to hurt you/your family or threatened to report you to the police?
- Does anyone hold your identification documents (i.e. passport or driver's license)? Could you get it back if you wanted to do so?
- Is anyone restricting you from seeing your family and friends or tracking your movements? When was the last time you had contact with your family?

Red Flags (What to Look For):

- Patient has no identification documents or documentation is in possession of an accompanying party
- Accompanying party insists on answering/interpreting for patient. Accompanying male is much older than young female in OB/GYN exam
- Patient is reluctant to explain his/her injuries
- Patient is unaware of his/her location
- Patient exhibits fear, anxiety, depression, submission, tension, or nervousness and avoids eye contact
- Patient is under 18 years of age and engaging in commercial sex or trading sex for something of value
- Patient works and sleeps in the same place
- Patient has no money or has no control over money. Accompanying party pays with lots of cash
- Patient is a runaway/throwaway youth

Physical Signs:

- Frequent or recurrent UTIs
- Frequent treatment for STIs: Gonorrhea, Chlamydia, and HIV/AIDS
- High number of sexual partners
- Multiple pregnancies/abortions
- Frequent colds, sore throats, skin conditions, including scabies
- Maltreated previous injuries
- Weight loss or malnourishment
- Burns from battery acid, hot iron, or cigarettes, exposure to toxic chemicals
- Bruises, including evidence of being slapped or receiving rough treatment
- Shows of physical restraint or torture.
- Branding - Tattoos or markings of ownership (ask meaning of tattoo & circumstances from which it was obtained)
- Presence of internal cotton cosmetic sponges to stop bleeding from cycle or abortion

Figure 2 Assessment Guide[8]

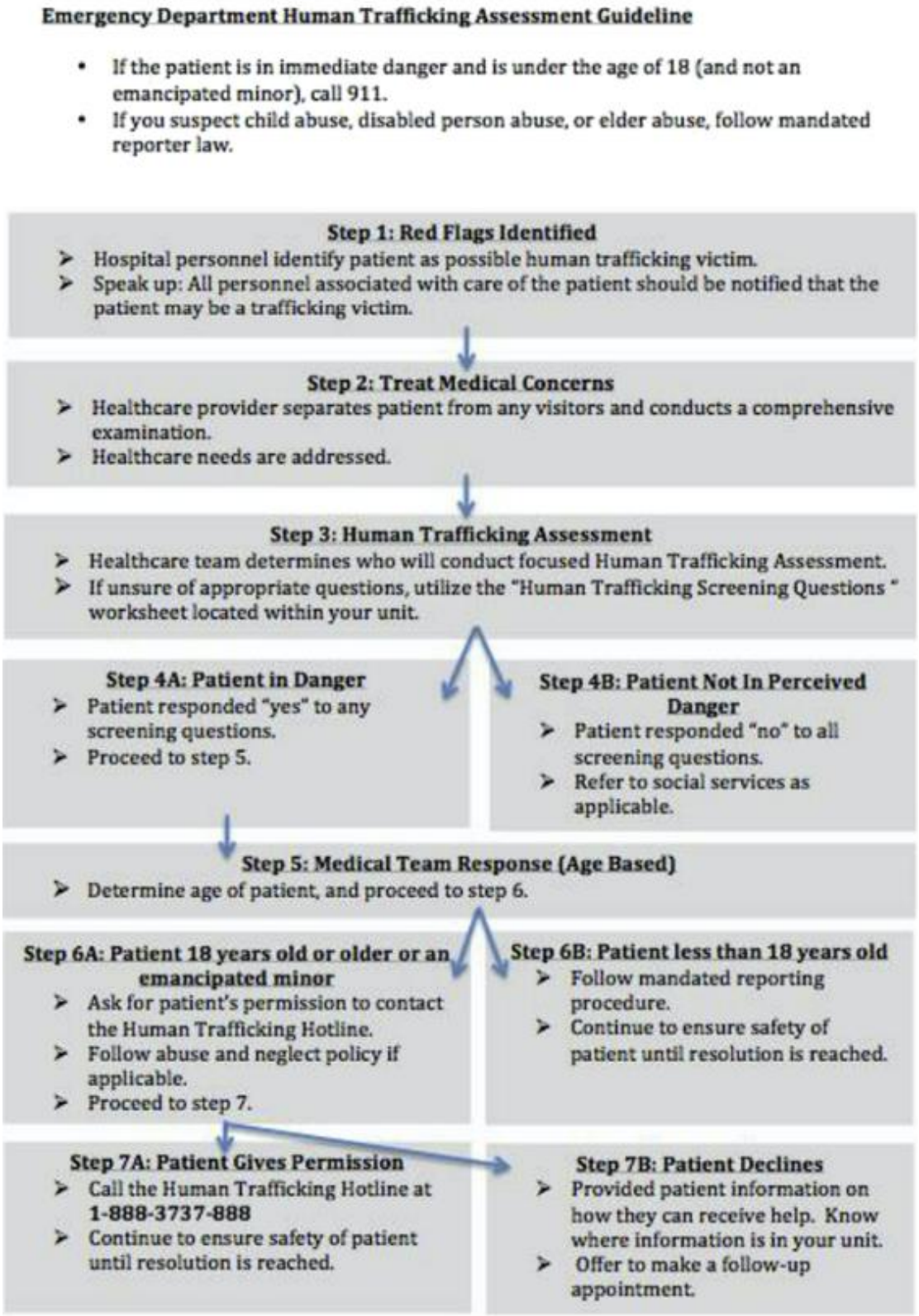

Figure 3 Patient Questionnaire [28]

Patient Questionnaire

Hello. We often ask teens some questions to find out a little more about what is going on in their lives. It helps us understand more about how we might be able to offer help. Some of the questions are sensitive and may make you feel uncomfortable so it is important to know that *you do not have to answer the questions if you don't want to*. If you decide to answer them, it will help us with your evaluation. Answers to some of the questions may be included in your general medical record, but the form, itself, will not. I am generally able to keep what you tell me private (or confidential). There are two exceptions to this. The first is if you tell me there is a threat to your safety or the safety of someone else. The second is if we are required by law to share information in our medical record. Do you understand these exceptions? If not, please ask us and we are happy to explain.

1) Have you been to see a nurse, doctor or other health provider in the last year? __ No __ Yes
2) Have you ever broken any bones or had any cuts that needed stitches?

   __ No __ Yes
3) Have you ever been knocked unconscious ("knocked out")?

   __ No __ Yes
4) Some kids have a hard time living at home and feel that they need to run away. Have you ever run away from home or been 'kicked out' of your home? __ No __ Yes
5) Kids often use drugs or drink alcohol, and different kids use different drugs. Have you used drugs or alcohol in the last 12 months? __ No __ Yes
6) If yes, do you remember how old you were when you first tried alcohol or drugs? _____ years old
7) Sometimes kids have been involved with the police. Maybe for running away, for breaking curfew, for shoplifting. There can be lots of different reasons. Have you ever had any problems with the police?

   __ No __ Yes
8) Has a boyfriend or girlfriend in a dating or serious relationship ever physically hurt you or threatened to hurt you (hit, pushed, kicked, choked, burned or something else)? __ No __ Yes
9) Have you ever had sex of any type? (other than involving the events that brought you here today/tonight)
   __ No __ Yes

If you answered, "Yes" to Queston 9, please go on to Questions 10-I6. If you answered, "No", you are done.

Figure 3.1 Patient Questionnaire Continued[28]

10) When you had sex, what did it involve (check all choices that apply to you):

a. __ penis in vagina

b. __ anal sex (penis or finger in 'butt')

c. __ mouth on penis or mouth on vagina

11) Since the first time you had sex, how many partners have you had?

__ 1-5 partners __6-10 partners __ >10 partners

Were partners ___Male ___Female ___Both?

12) Which of the following best describes you?

__ Heterosexual (straight) ___ Homosexual (Gay or lesbian) __ Bisexual __ Transgender __ Not sure

13) Have you ever had any sexually transmitted infections, like herpes, gonorrhea, chlamydia or trichomonas?
__ No __ Yes

14) Sometimes kids are in a position where they really need money, drugs, food or a place to stay. Have you ever traded sex for money, drugs, a place to stay, a cell phone, or something else? __ No __ Yes

15) Has a boyfriend, a girlfriend or anyone else ever asked you, or forced you to have sex with ANOTHER person? (for example, a boy asks his girlfriend to have sex with another boy)

__ No __ Yes

If asked, did you have to actually do it? __ No __ Yes

16) Has anyone ever asked or forced you to do some sexual act in public, like dance at a bar or a strip club?
__ No __ Yes

If asked, did you have to actually do it? __ No __ Yes

17) Has anyone ever asked you to pose in a sexy way for a photo or a video? __ No __ Yes

If asked, did you have to actually do it? __ No __ Yes

Thank you for answering these questions. Is there anything that we have asked that you would like to talk more about?

Table 1 Sensitivity and Specificity - For Cut Off of Two or More Positive Answers[27]

	CST		
Screen	+	–	Total
+	10	90	100
–	1	102	103
Total	11	192	203

Table 2 Sensitivity and Specificity With Varying Cut Offs[27]

	Sensitivity (95% CI)	Specificity (95% CI)
Overall (2 items +)	90.9 (58.7%–99.8%)	53.1 (45.8%–60.4%)
3 items +	81.8 (58.2%–97.7%)	75.5 (68.8%–81.4%)
4 items +	45.5 (16.8%–76.6%)	90.1 (84.9%–93.9%)
5 items +	27.3 (6.0%–61.0%)	98.4 (95.5%–99.7%)
6 items +	*Zero were positive*	*Zero were positive*
2 items + positive history of sexual activity	90.9 (58.7%–99.8%)	64.6 (57.4%–71.3%)

Table 3 Sensitivity and Specificity of Screening Tool Based on Quantity of Positive Answers[7]

Items[a] Answered "Yes"	Sensitivity % (95% CI)	Specificity % (95% CI)
2 items+	84.6 (70.8–98.5)	53.2 (46.1–60.4)
3 items+	80.8 (65.6–95.9)	74.7 (68.5–81.0)
4 items+	42.3 (23.3–61.3)	91.4 (87.4–95.4)
5 items+	11.5 (0–23.8)	98.4 96.6–100)

[a] Knocked unconscious, runaway, use of drugs and/or alcohol in the last 12 mo, problems with police, >5 sexual partners, and STIs.

Table 4 Performance Measures for Screen[28]

	Total sample, N = 810	Emergency department, N = 91	Child advocacy center, N = 395	Teen clinic, N = 324
Sensitivity, % (95% CI)	84.4 (75.3, 91.2)	83.3 (51.6, 97.9)	84.0 (63.9, 95.5)	84.9 (72.4, 93.3)
Specificity, % (95% CI)	57.5 (53.8, 61.1)	49.4 (37.9, 60.9)	61.4 (56.2, 66.3)	54.6 (48.5, 60.7)
Positive predictive value, % (95% CI)	19.9 (16.0, 24.3)	20.0 (10.0, 33.7)	12.8 (8.1, 18.9)	26.8 (20.3, 34.2)
Negative predictive value, % (95% CI)	96.7 (94.6, 98.2)	95.1 (83.5, 99.4)	98.3 (95.6, 99.5)	94.9 (90.2, 97.8)
Positive likelihood ratio (95% CI)	2.0 (1.8, 2.3)	1.7 (1.2, 2.3)	2.2 (1.8, 2.7)	1.9 (1.6, 2.2)
Negative likelihood ratio (95% CI)	.3 (.2, .4)	.3 (.1, 1.2)	.3 (.1, .6)	.3 (.2, .5)

Table 5 Screening Tool Questions[29]

Original screening tool	Edited screening tool
1. Were you (or anyone you work with) ever beaten, hit, yelled at, raped, threatened, or made to feel physical pain for working slowly, doing something "wrong" or trying to leave?[26]	1. Is anyone making you do anything you don't want to do?
2. Has anyone threatened to hurt you or your family if you tried to leave your job or situation?	2. Is someone else in charge of your money?
3. Is anyone forcing you to do anything that you do not want to do?	3. Is someone else in charge of your ID, passport, or papers?
4. Does anyone force you to do sexual acts for your work?	4. Does someone else decide when you can call or see your friends or family?
5. Do you have to ask permission to eat, sleep, and use the bathroom?	5. Do you have to ask someone to eat, sleep, or use the bathroom?
6. Does someone else control whether you can leave your house or not?	6. Does someone else decide when you can leave the house?
7. Are you kept from contacting your friends and/or family whenever you would like?	7. Do you owe your boss money?
8. Do you owe your employer money?	8. Has anyone lied to you about the kind of work you would be doing?
9. Is someone else in control of your money?	9. Has anyone said they would hurt you or your family if you try to leave your job or situation?
10. Is someone else in control of your identification documents, passports, birth certificate, and other personal papers?	10. Have you been yelled at, hurt, threatened, or raped for working too slow, doing something wrong, or trying to leave?
11. Has anyone lied to you about the type of work you would be doing?	11. Does anyone make you have any kind of sex for work/money? Does anyone make you have any kind of sex for work/money?

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