Human Trafficking Education: A Pilot Study of Integration into Medical School Curriculum*

Journal of Medical Education and Curricular Development
Volume 10: 1–7

DOI: 10.1177/23821205231164088
SAGE

Devika M Das[1], Jennifer MV Talbott[1], Jordan S Dutcher[1], Matthew Buras[2], Elisabeth Lim[2], Suneela Vegunta[3], Paru David[3] and Juliana M Kling[3]

[1]Alix School of Medicine, Mayo Clinic, Scottsdale, AZ, USA. [2]Division of Health Science Research, Mayo Clinic, Scottsdale, AZ, USA. [3]Division of Women's Health Internal Medicine, Mayo Clinic, Scottsdale, AZ, USA.

ABSTRACT

OBJECTIVES: Few medical schools incorporate formal education on human trafficking (HT) and sex trafficking (ST) into their curriculum. Our objective was to develop, implement, and evaluate education on HT and ST in the first-year medical student curriculum.

METHODS: The curriculum included a standardized patient (SP) experience and lecture. As part of their mandatory sexual health course, students interviewed an SP who presented with red flags for ST and then participated in a discussion led by a physician-facilitator in an observed small group setting. A multiple-choice survey to assess knowledge about HT and ST was developed and administered to students before and after the SP interview.

RESULTS: Of the 50 first-year medical students, 29 (58%) participated in the survey. Compared with the students' baseline scores (according to the percentage of correct responses), scores after the educational intervention showed a significant increase in percentage correct on questions related to trafficking definition and scope (elder care, $P = .01$; landscaping, $P = .03$); victim identification ($P < .001$); referral to services ($P < .001$); legal issues ($P = .01$); and security ($P < .001$). On the basis of the feedback, a 2-hour lecture, which was adapted from the American Medical Women's Association–Physicians Against the Trafficking of Humans "Learn to Identify and Fight Trafficking" training, was presented the next year to all first-year medical students as part of their longitudinal clinical skills course and before the SP case. Curriculum objectives included learning trafficking definitions, victim/survivor identification, intersections with health care, the local impact of HT, and available resources.

CONCLUSION: This curriculum fulfills course objectives and could be replicated at other institutions. Further evaluation of this pilot curriculum is necessary to evaluate its effectiveness.

KEYWORDS: human trafficking, medical education, sex trafficking, standardized patient

RECEIVED: April 2, 2022. **ACCEPTED:** February 28, 2023

TYPE: Original Research Article

FUNDING: The author(s) received no financial support for the research, authorship, and/or publication of this article.

DECLARATION OF CONFLICTING INTERESTS: The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

CORRESPONDING AUTHOR: Juliana M Kling, Division of Women's Health Internal Medicine, Mayo Clinic, Address: 13737 North 92nd Street, Scottsdale, AZ 85260, USA.
Email: kling.juliana@mayo.edu

Introduction

Human trafficking (HT) is a crime and a public health concern with cases having been reported in all 50 states in the United States.[1] As defined by the United Nations, HT involves the recruitment, transfer, harboring, or receipt of persons through the use of force, fraud, or deception with the aim of exploitation for profit.[2] Sex trafficking (ST), commonly described as *modern sexual slavery* and *commercial sexual exploitation*, is a type of HT.[3] In 2016, the International Labour Organization estimated that there were 40.3 million victims of HT worldwide, with 4.8 million enduring forced sexual exploitation and 24.9 million enduring forced labor.[4] The 2019 US National Human Trafficking Hotline Data Report stated that 22 626 trafficking victims and survivors had been identified.[5] However, that number may be only a fraction of the persons involved in HT as the data are thought to grossly underestimate trafficking, especially the prevalence of male and gender-minority victims, owing to underreporting.

As many as 68% to 87% of ST victims sought health care while being trafficked,[6,7] but this percentage may indeed be higher because data on those patients are sparse and not readily available. Healthcare practitioners (HCPs) interface with victims of HT, often without recognizing it. In a study by Chisolm-Straker et al,[7] 56% of a sample of participants who endured HT visited the emergency department or urgent care and were seen by HCPs; 44%, by primary care practitioners; 27%, by dentists; and 26%, by obstetrician-gynecologists. Most commonly, trafficked men, women, and children report physical symptoms such as headaches, stomach pain, and back pain in addition to mental health concerns such as posttraumatic stress disorder, anxiety, and depression.[8]

*Parts of this work were presented orally at the Association of American Medical Colleges (AAMC) Group on Educational Affairs (GEA) Joint Regional Conference; April 20-22, 2021; Virtual. They were published as an abstract in the 2021 GEA Regional Spring Meeting Abstract Compendium.

Despite the high prevalence of encounters that HCPs have with victims of HT, essential training in medical school curricula is lacking, and 63% of practicing HCPs have not received training on the identification of ST victims.[9] Brief educational initiatives have been shown to greatly increase general knowledge and increase awareness about trafficking.[10] In a literature review of multiple databases, only 11 published resources were identified as educational materials on several core HT themes that were relevant to undergraduate medical students.[11] An easily accessible resource by Song et al[12] includes a small group case with a discussion on HT as part of an initiative to introduce medical students to the social determinants of health. Other published educational materials include online modules, slide presentations, standardized patient activities, and training manuals.[11,13] Despite a significant need to educate future HCPs about HT, it is clear training remains limited.

To improve medical student training on HT, we offered structured course material that was integrated into preexisting undergraduate medical curricula. As part of a longitudinal clinical curriculum, students are required to receive 24 h of instruction on how to take a history and perform a physical examination, including 4 h on sexual health history. This requirement creates an opportunity to incorporate education on HT, with a focus on ST since the course had a preexisting focus on sexual health. Our curriculum includes a standardized patient (SP) scenario to teach first-year medical students how to identify signs of ST and a lecture delivered virtually on the fundamentals of HT for HCPs.

Methods

Use of an SP in a case scenario of ST

We used a 2-pronged, sequential approach to introduce a pilot curriculum on HT and ST into a medical school curriculum for 50 first-year medical students in their first semester of medical school at Mayo Clinic Alix School of Medicine in Scottsdale, Arizona on August 20, 2019. Information on ST was embedded in a lecture on taking a sexual history, which was then reinforced with the use of an SP in a case scenario of ST. All study methods were approved and deemed exempt by the institutional review board (IRB) at our institution in August 2019 (IRB 19-000473). We needed 50 participants to achieve 80% power to observe a 10% increase in knowledge assuming a change from 50% to 60% (odds ratio = 6.0, proportion of discordant pairs = 30%, alpha = 0.05). Power was estimated in G*Power 3.1.9.2 for McNemar's test which is a nonparametric method for comparing pre/post change in a binary variable. Electronic written informed consent was included at the beginning of the electronic survey since the study was deemed a minimal risk by the IRB. The first page of the survey listed the risks/benefits and the participants had to check a box consenting in order for the survey to load.

Prework for session preparation for students included reviewing an introduction with a slide presentation about taking a sexual history and a list of pertinent questions to ask during the activity (Appendix A). The SP case scenario was incorporated into a group objective structured clinical examination (GOSCE) as part of the mandatory sexual health course. This course was designed to meet for one 4-hour session during the first year of medical school to introduce students to sexual health topics and interviewing techniques for obtaining a comprehensive sexual history. Although the learning objectives were geared toward ST, content that overlapped with HT was addressed as appropriate. This activity first occurred in person in 2019 but was delivered virtually in 2020 owing to the COVID-19 pandemic. In response to feedback from students about their lack of clear understanding regarding HT in 2019, a separate lecture on HT was given to students before the activity in 2020 and 2021.

Students watched a 1-hour slide presentation on taking a sexual history to introduce them to the topic, to help them understand the importance, and to learn how to obtain a comprehensive sexual history (Appendix B). One slide provided the incidence, risk factors, red flags, and hotline number for HT.

Students were divided into 8 small groups of 6 to 7 students each in separate breakout rooms. They were presented with 8 standardized 15-minute encounters to practice taking a sexual history. One student in each group conducted the interview in a GOSCE format in a clinical suite while their peers observed and asked questions at the end of the scenario. One scenario was an encounter that involved ST. The door notes for this patient were brief and stated only the patient's name and "18-year-old patient with rash." The total duration of the simulation activity was 2 h; the schedule is shown in Appendix B.

The case scenario was modeled on a case-based curriculum for social determinants of health.[12] We adjusted the scenario to ensure an appropriate content level and offer a more realistic story for the patient population that our students would encounter (Appendix C). The SP script outlined definitions, background, and required moulage. Two trained SPs employed by our institution's medical school were present for the specific scenario. An SP coordinator trained and briefed the SPs.

The scenario included a female SP who presented with red flags for ST, including unusual tattoos or branding marks, and a male SP posing as a controlling boyfriend who accompanied her and refused to leave the room (in an actual patient encounter, he would have been her trafficker).[14] The visit occurred in an outpatient setting. No previous medical records, laboratory test results, imaging findings, or information about this patient were available before the visit.

Afterwards, a physician-facilitator with knowledge and background in the field of ST debriefed students and used an instructive script to educate them on key factors relating to ST (Appendix D). Additional handouts with HT resources

and information available online were also provided at the conclusion of the debriefing session. A handout developed by the Arizona State University Office of Sex Trafficking Intervention Research[14] included indicators and red flags for HT, and another handout, developed by the US Department of Health and Human Services (HHS),[15] included the national HT hotline. Students were not formally assessed because we designed this activity for teaching purposes only.

One week before and 1 week after the education, students received an electronic 9-question, elective, anonymous survey that evaluated their knowledge about ST and HT across 8 core content themes (Appendix E). Three additional automatic email reminders were sent to students once weekly. Student demographic information was collected. The survey was conducted through Research Electronic Data Capture (REDCap), a secure, web-based system that complies with the Health Insurance Portability and Accountability Act. The core content themes emphasized in the survey were described in an HT review for HCPs by Ahn et al.[13] The themes were trafficking definition and scope, victim identification, health consequences, appropriate treatment, referral to services, legal issues, security, and prevention (Table 1). Content for the questions was adapted from an HHS brochure and from published evaluations of HT activities for learners.[14,16] We used an iterative process with the project team which included students and physicians to finalize the survey. This survey was not validated as there is no validated survey to assess a human trafficking curriculum and it was not pilot-tested. Survey responses were analyzed through a comparison of the percentage correct before and after the educational initiative. To gauge students' interest in learning about HT, an additional question asked students about the importance of knowing about HT for their profession. Space was also provided for free-text comments. An anonymous survey was also administered electronically to students immediately after the activity to collect qualitative feedback on each GOSCE scenario as part of the course evaluation, including the ST scenario.

Statistical analysis

The percentage correct on each survey question was calculated before and after the education. Quantitative variables in this study were analyzed with paired *t*-tests. A *P*-value < .05 was considered statistically significant. Statistical analysis was performed using SAS Version 9.4 (SAS Institute Inc, Cary, NC).

Results

All 50 first-year medical students participated in the mandatory SP scenario. A total of 29 of the 50 students (58%) participated in the elective surveys before and after the education. After the intervention, student scores improved by a mean of 4.3 points (30 points were possible) ($P = .001$). Compared with the students' baseline scores (according to percentage correct), scores after the education were significantly higher for the following: trafficking definition and scope (elder care, $P = .01$; landscaping, $P = .03$); victim identification ($P < .001$); referral to services ($P < .001$); legal issues ($P = .01$); and security ($P < .001$) (Table 2).

Trafficking definition and scope

This question centered on identifying venues and industries associated with HT. Scores increased significantly from before the education to after the education for the identification of elder care (from 55.2% to 72.4%; $P = .01$) and landscaping (from 55.2% to 69.0%; $P = .03$) as possible venues for trafficking victims. Students correctly identified massage parlors, hotels, and restaurants over 85% of the time both before and after the education ($P > .99$ for all).

Table 1. Human trafficking themes.[13]

Theme	Definition
Trafficking definition and scope	Definition of *human trafficking*; types of trafficking; examples of how, where, and why it occurs; description of extent of the problem locally or worldwide
Victim identification	Red flags, warning signs, or key indicators that might help a health professional identify a victim of human trafficking
Health consequences	Adverse health effects (physical and psychological) that result from human trafficking
Appropriate treatment	Suggestions for effective communication and provision of culturally sensitive care or trauma-informed care (or both) in the treatment of trafficking victims
Referral to services	Discussion of liaising with nonhealth services (eg, shelter or legal assistance) to meet victims' needs or to provide contact information for key resources (or both)
Legal issues	US antitrafficking legislation; medicolegal considerations (ie, documenting in medical records, reporting abuse of minors, obtaining informed consent, and maintaining patient confidentiality and privacy); suggestions for health professionals when interacting with law enforcement
Security	Provisions for the safety of the trafficked person (and, in some cases, the health professionals)
Prevention	Ways in which health professionals can become involved in human trafficking prevention activities

Table 2. Results from survey assessment questions.

Theme	Assessment question or statement	Assessment response[a]	Correct responses, %		*P* value
			Before intervention	After intervention	
Trafficking definition and scope	In human trafficking, victims are forced to provide labor or sex in many situations, including the following venues/industries (you may select > 1 answer)	**Massage parlors**	100.0	100.0	> .99
		Eldercare	55.2	72.4	.01
		Landscaping	55.2	69.0	.03
		Hotels	96.6	96.6	> .99
		Restaurants	86.2	86.2	> .99
		I'm not sure	89.7	86.2	.31
Victim identification (common red flags for human trafficking—true or false)	Patient is unable to provide a home address	**True**	93.1	93.1	> .99
	Patient is accompanied by many small children	**False**	31.0	27.6	.31
	Patient has unusual tattoos	**True**	31.0	89.7	< .001
Health consequences	Which of the following are common health consequences of trafficking (you may select >1 answer)?	**Substance use**	100.0	96.6	.56
		Poor dental hygiene	93.1	93.1	> .99
		Severe allergies	93.1	62.1	<.001
		Marked weight gain	69.0	65.5	.31
		Anxiety	96.6	100.0	.56
		Bladder infections	89.7	89.7	> .99
		Seizures	86.2	62.1	.002
		I'm not sure	75.9	96.6	.006
Appropriate treatment (the question is appropriate to ask suspected victims—true or false)	Have you or someone you know been threatened?	**True**	75.9	86.2	.07
	What are your working, living, and sleeping conditions like?	**True**	89.7	96.6	.14
	Why have you chosen this life?	**False**	75.9	86.2	.07
Referral to services	The next step if I suspect a patient is a victim of human trafficking and not in immediate danger is to call or instruct them to call this number:	**1-888-373-7888**	13.8	86.2	< .001
Legal issues (true or false)	A person who is under the age of 18 must cross state lines to be considered a trafficking victim	**False**	48.3	65.5	.01
Security (true or false)	The first step in providing assistance is convincing the trafficking victim to leave their current situation	**False**	37.9	75.9	< .001
Prevention	Select the populations or groups who are at especially high risk for human trafficking (you may select >1 answer)	**Homeless**	100.0	96.6	.56
		Immigrant	6.9	3.4	.31
		Minority	93.1	96.6	.31
		LGBTQ	79.3	89.7	.07
		White male	96.6	100.0	.56
		Victim of violence	96.6	96.6	> .99
		I'm not sure	93.1	100.0	.31

Abbreviation: LGBTQ, lesbian, gay, bisexual, transsexual, or queer.
[a]Boldface type indicates the correct response.

Victim identification

This question involved identifying red flags or warning signs for HT. Identification of unusual tattoos as a common red flag increased significantly after the intervention (from 31.0% to 89.7%; $P < .001$). Before and after the intervention, students correctly chose that the inability to provide a home address was a warning sign (93.1%; $P > .99$). However, the majority of students continued to incorrectly select that a patient accompanied by many small children was a warning sign for trafficking, and the percentage correct decreased from 31.0% to 27.6% after the education ($P = .31$).

Health consequences

This question asked students to identify common health consequences of HT. Most students correctly identified many of the health consequences (substance use, poor dental hygiene, anxiety, and bladder infections) both before and after the education (≥ 90%; $P > .56$ for all). However, after the intervention, students were significantly more likely to select the incorrect answers of severe allergies ($P < .001$), seizures ($P = .002$), and marked weight gain ($P = .31$).

Referral to services

This question asked about the next steps when there is high suspicion for HT, which is directing the suspected victim to call the HT hotline. Before the intervention, students identified the correct answer only 13.8% of the time compared to 86.2% after the intervention ($P < .001$).

Legal issues

This question asked if crossing state lines is a requirement to be considered HT. It was answered correctly as "no" by a larger percentage of students after the intervention than before (48.3% vs 65.5%; $P = .01$).

Appropriate treatment

This question asked about the appropriateness of questions to ask suspected victims in a patient-centered manner. For all 3 questions posed, the percentage of correct responses increased from before the intervention (all ≥ 75%) to after the intervention (all ≥ 86%), but the differences were not statistically significant.

Security

This question asked students to correctly identify a situation that would jeopardize the safety and security of a suspected victim, such as convincing them to leave their current situation as a first step without detailing a safety plan is inappropriate. The percentage of students who correctly answered the question improved significantly from before the intervention to after the intervention (37.9% vs 75.9%; $P < .001$).

Prevention

This question asked students to identify populations at high risk for HT. Before and after the intervention, students correctly identified homeless persons, persons of a minority race or ethnicity, persons in a sexual or gender minority, and victims of violence (all > 75%), but the differences were not statistically significant. Students misidentified immigrant populations as a high-risk group before (6.9%) and after the intervention (3.4%), but the difference was not statistically significant.

When asked to rate the importance of HT knowledge for their profession, most students selected "strongly agree" before the intervention (78%) and after the intervention (86%). The other students responded, "agree." The following statement from a student is an example of the anonymous qualitative feedback received: "I don't know very much about trafficking but would like to learn more and learn about the signs to watch for in patients."

In addition, the open-ended anonymous student responses about the HT standardized patient encounter included valuable information. Students felt additional training should be provided prior to the SP case, which is demonstrated by the following quotes: "I think this case should have been prefaced with training on how to help and talk to these patients … so we could learn how to respectfully interact with this patient as an advocate" and "I think it would be very helpful to have a whole session on legal obligations as a physician with exact steps for us to follow in the future under this and similar circumstances."

Discussion

For many students, this course was their first introduction to HT topics. While results have been published on the use of HT curricula at other medical schools,[11] to our knowledge, the present report is the first published medical school curriculum that provides all the components required for implementation. This curriculum, therefore, fills a critical need and will be a valuable resource for students, faculty, and administrators who want to incorporate HT education into their medical school curricula. After our curriculum was introduced, the percentage of students who strongly agreed that HT knowledge was important for their profession significantly increased. One student commented, "This case was different than anything I had expected coming into the activity and the gravity of the patient's situation forced me to lengthily contemplate about how I should respond to such a scenario moving forward."

After completion of the course, students showed significant improvement in HT knowledge in several areas, including

appropriate treatment, trafficking definition and scope, and prevention. After the intervention, students' knowledge about services and security for HT victims significantly improved (for both, $P < .001$). We identified the following core content themes as areas where our educational materials needed improvement because < 75% of the students had correct answers for some of the questions after the intervention or the percentage of students with correct answers decreased after the intervention: victim identification, legal issues, and health consequences.

The GOSCE format is interactive and learner-centered. Learners receive immediate feedback from peers, faculty, and SPs, and the format requires few financial and administrative resources. Other medical schools may find incorporating HT education into existing curricula more feasible than creating a new course. The format is easy to apply because most medical schools already use SPs for preclinical training. This educational initiative was integrated into a preexisting activity seamlessly and with the use of a few additional resources. It was also successfully adapted to a virtual format and could easily be adapted for students studying other health professions, such as dentistry, nursing, and physical therapy. If a sexual history-taking curriculum is not part of a medical school's curriculum, HT can be incorporated into either a preexisting SP session, a course on social determinants of health, or role-playing activity. A significant number of Central and South American immigrants live in Arizona. The case was tailored to be consistent with the demographics of patients the students are likely to care for. It can be easily amended for any program.

The results of our educational initiative are similar to those of other studies in this field. In an educational initiative aimed at third-year students, 57% of students felt confident in identifying an HT victim after 1 brief SP encounter.[17] In another study, medical students had a significant increase in confidence in their ability to identify and support victims of ST after an SP activity and debriefing session.[18]

However, many limitations were identified after the introduction and assessment of student feedback on our curriculum. Only 1 student per group actively interviewed the SP while the other students observed and participated in the discussion. Time constraints prevented immediate avenues for more discussion of the emotional aspect of the cases; this was an area of concern expressed by many students. Students stated that they would have preferred to have had more background knowledge and training in this subject before the activity, which led to the introduction of a formal lecture during the academic year. We also recognize that selection bias could be at play, as the 58% of students who completed the pre- and post-surveys may have been more innately interested in the topic at baseline and may be more likely to incorporate this education into their future practice. Finally, the surveys distributed in the study were not validated or pilot-tested due to limited published curricula and assessments on human trafficking curricula.

The 2-hour slide-based lecture on HT provided additional background information and context. It was delivered virtually to a second cohort of 50 first-year medical students in August 2020 during their first semester of medical education before they had any SP experience. This lecture, which had no prerequisites, was part of a mandatory longitudinal course to prepare students for clinical interactions during their first year. The objectives of the lecture included trafficking definitions, victim and survivor identification, intersections with health care, and local impact and resources. This lecture was adapted from the American Medical Women's Association–Physicians Against the Trafficking of Humans training slide set, "Learn to Identify and Fight Trafficking (LIFT)," which is available online by request (path_admin@amwa-doc.org).[19,20] We made minor modifications to the slide set with the addition of local resources, articles, and links to online videos. The lecturers included a team of 3 senior medical students and a women's health internist who had all attended a 4-hour local in-person LIFT training session and worked with HT victims and survivors in the community. The training described how to identify and assist patients who are being trafficked and addresses sex and labor trafficking and the commercial sexual exploitation of children.[20] Owing to the evolving situation with COVID-19 and constraints with the IRB protocol, a knowledge-based survey was not administered to students before or after the lecture.

The survey results highlighted opportunities to improve the educational materials, which could be adapted by other institutions. Options include the use of a male ST victim in the SP case scenario to debunk the common misconception that males are not trafficked. In 2019, approximately 14% of victims were male or persons of gender minorities.[5] In addition, certain survey questions could be further tailored and adjusted for clarity and accuracy, including the question on referral to services. This question could be misleading by suggesting that the correct first step once there is suspicion for trafficking is a referral to the HT hotline where in reality there are more nuanced approaches specific to each. Furthermore, while feedback was elicited from students, feedback should also be incorporated from SPs, HT victims/survivors, physician-facilitators, clinical skills, and doctoring faculty. In addition, dedicated time for student feedback can be provided to improve participation. To allow more time for debriefing because of the emotional nature of the case, a drop-in session could be arranged after the activity to allow students to privately discuss their thoughts with faculty members and counselors with mental health training. In addition, an extension of the facilitator-led debriefing could allow more time for discussion and modeling of the appropriate next steps to take. While the lecture on HT was added after receiving feedback from students, its efficacy should be formally evaluated. Furthermore, an exploration into longitudinal knowledge retention should be initiated with annual surveys.

In conclusion, this educational initiative was successful in enhancing medical student knowledge of HT. It is easily adaptable and can be incorporated into other medical school curriculums in various settings to allow for widespread exposure to HT education. Ultimately all medical schools should consider a longitudinal HT curriculum to equip future physicians with the information they need to appropriately screen and care for victims of HT, and assessment needs to take place to evaluate retention and implementation of HT knowledge with such a curriculum.

Abbreviations

GOSCE	group objective structured clinical examination
HCP	health care practitioner
HHS	US Department of Health and Human Services
HT	human trafficking
IRB	institutional review board
LIFT	Learn to Identify and Fight Trafficking
REDCap	Research Electronic Data Capture
SP	standardized patient
ST	sex trafficking

Acknowledgments

We would like to acknowledge Kara L. Saliba for her contribution to the standardized patient case as well as the students and faculty of Mayo Clinic Alix School of Medicine—Arizona Campus for their participation and feedback. Randall J. Fritz, DVM, Mayo Clinic, substantively edited the manuscript. The Scientific Publications staff at Mayo Clinic provided proofreading, administrative, and clerical support.

Author Contributions

DMD participated in the design, drafting of the manuscript, and data analysis and interpretation. JMVT participated in the conception and design, data collection, drafting of the manuscript, and data analysis and interpretation. JSD participated in the conception and design, data collection, drafting of the manuscript, and data analysis and interpretation. MRB participated in data collection and data analysis and interpretation. ESL participated in data collection and data analysis and interpretation. SV participated in the conception and design and critical revision of the manuscript and developed the curriculum and course materials. PSD participated in the conception and design and critical revision of the manuscript. JMK participated in the conception and design and critical revision of the manuscript and developed the curriculum and course materials.

Data Availability Statement

All relevant data supporting the findings of this study are reported within the article and the supplemental materials.

ORCID iD

Devika M Das https://orcid.org/0000-0003-0959-5656

Supplemental Material

Supplemental material for this article is available online.

REFERENCES

1. Office on Trafficking in Persons. *What is human trafficking?* HHS; 2019. www.acf.hhs.gov/otip/about/what-is-human-trafficking. Accessed March 2, 2021.
2. Human Trafficking. United Nations: Office on Drugs and Crime. https://www.unodc.org/unodc/en/human-trafficking/human-trafficking.html. Accessed March 7, 2021.
3. Meshkovska B, Siegel M, Stutterheim SE, Bos AE. Female sex trafficking: conceptual issues, current debates, and future directions. *The Journal of Sex Research*. 2015;52(4):380-395. doi:10.1080/00224499.2014.1002126
4. Forced labour, modern slavery and human trafficking. International Labour Organization. https://www.ilo.org/global/topics/forced-labour/lang–en/index.htm. Accessed March 7, 2021.
5. Polaris Project. 2019. Data Report. The U.S. National Human Trafficking Hotline. https://polarisproject.org/wp-content/uploads/2019/09/Polaris-2019-US-National-Human-Trafficking-Hotline-Data-Report.pdf. Accessed March 7, 2021.
6. Egyud A, Stephens K, Swanson-Bierman B, DiCuccio M, Whiteman K. Implementation of human trafficking education and treatment algorithm in the emergency department. *J Emerg Nurs*. 2017;43(6):526-531. doi:10.1016/j.jen.2017.01.008
7. Chisolm-Straker M, Baldwin S, Gaïgbé-Togbé B, Ndukwe N, Johnson PN, Richardson LD. Health care and human trafficking: we are seeing the unseen. *J Health Care Poor Underserved*. 2016;27(3):1220-1233. doi:10.1353/hpu.2016.0131
8. Ottisova L, Hemmings S, Howard LM, Zimmerman C, Oram S. Prevalence and risk of violence and the mental, physical and sexual health problems associated with human trafficking: an updated systematic review. *Epidemiol Psychiatr Sci*. 2016;25(4):317-341. doi:10.1017/s2045796016000135
9. Beck ME, Lineer MM, Melzer-Lange M, Simpson P, Nugent M, Rabbitt A. Medical providers' understanding of sex trafficking and their experience with at-risk patients. *Pediatrics*. 2015;135(4). doi:10.1542/peds.2014-2814
10. Grace AM, Lippert S, Collins K, et al. Educating health care professionals on human trafficking. *Pediatr Emerg Care*. 2014;30(12):856-861. doi:10.1097/pec.0000000000000287
11. Talbott JMV, Dutcher JS, Pougnier CA, Calvin SL, Roe-Sepowitz D, Kling JM. Review of published curriculum on sex trafficking for undergraduate medical trainees. *Am J Prev Med*. 2020;58(4):604-611. doi:10.1016/j.amepre.2019.11.013
12. Song AY, Poythress EL, Bocchini CE, Kass JS. Reorienting orientation: introducing the social determinants of health to first-year medical students. *MedEdPORTAL*. 2018;14(1). doi:10.15766/mep_2374-8265.10752
13. Ahn R, Alpert EJ, Purcell G, et al. Human trafficking: review of educational resources for health professionals. *Am J Prev Med*. 2013;44(3):283-289. doi:10.1016/j.amepre.2012.10.025
14. ASU School of Social Work Office of Sex Trafficking Intervention Research (STIR). *What You Need to Know Sex Trafficking and Sexual Exploitation: A Training Tool for Health Care Providers*. https://socialwork.asu.edu/sites/default/files/Sex%20Trafficking%20ASU%20Health%20Care%20Brochure.pdf. Accessed February 4, 2021.
15. U.S. Department of Health & Human Services Office on Trafficking In Persons. *Look Beneath the Surface Materials for Health Care and Social Service Providers*. https://www.acf.hhs.gov/otip/outreach-material/resource/lbs-providers. Accessed February 4, 2021.
16. Titchen KE, Loo D, Berdan E, Rysavy MB, Ng JJ, Sharif I. Domestic sex trafficking of minors: medical student and physician awareness. *J Pediatr Adolesc Gynecol*. 2017;30(1):102-108. doi: 10.1016/j.jpag.2015.05.006
17. Weiss AL, Kiluk V. Teaching Human Trafficking to 3rd Year Medical Students. *Journal of Adolescent Health*. 2018;62(2). doi:10.1016/j.jadohealth.2017.11.056
18. Mercer L, Ludwig A, Smith J, Erickson L, Manriquez M. The Use of Standardized Patients to Increase Medical Student Awareness of and Confidence in Screening for Human Trafficking. *Obstet Gynecol*. 2018;132(1). doi:10.1097/01.aog.0000546646.85990.78
19. Lee H, Geynisman-Tan J, Hofer S, Anderson E, Caravan S, Titchen K. The impact of human trafficking training on healthcare Professionals' knowledge and attitudes. *Journal of Medical Education and Curricular Development*. 2021;8:238212052110165. doi:10.1177/23821205211016523
20. AMWA-PATH. Learn to Identify and Fight Human Trafficking (LIFT) [Video]. YouTube. https://www.youtube.com/watch?v=tZUaVgPnAzg. Published December 9, 2019. Accessed October 7, 2021.