A Theory-based Didactic Offering Physicians a Method for Learning and Teaching Others About Human Trafficking

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ABSTRACT

Emergency clinicians are on the frontlines of identifying and caring for trafficked persons. However, most emergency providers have never received training on trafficking, and studies report a significant knowledge gap involving this important topic. Workshops often employ a "train-the-trainer" model to address clinicians' knowledge gaps involving various topics (including trafficking). By offering participants knowledge and skills needed to both understand relevant content and teach this content to future learners, this model aims at promoting widespread dissemination of essential information. However, current train-the-trainer workshops typically involve full or multiday sessions and employ multimodal instructional techniques, making them time and resource intensive for both participants and facilitators.

To address these challenges, we created a 50-minute train-the-trainer workshop to teach emergency clinicians the knowledge and skills needed to recognize and care for trafficked patients while providing instructional techniques to teach learners this content in the clinical environment. Learning theory and principles informed the choice of instructional methods and were employed when designing the paper-based learning guides that functioned as this intervention's primary instructional resource. Guides contained detailed scripts used to perform role-playing exercises. These "scripted guides" were designed for participants to learn important content while simultaneously practicing techniques to teach this content to one another. They provided the scaffolding necessary to independently direct learning during the workshop (with minimal facilitator intervention), while also being carefully formatted and organized to create an accessible tool for future use during clinical teaching.

The session was implemented at the 2018 Society for Academic Emergency Medicine Annual Meeting in Indianapolis, Indiana. Based on participants' self-assessment using a retrospective pre–post test, the workshop was successful in creating a train-the-trainer model that is brief, requiring minimal facilitator resources and offers instruction on both content knowledge and instructional methods to disseminate this knowledge to future learners.

NEED FOR INNOVATION

Human trafficking (HT) is a modern form of slavery involving the use of force, fraud, or coercion to induce an individual to perform labor or commercial sex acts.[1] HT is a global public health crisis. In 2016, an estimated, 40.3 million persons were trafficked worldwide.[2] Emergency providers (EPs) are on the frontline of recognizing and caring for trafficked persons (TPs). One study demonstrated that 68% of TPs accessed health care while being trafficked with

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56% of these individuals being seen in an emergency department (ED).[3] Fear, shame and language barriers often prevent self-disclosure, and low levels of awareness and attitudinal bias can challenge providers' abilities to recognize HT.[4,5] Despite the extent of the problem, only 2% of EPs have received training on HT.[6]

BACKGROUND

Currently available options for provider instruction on HT include multiday seminars, brief online courses, massive open online courses, guidelines, and published summaries for self-directed learning.[7,8] To our knowledge, there are no published "train-the-trainer" interventions focusing on EPs or providing instructional methods directed at teaching learners in the clinical environment. Additionally, prior literature describing train-the-trainer interventions on other topics involves lengthy or longitudinal instruction that is both multimodal and facilitator intensive.[9–11] Learning theory can offer the guidance necessary to thoughtfully develop a train-the-trainer intervention that is brief, requires limited facilitator guidance, and provides emergency educators tools for engaging learners during regular clinical practice to promote knowledge dissemination and transfer of skills to the bedside to directly impact patient care.

OBJECTIVE

We created a 50-minute train-the-trainer workshop focused on emergency care of TPs. Upon completion, participants should be able to: 1) describe knowledge and skills required to recognize and care for TPs in the ED and 2) employ brief, structured techniques while working clinically to teach learners about recognition and care of TPs. Additionally, we aimed to help participants develop a cognitive process for how educational theory and instructional principles can be used to inform the development of a train the trainer intervention that thoughtfully addresses current challenges.

DEVELOPMENT PROCESS

Development of this instructional session was a joint effort by experts in the fields of HT and medical education. As described below, there were three major parts of the development process. Table 1 illustrates how these three aspects were used to create the instructional design used for this session. Establishing *what* content is most relevant for EPs was determined by literature review and the team's trafficking experts.

To determine *how* this content was going to be taught, an instructional framework rooted in cognitivist theory that employed interactive learning techniques was developed. Using cognitivist theory, we set out to develop an intervention that would provide participants with an alternative method to "learn how to learn."[12] This intervention used printed instructional guides as the primary resource for learning during the workshop. Guides describing three different clinical scenarios were composed of detailed scripts that participants read verbatim during the workshop while role playing as either the physician educator or the learner opposite a partner playing the reciprocal role. Informed by educational theory and instructional principles, these scripted guides (SGs) were designed to provide the scaffolding and organization needed to allow participants with limited prior subject knowledge to learn essential HT content while simultaneously teaching this content to their partner. In addition to the printed SGs used during the workshop, participants were provided a link to electronic versions that could be easily accessed while working clinically.

Cognitivist theory also informed key instructional design aspects of this intervention. Cognitivism emphasizes the importance of creating connections between new content and prior or common experiences.[13–15] For example, because HT is rarely encountered in daily practice, each case used a frequently encountered clinical presentation (e.g., lumbar strain) to prompt teaching about HT. This approach provides increased opportunity for participants to use these SGs to teach in the clinical environment and helps learners create connections between encountered presentations and potential TPs.

Established instructional techniques were used to format and organize the SGs. Content was formatted to highlight essential teaching points, which were organized using the instructional techniques of "teaching scripts" or "concept maps."[16,17] This design was intended to focus attention on essential information, suggest possible relationships, and prime participants to organize content to create personal meaning. The carefully organized teaching points were supported by detailed scripts. These scripts "filled in gaps" between essential teaching points and were intended to allow workshop participants to practice teaching one another

Table 1
How Educational Theory and Instructional Principles Informed the Instructional Design Used to Create This Intervention on Human Trafficking for the SAEM 2018 Annual Meeting

	Case 1	Case 2	Case 3
Goals	• Learn about how to build trust with a TP and why this is important. • Understand HT frequently involves males and/or labor exploitation (HT does not just involve women/girls or sexual exploitation). • Offer introduction to identifying features of TPs.	Recognize common identifying features of potential TPs ("red flags").	• Learn the high incidence of mental health and/or substance use disorders in TPs. • Learn about actions that should and should not be taken after a patient discloses their trafficking status.
Clinical presentation used to prompt HT teaching ("common prompt")	Your learner presents a case of a young man with muscular lumbar pain.	Your learner presents a young woman with a GU concern.	Your learner presents a young woman with history of depression presenting with a heroin overdose.
Interactive technique used	Teaching script	Concept map	Teaching script
How cognitivism was applied	Common prompt: By using frequently encountered (non-HT) presentations to prompt initiation of this learning exercise, learners make a connection to an encountered clinical presentation (lumbar pain, GU concern, mental health conditions, substance use disorder). Learner is probed to create further connections between concepts and relationships they currently understand and the new content that is being taught (e.g., presentations of child abuse or neglect or interpersonal violence, heat exhaustion, or traumatic injuries). Content is compared and contrasted both with other new content and with learner's currently held concepts regarding HT.		
Cognitive biases	Availability bias: The first case of the session highlights features of HT [(a) male TP and (b) labor trafficking)] that are not consistent with common assumptions.	Anchoring bias: Case involves a woman with a GU concern but challenges the learner to consider that TPs that identify as male may present to the emergency department.	Search satisficing: Emphasize the idea that TPs can present with non–trafficking-related illnesses, so a heightened awareness is important.
Knowles principles:			
Motivation to learn* Orientation to learning*	Emphasize the impact HT has on people's lives: • "HT is a form of 'modern slavery in which an individual is commercially exploited by force, fraud or coercion for labor and/or sex." • "Often TPs lose their freedom and experience physical, sexual, and mental violence."	Emphasize why emergency clinicians must learn about TPs: • 68%–88% of TPs reported having contact with a health care worker while being trafficked. • Greater than 50% of TPs seen by health care are seen in the emergency department.	Emphasize the extent of trafficking and comorbid conditions: • Handout provided with trafficking statistics *specific to the learner's state* (from humantraffickinghotline.org) • Many trafficked patients have either mental health or substance use issues.
Need to know	This concept guided the organization and ordered the presentation of content within the session, e.g., emphasizing the extent of the problem or the impact that HT has on patients' lives occurred earlier in the scripts; the details of how one builds trust with TP came after information on identifying features and rationale for why building trust is important.		
Readiness to learn (life tasks)	Ask learner: "We frequently see patients with back pain in our daily clinical practice. If 98% of providers have never received training on HT, imagine how many TPs we may have missed?" "We usually think of young women and sex trafficking but what percent of TPs identify as male?" (~30–40%)	Ask learner: "How many patients with GU concerns do we see while working clinically? . . . How often do we think of these as potential TPs." Emphasize: "Trafficking affects both citizens and non-citizens. Like foreign-born/non-English speaking persons, US citizens are also trafficked."	Ask learner: "How frequently do we see patients with mental health concerns or drug use/dependence issues?" "If a TP discloses their status to you, they are reaching out for your help . . . do you know what to do next? What are their rights? What are your responsibilities?"

(Continued)

Table 1 (continued)

	Case 1	Case 2	Case 3
Learner's experience	Probe learner with questions such as: "What do you know about human trafficking?" "What are the two types of trafficking?" (sex and labor)	Probe learner with questions such as: "When there is a discrepancy between a patient's history and exam, what are we concerned for?" "What types of emotions/feelings have TPs reported experiencing when seeking medical care?" "What other types of patients report similar emotions?"	Probe learner with questions such as: "What do you consider when a patient presents with controlling 'relative' or partner, bruising of varying ages, etc.?" (child abuse/neglect or interpersonal violence)
Learner self-concept (self-directed learning)	Simple Web address and QR code listed on learning guides linked to electronic resources that included: • Web links for national guidelines, "best-practices" PDF guides, etc. • National Human Trafficking Hotline and other patient resources • Web links to informational and educational videos and Massive open online courses (MOOCs)		

This table offers examples of how learning theory and instructional principles informed decisions regarding what specific content was included in each case and how this content is organized into the scripted guides used by participants during role playing exercises.
GU = genitourinary; HT = human trafficking; TP = trafficked person.
*Knowles adult learning principles of "motivation to learn" and "orientation to learning" are combined in the table below due to considerable overlap in their goals and content.

about trafficking without requiring prior knowledge on the subject. The goal of this design is to promote more scaffolded learning initially (i.e., read entire script verbatim during the workshop), while reducing scaffolding over time (i.e., using only highlighted teaching points without the script as participants repeatedly used the SGs to teach learners in the ED).

Finally, to determine *where* specific content should be integrated into SGs, Knowles' principles of adult learning were used with additional direction from other learning concepts such as cognitive load and cognitive debiasing.[18,19]

PROGRAM IMPLEMENTATION

This 50-minute interactive workshop was developed for and implemented at the 2018 Society for Academic Emergency Medicine (SAEM) Annual Meeting in Indianapolis, Indiana. For context, a 10-minute PowerPoint-based introduction provided reasons why clinicians need to know about HT, a description of the session's objectives, and a brief overview of the interactive component. Participants then paired off to role-play three cases (10 minutes per case). They alternated playing the role of the physician-educator ("teacher") or the learner and followed the detailed SGs to enact each teaching-learning scenario.

The guides started with instructions, case overview, and description of each participant's role. There were role-specific scripts for both the "teacher" and the "learner" that complemented each other and offered prompts for when each participant was to speak or perform certain actions (e.g., "complete box 2 on the concept map"). The SGs had all necessary instructions, and the scripts were to be read verbatim, which created a "teacher–learner" interaction that did not require a facilitator. As the "teacher" read the script, essential learning points were emphasized, repeated, and given context. This encouraged the teacher to learn the content while simultaneously teaching it. As intended, there was very little facilitator–participant interaction during the session. To promote use of these guides when working clinically, electronic versions were made available to participants. Importantly, learner scripts incorporated what were felt to be common responses to questions contained in the learner guides. However, teacher guides were designed to still be effectively used when teaching learners in the clinical environment, whose responses are (typically) not scripted.

PROGRAM EVALUATION

Participants completed a four-item, retrospective pre–post survey at the conclusion of the session to assess learning and evaluate the session. Participants rated their abilities before and after the session on a 4-point Likert scale.[20] Nineteen individuals participated, consisting of both attending (28%) and resident EPs (72%) from multiple states. Results showed significant improvements in self-reported perceptions of participants' own abilities to: 1) describe different types of HT, 2) identify high risk signs of trafficking, 3) employ interactive learning methods in the clinical environment to instruct others on recognition and care of TPs, and 4) describe an effective approach for assessment and management of TPs (all results, $p < 0.001$). Effect sizes were calculated and ranged from 0.57 to 0.62. Cronbach's alpha calculated for all items was 0.66 for the pretest and 0.61 for the posttest, demonstrating moderate internal survey consistency. All statistics were performed in Microsoft Excel. Question 3 had the largest difference in scores, which supports the utility of this intervention.

REFLECTIVE DISCUSSION

We have described the development of a brief train-the-trainer intervention using education theory and instructional principles to inform the thoughtful creation of scripted learning guides designed to impart new knowledge and teach how to teach this content in the clinical environment. Creation of a novel didactic using role-play with detailed scripts was developed using educational theory, interactive learning techniques, and adult learning principles. The method described here lends itself to topics where learners have limited content knowledge and subject matter that does not involve complex understanding (e.g., pathophysiology or critical care). When planning to create similar didactics for other topics, in addition to content experts, we recommend consulting experts in instructional design and theory to develop appropriately detailed scripted learning guides.

While this intervention is exciting, our results are based on a single workshop and outcomes involve self-reported impression of learning (Kirkpatrick's Level 1, learner's reaction). Furthermore, all participants were attendees of a national conference focusing on academic medicine who voluntarily chose to attend this didactic, likely creating a self-selection bias: Participants were more likely to be interested in the content (HT in the clinical setting) and/or in the concept of teaching unfamiliar material. Future research should assess if this intervention changed participants' behaviors and examine if they used the method to teach learners in the clinical environment.

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Supporting Information

The following supporting information is available in the online version of this paper available at http://onlinelibrary.wiley.com/doi/10.1002/aet2.10206/full

Data Supplement S1. Supplemental material.