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## Research Article

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## Breaking the Cycle of Human Trafficking: The Importance of Education of Health Care Clinicians

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## Abstract

**Background:** Human Trafficking (HT) is an ongoing human-rights violation with global impact. Healthcare clinicians (HCCs) working in primary care and hospital settings are well positioned to identify and assist individuals who are victims of Trafficking in Persons (TIPs).

**Local Problem:** Several studies emphasize the seriousness of HT and HCCs' lack of knowledge in HT identifiers which can lead to missed opportunities to assist and support victims. HCCs frequently lack knowledge of common identifiers, how to assess and communicate with suspected victims, as well as how to respond to a HT situation, and develop a patient-centered plan of care.

**Methods:** The sample consisted of 21 clinicians and support staff of a mobile healthcare clinic. A pre and posttest design was used to compare changes in scores related to HCCs' perception, knowledge, attitudes, and behavior regarding HT indicators and communication strategies based on the Human Trafficking for Clinicians Survey.

**Interventions:** An evidence-based educational seminar was delivered virtually to participants regarding prevalence and incidence of HT and its significance in healthcare.

**Results:** There were statistically significant changes in pre-test post-test scores for all domains associated with HT Indicators as well as communication skills.

**Conclusion:** The results of this QI project suggest that the study be conducted on a larger scale in hospitals, emergency rooms, urgent care, as well as primary care settings. Interprofessional education should be expanded to include HCCs and members of law enforcement who through shared efforts can intervene to break the cycle of HT and abuse.

**Keywords:** Clinicians; Human trafficking; Knowledge; Nurse practitioner; Trafficking in persons

## Introduction

Human Trafficking (HT) is an ongoing human rights violation with global impact. It is one of the major social problems that affect individuals from all socioeconomic backgrounds. Factors that lead to HT include regional conflicts, economic suffering, and cultural acceptance. Assessing the full impact of HT is complex because so many cases go undetected, which the United Nations refers to as "The hidden figure of crime" [1]. In the United States alone, approximately 400,000 individuals are living in conditions of modern-day slavery [2]. The fact that HT is a covert crime presents the greatest barrier to identifying Trafficking in Persons (TIPs) [3]. When the covert nature is combined with a widespread lack of knowledge and comprehension of the issue, identifying, and assisting Trafficking in Persons (TIPs) is challenging at best [3].

Individuals vulnerable to HT include those of low socioeconomic status/poverty, family abuse/neglect, poverty, mental and behavior problems, and substance abuse. TIPs are often runaways, the homeless, individuals of peculiar sexual orientations, such as the Lesbian- Gay- Bisexual- Transsexual- Queer (LGBTQ) populations, and migrant workers.

According to Ram and Goldin [4], researchers have identified warning signs of HT based on physical appearance, such as malnourishment, exhaustion, and physical abuse (bruises, cuts, grip markings, and burns), as well as such behaviors as displaying anxiety and submissive behavior, unable to speak the common language, requests for isolated rooms, and lack of formal identification, as well as the patient being reluctant to explain his/her injuries, and avoiding eye contact [5]. Tattoos of male names, barcodes, or gang symbols found on the neck, inner thigh, or around the genitals as potentially indicative of HT.

### Statement of the Problem

If TIPs are to encounter anyone who has the potential to help them, a likely individual would be a Healthcare Clinician (HCC). Physicians, Advanced Practice Registered Nurses (APRNs), Registered Nurses (RNs), certified nursing assistants, and medical assistants are all considered HCCs, as they are all involved in the treatment of patients in some way. However, HCCs may not be fully aware of the HT indicators or the steps to addressing HT when it is suspected. Grace, et al. [6] report that 28% to 50% of TIPs in captivity are usually not identified upon their encounter with a clinician. According to the Polaris Project [7], 69% of HT survivors reported having had access to health services at some point during their exploitation. In addition, HCCs have been ranked as the seventh most frequent identifier of HT among the National Hotline's list since 2007 [7]. Identifying TIPs requires knowledge of HT indicators and communication skills, such as patience, reasoning, and the ability to establish rapport [8].

### Significance

TIPs are placed in horrid conditions that affect their health negatively and deprive them of basic human rights, freedom, autonomy, self-esteem, ownership of their body, and a sense of safety [4,9]. The physical and mental health of 150 TIPs and found that symptoms related to physical and sexual abuse were a commonly reported indicators, including broken bones, chronic pelvic pain, burns, miscarriages, and sexually transmitted infections and diseases such as Human Immunodeficiency Virus (HIV), Pelvic Inflammatory Disease (PID), chlamydia, or gonorrhea. TIPS reported general symptoms of fatigue, headaches, stomach pain, and back pain, as physical examinations often document malnourishment, and scars from domestic violence. There was also a higher reported prevalence of drug and alcohol abuse, as traffickers use drugs and alcohol as means to control their victims. In addition to significant physical conditions, females and male exposed to physical and sexual violence had greater prevalence of anxiety, depression, and PTSD. Based on these findings, healthcare professionals be trained on HT to support safe and appropriate responses and an approach that takes both social and psychological factors into account when responding to the mental needs of TIPs.

### Knowledge Gaps

Clinician's lack of knowledge regarding their role in identifying and responding to HT is cited as the primary reason for not intervening [9]. Knowledge of HT includes recognition of common identifiers of TIPs, how to assess and respond to an HT situation, and how to create a plan of care that is specific for the patient [9]. Lutz [10] evaluated APRN's knowledge level on HT and reported that 94.5% of the participants reported no previous HT education. Without appropriate knowledge, HCCs are limited in their ability to identify TIPs and treat them effectively.

### Review of the Literature

Health professionals' perceptions, knowledge, attitudes, behaviors, and communication strategies are critical to understand their ability to identify and respond to potential victims of human trafficking. A common misperception from HCCs is that TIPs have to cross a geographic border to fit the definition of HT. The National Human Trafficking Hotline [11] clarifies that crossing a geographic border refers to human smuggling, but the crime of HT does not require movement. Victims can be trafficked in their homes within their country's borders.

A lack of knowledge of the screening process may discourage HCCs from screening prospective TIPs. Furthermore, lack of knowledge regarding various cultures, cultural misconceptions, and language barriers between a provider and TIPs also contribute to the missed opportunities in identifying TIPs [4]. If HCCs do not evaluate patients in a culturally sensitive manner, inconsistencies in patient's reported history can be unrecognized.

HCCs' attitudes may shift as their proficiency in screening patients improves. According to a recent study where APRNs were evaluated on their knowledge and attitudes on HT, only 24% reported confidence in their ability to identify a victim of HT [12]. Lack of confidence results in HCCs missing their opportunity to identify TIPs because confidence levels contribute to their readiness to do so. Educating HCCs about HT signs on a routine basis will most likely increase their confidence in identifying TIPs.

There is a strong connection between perceptions, knowledge, attitudes, and the actions or behavior of HCC. In a study where 500 physicians completed a survey on whether they knew what to do when encountering TIPs, only 20% of the participants reported that they would know which steps to take [13]. Thus, to better screen and identify TIPs, HCCs' knowledge, attitudes, or behavior on TIPs identifiers must increase.

HCCs must be able to communicate effectively with TIPs and survivors, especially for those who may be in crisis and in a hypersensitive state. Using strategic communication skills will allow HCCs to assess TIPs' situation and respond efficiently to their needs. TIPs do not present with clear signs of HT, and they often prefer to conceal their situation for fears instigated by their perpetrators [14]. Poor communication can further traumatize and possibly revictimize TIPs. In addition to these fears, factors such as language barriers, fear of their traffickers, and fear of law enforcement limit TIPs' ability to express themselves to HCCs and reveal their situation [14]. Ineffective communication by HCCs may also contribute to the misidentification of TIPs. Although it is challenging to communicate with TIPs, one way to overcome this issue is to educate HCCs on strategies to facilitate a conversation. During interactions with TIPs, especially those with Stockholm syndrome, who identify with their traffickers, HCCs need to be active listeners without judgment and avoid close-ended questions, creating a safe environment for TIPs to reveal their situation and obtain assistance [5].

### Aim of the Project

The United Nations Global Initiative to Fight Human Trafficking [15] is committed to addressing HI by increasing screening, identification, and treatment of TIPs in healthcare. The aim of this Quality Improvement (QI) project was to examine the effects of an evidence-based educational intervention to increase HCCs' perceptions, knowledge, attitudes, behavior, and communication strategies to increase identification of individuals who are victims of HT and ways of offering assistance.

### Methods

#### Design, Participants, and Setting

This QI project used a comparative pretest-posttest design. The sample consisted of 21 HCCs, specifically APRNs, medical assistants, pharmacy technicians, and front desk assistants. The setting was a mobile health clinic that offers health and wellness screenings to the underserved population.

#### Procedures

Following approval of the study by the Institutional Review Board, recruitment occurred via email and flyers were posted in common areas of the clinic. Interested participants were given the contact information of the Principal Investigator (PI) to discuss the project and the inclusion/exclusion criteria, as well as the elements of informed consent. Upon agreement to participate, informed written consents were obtained via email and survey monkey was used to complete the project's demographic form and the Human Trafficking for Clinicians Survey. Participants' data was identified using an assigned code-number to ensure confidentiality and ensure that no personal identifying information appeared on the pre and post-test survey. The digital data collected from the pre and post-tests were housed in SurveyMonkey and secured on a password encrypted laptop. The post-test survey was completed two weeks following the educational intervention.

#### Intervention

The 2-day educational seminar was delivered virtually given social distancing due to the Coronavirus Disease (COVID) Pandemic. The seminar was conducted using zoom technology and consisted of an interactive educational seminar to promote purposeful participant engagement. Information provided included the prevalence and incidence of HT, its significance in healthcare, common HT identifiers amongst men and women, communication strategies, screening tools, and material regarding interventions/assistance and resources for suspected TIPs.

#### Measures

A demographic form was used to assess the clinician's characteristic, including age, gender, ethnicity, position at the facility, and years of medical experience. The Human Trafficking for Clinicians Survey (HTCS) was developed by the PI following a review evidence-based literature and reviewed by the research team for face validity. The HTCS questions were divided into two categories: HT indicators and communication strategies. The HT indicators category was further divided into four domains: perception, knowledge, attitudes, and behaviors, while the communication strategies category was divided into knowledge, attitudes, and behaviors. The surveys consisted of Likert-type questions with four or five response options.

## Data Analysis

Data from SurveyMonkey were extracted and uploaded to GraphPad Prism version 8.0.0. Descriptive statistics were used to analyze demographic data. Scores on the Human Trafficking for Clinicians Survey were analyzed using a paired t-test, with a significance level of 0.05. to compare mean perception, knowledge, attitudes, and behavior values for each category before and after the intervention.

## Results

### Demographic

The sample consisted of APRNs (28.57%), pharmacy technicians (4.67%), medical assistants (28.57%), front desk assistants (9.52%), and other (28.57%), which were represented by field staff and individuals in patient registration. One hundred percent of the original participants completed the educational intervention and post-test survey. Demographic data between the pre and postintervention surveys were the same with the one exception where a participant changed their years of medical experience in the postintervention survey from 10 to 20 years to having more than 20 years of medical experience.

### HT Indicators

The percentage of participants' responses for each question about their perception, knowledge, attitudes, and behavior of HT indicators are illustrated in (Table 1). The results of the two-tailed paired samples t-test for perception, knowledge, and attitudes was significant based on an alpha value of 0.05,  $p < .0001$  and for behavior,  $p < .001$ , indicating a statistically significant change from pre to post-test scores (Table 2).

HT indicators:			
Participants' perception of human trafficking pre and post-intervention scores			
Question	Pre-intervention	Post-intervention	% change
How many training programs on human trafficking have you attended throughout your medical experience?			
None	10 (47.62%)	0	47.62 ↓
1*	6 (28.57%)	16 (76.19%)	47.62 ↑
3*	3 (14.29%)	3 (14.29%)	0
More than three*	1 (4.76%)	2 (9.52%)	4.76 ↑
I don't know	1 (4.76%)	0	4.76 ↓
Which population group is at risk for human trafficking?			
Everyone	19 (90.48%)	21 (100%)	9.52 ↑
Caucasian	2 (9.52%)	0	9.52 ↓
Black	0	0	0
Hispanic	0	0	0
Asian	0	0	0
I know how to identify and screen for human trafficking when it is suspected.			
Strongly agree*	2 (9.52%)	10 (47.62%)	38.10 ↑
Agree*	11 (52.38%)	11 (52.38%)	0
Undecided	6 (28.57%)	0	0
Disagree	2 (9.52%)	0	0
Strongly disagree	0	0	0
To fit the definition of human trafficking, victims must cross a border.			
Strongly agree	1 (4.76%)	0	4.76 ↓
Agree	2 (9.52%)	0	9.52 ↓
Undecided	1 (4.76%)	0	4.76 ↓
Disagree*	10 (47.62%)	2 (9.52%)	38.10 ↓
Strongly disagree*	7 (33.33%)	19 (90.48%)	57.15 ↑
There is an available Human trafficking screening tool for me to use when trafficking in persons is suspected.			
True*	10 (47.62%)	21 (100%)	52.38 ↑
FALSE	3 (14.29%)	0	14.29 ↓
Maybe	0	0	0
Unsure	8 (38.10%)	0	38.10 ↓
Knowledge of HT indicators pre and post-intervention scores			
Question	Pretest	Posttest	% change
When I think of the term 'trafficking in persons':			
I'm not sure what this means	0	0	0
This term is unclear and confusing to me	2 (9.52%)	0	9.52 ↓
I don't know the difference between victim of HT and trafficking in persons	4 (19.05%)	0	0
Trafficking in persons is the same as human smuggling	10 (47.62%)	0	47.62 ↓
I understand that the term describes the act *	5 (23.81%)	21 (100%)	76.19 ↑

Self-rated level of knowledge about human trafficking indicators.			
Excellent*	19 (90.48%)	21 (100%)	9.52 ↑
Good	2 (9.52%)	0	9.52 ↓
Fair	0	0	0
Poor	0	0	0
I'm not sure	0	0	0
The different forms of human trafficking are:			
I don't know the different forms	2 (9.52%)	0	38.10 ↓
Sex-trafficking only	0	0	0
Labor-trafficking, sex-trafficking, debt-bondage*	9 (42.86%)	21 (100%)	57.14 ↑
Sex-trafficking and labor-trafficking	10 (47.62%)	0	47.62 ↓
I'm not sure what these mean	0	0	0
Physical indicators of human trafficking include: (Circle all that apply).			
Tattoos*	6 (28.57%)	21 (100%)	71.43 ↑
Bruising*	16 (76.19%)	21 (100%)	23.81 ↑
Avoiding eye contact*	16 (76.19%)	21 (100%)	23.81 ↑
Rehearsed responses*	15 (71.43%)	21 (100%)	28.57 ↑
Sexually transmitted infections*	12 (57.14%)	21 (100%)	42.86 ↑
Fractures*	9 (42.86%)	21 (100%)	57.14 ↑
Poor living conditions*	13 (61.90%)	21 (100%)	38.10 ↑
Old scars*	11 (52.38%)	21 (100%)	71.43 ↑
Lacking identity documents*	11 (52.38%)	21 (100%)	71.43 ↑
I don't know the indicators	2 (9.52%)	0	9.52 ↓
Human trafficking is defined as:			
I don't know the definition	0	0	0
Commercial sex act with a person who is not 18 yet	0	0	0
Recruitment of a person for labor and services without force, fraud, or coercion	2 (9.52%)	0	9.52 ↓
Forcing women to be involved with commercial sex acts	1 (4.76%)	0	4.76 ↓
Exploiting a person by force, fraud, or coercion for labor, services, or commercial sex*	18 (85.71%)	21 (100%)	14.29 ↑
Attitudes of human trafficking indicators pre and posttest scores			
Question	Pretest	Posttest	% change
Self-rated level of confidence and readiness to identify a trafficking in persons.			
Excellent*	6 (28.57%)	11 (52.38%)	23.81 ↑
Good*	3 (14.29%)	10 (47.62%)	33.33 ↑
Fair	9 (42.86%)	0	42.86 ↓
Poor	2 (9.52%)	0	9.52 ↓
I'm not sure	1 (4.76%)	0	4.76 ↓
I am comfortable with assessing a person with possible indicators of human trafficking:			
Strongly agree*	5 (23.81%)	11 (52.38%)	28.57 ↑
Agree*	9 (42.86%)	10 (47.62%)	4.76 ↑
Undecided	4 (19.05%)	0	19.05 ↓
Disagree	3 (14.29%)	0	14.29 ↓
Strongly disagree	0	0	0
It is worthwhile to screen patients for human trafficking when it is suspected:			
Strongly agree*	13 (61.90%)	17 (80.95%)	19.05 ↑
Agree*	7 (33.33%)	4 (19.05%)	14.28 ↓
Undecided	1 (4.76%)	0	4.76 ↓
Disagree	0	0	0
Strongly disagree	0	0	0
I feel prepared to ask questions about human trafficking to patients:			
Strongly agree*	8 (38.10%)	11 (52.38%)	14.28 ↑
Agree*	5 (23.81%)	10 (47.62%)	23.81 ↑
Undecided	6 (28.57%)	0	28.57 ↓
Disagree	1 (4.76%)	0	4.76 ↓
Strongly disagree	1 (4.76%)	0	4.76 ↓
I am more sympathetic towards women of domestic servitude than women who are assaulted during prostitution.			
Strongly agree	4 (19.05%)	0	19.05 ↓
Agree	3 (14.29%)	0	14.29 ↓
Undecided	2 (9.52%)	0	9.52 ↓
Disagree*	9 (42.86%)	7 (33.33%)	9.53 ↓
Strongly disagree*	3 (14.29%)	14 (66.67%)	52.38 ↑
Behavior of human trafficking indicators pre- and posttest scores			
Question	Pretest	Posttest	% Change
I have the strategy or skills to further investigate or act on suspicion of human trafficking?			
Yes*	8 (38.10%)	20 (95.24%)	57.14 ↑
No	0	0	0
Maybe	8 (38.10%)	1 (4.76%)	33.34 ↓
Unsure	5 (23.81%)	0	23.81 ↓
I have enough time to ask about human trafficking if I suspect a person?			
Yes*	13 (61.90%)	21 (100%)	38.10 ↑
No	0	0	0
Maybe	6 (28.57%)	0	28.57 ↓
Unsure	2 (9.52%)	0	9.52 ↓

I should call the police immediately if I suspect a person is being trafficked?			
Yes*	15 (71.43%)	1 (4.76%)	66.67 ↓
No	1 (4.76%)	4 (19.05%)	14.29 ↑
Maybe*	3 (14.29%)	16 (76.19%)	61.90 ↑
Unsure	2 (9.52)	0	9.52 ↓
I have suspected that a patient of mine was being trafficked:			
Yes*	4 (19.05%)	9 (42.86%)	23.81 ↑
No	9 (42.86%)	8 (38.10%)	4.76 ↓
Maybe*	2 (9.52%)	4 (19.05%)	9.53 ↓
Unsure	6 (28.57%)	0	28.57 ↓
(Answer question 5 if you answered 'Yes' to question 4) I responded appropriately and alerted the authorities.			
Yes*	4 (36.36%)	3 (23.08%)	13.28 ↓
No	3 (27.27%)	4 (30.77%)	3.59 ↑
Maybe*	3 (27.27%)	5 (38.46%)	11.19 ↑
Unsure	1 (9.09%)	1 (7.69%)	1.40 ↓
Communication Strategies:			
Knowledge of communication strategies pre and posttest scores			
Question	Pretest	Posttest	% Change
I attended a communication skills course			
Yes*	6 (28.57%)	21 (100%)	71.43 ↑
No	12 (57.14%)	0	57.14 ↓
Maybe	2 (9.52%)	0	9.52 ↓
Unsure	1 (4.76%)	0	4.76 ↓
I have received training on communication skills to use when interacting with a trafficking in persons:			
Yes*	6 (28.57%)	21 (100%)	71.43 ↑
No	9 (42.86%)	0	42.86 ↓
Maybe	4 (19.05%)	0	19.05 ↓
Unsure	2 (9.52%)	0	9.52 ↓
Effective communication can be achieved by actively listening and taking turns talking:			
True*	19 (90.48%)	21 (100%)	9.52 ↑
FALSE	0	0	0
Maybe	2 (9.52%)	0	9.52 ↓
Unsure	0	0	0
When human trafficking is suspected, body language plays a big impact in effective communication			
True*	20 (95.24%)	21 (100%)	4.76 ↑
FALSE	0	0	0
Maybe	1 (4.76%)	0	4.76 ↓
Unsure	0	0	0
Trafficking in persons are easy to speak with and will reveal their true living situation directly			
TRUE	8 (38.10%)	0	38.10 ↓
False*	5 (23.81%)	17 (80.95%)	57.14 ↑
Maybe	6 (28.57%)	4 (19.05%)	9.52 ↓
Unsure	2 (9.52%)	0	9.52 ↓
Attitudes of communication strategies pre and posttest scores			
Question	Pretest	Posttest	% Change
I am comfortable asking a person if they were in danger from an employer.			
Yes*	15 (71.43%)	21 (100%)	28.57 ↑
No	1 (4.76%)	0	4.76 ↓
Maybe	5 (23.81%)	0	23.81 ↓
Unsure	0	0	0
I am more comfortable assessing patients who speak English or my native language.			
Yes	16 (76.19%)	3 (14.29%)	61.90 ↓
No*	1 (4.76%)	5 (23.81%)	19.05 ↑
Maybe	2 (9.52%)	13 (61.90%)	52.38 ↑
Unsure	2 (9.52%)	0	9.52 ↓
I feel certain communication skills is needed to interact with a possible trafficking in persons.			
True*	18 (85.71%)	21 (100%)	14.29 ↑
FALSE	0	0	0
Maybe	1 (4.76%)	0	4.76 ↓
Unsure	2 (9.52%)	0	9.52 ↓
Body language can affect a patient's response.			
Never	0	0	0
Not often	3 (14.29%)	0	14.29 ↓
Sometimes	6 (28.57%)	0	28.57 ↓
Often*	9 (42.86%)	19 (90.48%)	47.62 ↑
Always	3 (14.29%)	2 (9.52%)	4.77 ↓
Learning how to communicate with a trafficking in persons is important			
Yes*	21 (100%)	21 (100%)	0
No	0	0	0
Maybe	0	0	0
Unsure	0	0	0



Behavior of communication strategies pre and posttest scores			
Question	Pretest	Posttest	% Change
When I listen to what a patient is saying, I predict what their conclusion will be.			
Never*	4 (19.05%)	8 (38.10%)	19.05 ↑
Not often*	4 (19.05%)	13 (61.90%)	42.85 ↑
Sometimes	10 (47.62%)	0	47.62 ↓
Often	3 (14.29%)	0	14.29 ↓
Always	0	0	0
When I am not sure what someone is saying to me, I stop asking questions?			
Never*	9 (42.86%)	14 (66.67%)	23.81 ↑
Not often*	6 (28.57%)	7 (33.33%)	4.76 ↑
Sometimes	2 (9.52%)	0	9.52 ↓
Often	3 (14.29%)	0	14.29 ↓
Always	1 (4.76%)	0	4.76 ↓
I become impatient with patients who do not express their thoughts clearly.			
Never*	11 (52.38%)	12 (71.43%)	19.05 ↑
Not often*	4 (19.05%)	6 (28.57%)	9.52 ↑
Sometimes	3 (14.29%)	0	14.29 ↓
Often	3 (14.29%)	0	14.29 ↓
Always	0	0	0
When I ask questions, they are open-ended and cannot be answered with a 'yes' or 'no' response.			
Never	3 (14.29%)	0	14.29 ↓
Not often	2 (9.52%)	1 (4.76%)	4.76 ↓
Sometimes	8 (38.10%)	0	38.10 ↓
Often*	7 (33.33%)	17 (80.95%)	47.63 ↑
Always*	1 (4.76%)	3 (14.29%)	4.53 ↑
When I suspect a trafficking in persons, I know the communication strategies needed to interact with one.			
Yes*	10 (47.62%)	21 (100%)	52.38 ↑
No	2 (9.52%)	0	9.52 ↓
Maybe	6 (28.57%)	0	28.57 ↓
Unsure	3 (14.29%)	0	14.29 ↓
Note. % Change = Percent Change, * = The correct answer choice, ↑ = Increase in percent change, ↓ = Decrease in percent change.			

**Table 1:** Participants' Responses to Questions about HT indicators and Communication Strategies.

Perception						
Pre-intervention		Post-intervention				
M	SD	M	SD	t	p	d
64.76	22.72	100	0	7.1075	< .0001	2.19
Knowledge						
Pre-intervention		Post-intervention				
M	SD	M	SD	t	p	d
45.71	19.12	100	0	13.0084	< .0001	4.01
Attitudes						
Pre-intervention		Post-intervention				
M	SD	M	SD	t	p	d
64.76	28.92	100	0	5.5842	< .0001	1.72
Behavior						
Pre-intervention		Post-intervention				
M	SD	M	SD	t	p	d
36.19	29.41	78.1	18.87	-6.34	< .001	1.38
Note. N = 21. Degrees of Freedom for the t-statistic = 20. M represents Mean. SD represents Standard Deviation. d represents Cohen's d.						

**Table 2:** Two-Tailed Paired Samples t-Test for the Difference Between Perception, Knowledge, Attitudes, and Behavior of HT Pre-Intervention and Post-Intervention Scores.

### Communication Strategies

The percentage of participants’ responses for each question about their knowledge, attitudes, and behavior of communication strategies are illustrated in (Table 1). The results of the two-tailed paired samples t-test for knowledge and attitudes related to communication strategies were significant based on an alpha value of 0.05,  $p < .001$ , as well as for behavior,  $p < .001$  (Table 3). These findings indicate the statistically significant difference in scores related to communication skills pre and post educational intervention.

Knowledge						
Pre-intervention		Post-intervention				
M	SD	M	SD	t	p	d
53.33	24.77	96.19	8.05	-7.94	< .001	1.73
Attitudes						
Pre-intervention		Post-intervention				
M	SD	M	SD	t	p	d
63.81	13.59	84.76	8.73	-6.49	< .001	1.42
Behavior						
Pre-intervention		Post-intervention				
M	SD	M	SD	t	p	d
52.38	25.67	100	0	8.5	< .0001	2.62
Note. N = 21. Degrees of Freedom for the t-statistic = 20. M represents Mean. SD represents Standard Deviation. d represents Cohen's d.						

**Table 3:** Two-Tailed Paired Samples t-Test for the Difference between Knowledge, Attitudes, and Behavior of Communication Strategies Pre-Intervention and Post-Intervention Scores.

### Discussion

This QI project revealed the impact of an evidence-based educational seminar on clinician’s perception, knowledge, attitudes, and beliefs on HT indicators. The results revealed statistically significant increases in the mean post-test scores in perception, knowledge, attitudes, and behavior of HT indicators. These results align with multiple studies that indicate that HCCs would benefit from training on HT indicators, as well as clear guidance on referral and support options for TIPs [10,16,17-20]. The authors of this paper emphasize the importance of improving HCCs’ skills and knowledge that focus on the identification and needs of TIPs, as both skill and knowledge contribute to HCCs’ readiness to act and intervene. Additional research is needed, specifically implementing guidelines in primary care and acute care settings to positively impact and refine HCCs’ perceptions, knowledge, attitudes, and behavior in screening, identifying, and offering assistance to TIPs.

The impact of an evidence-based educational seminar on HCCs’ knowledge, attitudes, and behavior related to communication strategies when interacting with TIPs were also highlighted by the increases in the mean post-test scores in knowledge and attitudes of communication strategies, as well as by the statistically significant change in behavior scores. These study findings are also congruent with the literature that suggests HCCs require a baseline understanding of communication styles and trauma-informed care when interacting with TIPs [5,21,22] [8]. In addition, providing HCCs with training on communication methods to utilize when interacting with potential TIPs will better prepare them to screen and recognize TIPs and respond to victims. Although several studies were identified to support HCCs’ knowledge and behavior on communication strategies, no other studies identified that have evaluated changes in attitudes on HT communication strategies. Therefore, future research should be conducted.

### Limitations

The project consisted of a small and convenience sample of HCCs from a single healthcare clinic, which limits generalizability to other healthcare groups or settings. Although all participants reported their perception, knowledge, attitudes, and behaviors on HT, the impact of researcher and participant factors (e.g., social desirability) may be an influential factor. Moreover, as the Human Trafficking for Clinicians Survey was developed by the PI, further research must be conducted to establish the reliability and validity of the survey. Lastly, the educational intervention was time limited. It is probable that if more time had been provided during the educational intervention to deliver more extensive content, the participants might have exhibited greater results in terms of actual knowledge of HT.

### Implications for Research

HCCs are in a unique position to intervene on behalf of TIPs while they are still being held captive. In some cases, TIPs may not self-identify themselves as victims; therefore, it is imperative for HCCs to observe for signs and symptoms of HT [16]. Seven previous studies were identified in the literature that supported this QI project’s findings. There was a sufficient amount of research that examined the impact of HT training for HCCs in healthcare practices [5,10,16-20]. Yet, this project adds to the growth of this knowledge base by providing valuable information in support of the use of an educational training on communication strategies to use when interacting with TIPs. The goal of communication style training is to equip HCCs with the skills necessary to build a trusting connection with TIPs, which encourages TIPs to reveal their trafficking situation. Additional research is therefore recommended to examine how communication training affects HCCs’ knowledge, attitudes, and behavior when it comes to identifying and assisting TIPs.



**Implications for APRNs**

APRNs are uniquely-positioned to identify suspected TIPs in the healthcare setting, therefore, it is vital that APRNs and other allied professionals are equipped with the knowledge and assessment skills so they can protect TIPs. Further research on a larger scale over a longer period should be conducted to determine the efficacy of providing HT education for APRNs and other interdisciplinary professions, specifically on HT indicators and communication strategies when interacting with TIPs. This project could be replicated in larger healthcare facilities, such as hospitals and primary, pediatric, and urgent-care clinics. (Table 4) discusses the key points from the Medical Assessment Tool [23] on what should be conducted when encountering suspected TIPs. The key points from the Medical Assessment Tool is structured to guide nurse’s and APRN’s actions when interacting with potential TIPs. Agencies and accreditation bodies, such as the Accreditation Commission for Education in Nursing, should build a set of core competencies related to perception, knowledge, attitudes, and behavior in HT indicators and communication strategies with TIPs. APRNs and other clinicians can contribute to the efforts to break the HT cycle by advocating for policies that support HT research and training. Based on the review of literature and the findings of the QI project, (Table 5) presents recommendations for guiding the development of evidence-based practices in health care and educational settings.

1. If possible, get patient alone to discuss questions with a social worker or medical professional. Ask the following questions:	Have you ever had to do job that you didn't want to do?
	Have you ever been forced to have sex to pay off a debt?
	Does anyone hold your identity documents for you? Why?
	Have you been afraid to leave your work because of physical abuse or threats from your employer?
	Have you ever been misled about the type of work you'd be doing?
	Were you ever threatened with deportation or jail if you tried to leave your situation?
1a. Yes to any of the questions:	Call National Human Trafficking Resource Center (NHTRC) Hotline 1-888-3737-888 (24/7 and access to 170 languages). Ask for assistance with assessment questions and next steps.
1b. No to any of the questions:	Refer to social services as applicable.
2. After calling Hotline, conduct assessment of potential danger:	Ask the Hotline to assist in assessing the level of danger.
	Be aware of surroundings and environment
	Questions to Consider: Is the trafficker present? (i.e. in the waiting room/outside) What will happen if the patient does not return to the trafficker? Does the patient believe he/she or a family member is in danger? Is the patient a minor?
2a. If patient is in danger:	The Hotline can assist in determining next steps.
	You may need to involve law enforcement for victim safety.
Note. From “Medical Assessment Tool, “by Polaris Project, 2010 [23].	

**Table 4:** Tips to Follow When Encountering Potential TIPs.

Implement trauma-informed and participatory communication methods to TIPs identification and outreach. Clinicians should be kept up to date on the development of these methods. Enhancing TIP’s agency and empowering them may open up new possibilities that recognizes and accommodates the impact of trauma on TIP’s lives.
There is no single profile that identifies TIPs, therefore it is important to be kept updated on TIP’s key indicators.
Identify resources in the community. Collaborating with multidisciplinary teams and community-based organizations can help improve the identification and treatment of TIPs by sharing strategies, recommendations, and promising practices.
Because HT victims come from a diverse range of cultures, cultural concerns must be considered when assisting them. TIP’s thought, communication, language, beliefs, values, practices, customs, rituals, roles, and connections should all be taken into account.

**Table 5:** Proposed Training Approach Recommendations.

**Conclusion**

Primary and secondary prevention efforts can be used to overcome key vulnerabilities for HT victims. In addition, community stakeholders can potentially reduce trafficking by collaborating with other stakeholders to foster community resistance and resilience [24,25]. In healthcare, prevention strategies include preparing HCCs to identify patients at risk for HT and using effective communication strategies to facilitate an open discussion. In the hospital or any other clinical settings, there’s a high probability of encountering a trafficked individual. TIPs can be discovered and provided with the appropriate aid by implementing a QI intervention, which focuses on the interprofessional education of APRNs, RNs, physicians, social workers, psychologists, and law enforcement to identify and support TIPS, who through shared efforts can intervene to break the cycle of HT and abuse.

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## Declarations

Sharda Ram developed the instrument, performed all the analyses, and wrote the initial draft of the manuscript. Sharda Ram, Deana Goldin, and Deborah Witt Sherman contributed to the development of the manuscript, developed the research project, collected chart data, and revised the manuscript for final submission.

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