Spring 5-2021

A Quality Improvement Project to Increase Intimate Partner Violence Screening on College Campuses

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Date of Submission: May 10, 2021

Acknowledgments

I wish to express special thanks to my committee for their continued support and encouragement: Dr. Josie Doss, my committee chair, Dr. Krysatl Canady, and Karen Tomlinson, committee members. Dr. Doss was my champion through many setbacks. I offer my sincere appreciation for the learning opportunities I had.

A special thank you goes to my biggest supporter, Jerry Murck, he believed in me before I believed in myself. I could not have completed this endeavor without the support of my loving family, from grocery shopping and meals sent to a listening ear. I owe you all a debt of gratitude.

Abstract

Background: Sexual assault on college campuses can be a life-changing event and goes unreported 80% of the time. Women are not screened for intimate partner violence (IPV) regularly when seen in university student health settings. Student health settings on college campuses can fill this gap by routine screening for intimate partner violence.

Purpose: This quality improvement project aimed to increase intimate partner violence screening rates with the implementation of an evidence-based intimate partner violence-screening tool and healthcare provider training.

Project method: A retrospective chart view was conducted before and after implementing the Humiliation, Rape, Anger, and Kick (HARK) evidenced-based IPV tool at a university student health center in Georgia. Healthcare providers working in student health completed the Physician Readiness to Manage Intimate Partner Violence Survey (PREMIS) pre and post IPV educational session.

Findings: Intimate partner violence screening rates pre-implementation of the HARK screening tool was 2.6% (N=303). Intimate partner violence screening rates post-implementation of the HARK screening tool was 95.7% (N=185). Results for the knowledge subscale of the PREMIS tool (Mdn = 27.50), $z = -1.342$, $p > .005$.

Conclusion: These findings support the use of an evidence-based IPV screening tool to increase rates of screening. Additional measures may be needed to enhance provider knowledge regarding IPV.

Keywords: intimate partner violence screening, college students, college health services, college health clinic, domestic violence, screening tools

Table of Contents

A Quality Improvement Project to Increase Intimate Partner Violence Screening on College Campuses

Sexual assault or rape on college campuses goes unreported 80% of the time (Moore & Baker, 2018; Sinozich & Langton, December 2014). Approximately 20% of female college students experience some form of intimate partner violence (IPV). Women are not screened for intimate partner violence regularly when seen in university student health centers (Demers et al., 2017; Sharpless et al., 2018; Sutherland & Hutchinson, 2018; (*2018 NCVRW Resource Guide: Intimate Partner Violence Fact Sheet*, 2018). Females ages 18 to 24 have the highest rape and sexual assault rates among all women (Sinozich & Langton, 2014).

Negative consequences of intimate partner violence may be reduced with early identification and intervention and potentially prevent future IPV experiences (CDC, 2017). Screening for intimate partner violence is fundamental for identifying those affected by IPV. Screening is the first step to early intervention. University-based Student Health Centers sees female students for both acute care and well women examinations. Student Health settings on university campuses represent a perfect vehicle for screening IPV and referral to support services.

Problem Statement

Intimate partner violence is physical violence, sexual violence, stalking, or psychological harm by a current or former partner or spouse. Psychological harm includes cyber-stalking, intimidation, and bullying through social media sites, text messaging, and email (Centers for Disease Control and Prevention, 2019; Sargent et al., 2016). Identification of students that experience IPV may increase support and treatment. According to Wolfard -Clevenger (2015) and Sargent (2016), IPV victims are at greater risk for depression and suicide. The risk of

depression and thoughts of suicide impact students' college experience. Women are more likely to experience an overall decline in academic performance, which raises their risk of being unsuccessful or dropping out of college Tsui & Santamaria, 2015). Victims of IPV on college campuses often do not know where or how to report the assault. Screening all female patients at University Student Health settings would identify victims of abuse not otherwise captured.

Universal screening of all female patients would destigmatize reporting and make patients aware that University Student Health Centers would be an option for reporting should they have a need. The current national clinical practice guidelines by the United States Preventative Services Task Force (USPSTF) recommends screening all women of childbearing age for Intimate partner violence: Grade B (Moyer, 2013). Grade B recommendation reflects a high certainty that the net benefit is moderate to substantial (n.d.).

Gap in Practice

The Principle Investigator (PI) conducted a needs assessment at the Student Health Services in a public university in the Southeastern United States. This health center did not use a standardized, evidence-based intimate partner violence screening tool. The current routine care assesses intimate partner violence for females during well-women examinations by asking two questions on a self-report history form: 1) do you feel safe at home, and 2) have you experienced domestic violence? It is up to the individual practitioner to investigate answers to these questions or query unanswered questions. Intimate partner violence may remain undetected; students may not feel comfortable disclosing this information on a history form. Lack of asking about specific behaviors may lead to unaccounted episodes of IPV. Practitioners determine if a patient has been a victim of intimate partner violence and refer to support services based on patient need.

The absence of an evidence-based IPV screening tool and potential inconsistent referral to support services identifies a need in Student Health Centers for an evidenced-based IPV screening tool. Using a standardized IPV screening tool would give practitioners at Student Health Services and opportunity to screen all women without bias or misinterpretation. All practitioners would ask the same questions to all female students and students that screened positive for IPV to support services. Using standardized, valid, and reliable, evidence-based screening tools make screening consistent and helps identify IPV victims (Arkins et al., 2016).

A gap in practice exists between the current routine care at the University Student Health Service (USHS) and national clinical practice guidelines. This quality improvement project will help close the gap in practice by screening all female patients for IPV versus patients being evaluated for yearly well-women exams. Healthcare provider education on IPV in college settings will further reduce the barriers to screening.

Project Aims and Clinical Questions

The purpose of this Doctor of Nursing Practice (DNP) translational quality improvement project was to address the following PICOT question. Does implementing an evidence-based intimate partner screening tool and healthcare provider training increase rates of screening for IPV compared to the current standard of care at SHS. This project trained healthcare professionals at the Student Health Center to use and score the HARK IPV screening tool. The education training session for HCP included information on IPV occurrence rates on college campuses, best practice interview techniques, common barriers to reporting and screening, and a list of community referral resources. The PI offered the educational training to all Healthcare providers on site.

Project Aims

Aim One

Increase rates of screening for Intimate Partner Violence using the HARK IPV screening tool.

Aim Two

Increase rates of patient referral to support services if patients screen positive for Intimate Partner Violence

Aim Three

Use The Physician Readiness to Manage Intimate Partner Violence Survey (PREMIS) to identify healthcare provider IPV knowledge pre and post-educational presentation.

Clinical Questions

- Will IPV screening rates increase following the implementation of the evidence-based HARK IPV screening tool?
- Will healthcare providers refer all students that screened positive to support services?
- Does health care provider knowledge of IPV increase after an educational session on IPV?

Review of Literature

Search Strategy

Electronic searches were conducted in four databases, including CINHAL complete, MEDLINE, PsycINFO, and The Cochrane Library. Reference lists of all included papers were also searched for potentially relevant articles. The search terms for all databases included intimate partner violence, domestic violence, screening tools screening, assessment tools, college students, college-age, student health centers, and student health services. Boolean search words

included AND and OR in multiple combinations for all search terms. The parameters included English language, years 2014-2019, female, U.S.A., and peer-reviewed journals. Exclusion criteria used the Boolean terms NOT child abuse OR child neglect.

Selection

Ninety-eight articles met the search criteria. Of these, 40 were eliminated after scanning the titles because they involved countries outside of the United States or were acute care studies. The remaining 58 articles were rapidly appraised for inclusion. If the article's population included veterans, military, or obstetrics, they were eliminated: this left 40 items. These 40 articles were appraised for research design and study quality; another ten were eliminated for being qualitative or low-quality. The remaining 30 studies formed the literature synthesis. The PRISMA diagram outlining the selection process is included in Appendix A.

Prevalence of IPV Screening

Current research reflects that intimate partner violence on college campuses is underreported (Sutherland & Hutchinson, 2018). The screening rates for intimate partner violence in college health settings range from 11-15% (Sutherland & Hutchinson, 2018). A 2016 systematic review found that routine screening rates in family practice settings varied from 2% to 50% of HCP's who almost always screen for IPV (Alvarez et al., 2016). Hamberger et al., 2015 found less than 2% of females were asked about intimate partner violence in family practice settings. Utilizing an evidence-based intimate partner violence screening tool may increase the screening rates (Sherman et al., 2017; Ghandour et al., 2015; Moscou, 2015; Wong et al., 2018). Identification of victims is key to increasing the opportunity for intervention. Studies indicate an increase in screening rates after implementing an evidence-based screening tool (Crane et al., 2017; Day et al., 2015; Moscou, 2015; Wong et al., 2018; Zachor et al.,

2018). The screening rates for IPV in a study by Day et al. 2016 went from 14.6% to 80.6% after implementing an evidence-based screening tool. In contrast, a study by Moscou (2015) found that an original increase in intimate partner violence screening after implementing an evidence-based screening tool did not continue over time and suggested that electronic health record prompts may be needed to sustain the increase. Studies by Day (2015) and Zachor (2018) indicate that provider training before implementing an evidence-based screening tool may help support higher screening rates.

Barriers to Screening

Health care providers report three common barriers to screening, including time constraints, lack of resources, and provider discomfort related to asking detailed, intimate partner violence questions (Zachor et al., 2018; Sutherland & Hutchinson, 2018; Moscou, 2015). Many IPV screening tools are time-intensive, and with the brief amount of time providers spend with patients, it is often unrealistic to screen all female patients of reproductive age. Shorter screening tools would remove this barrier. Lack of resources can be addressed by having a list of referral agencies and emergency hotlines readily available. Other reported barriers include provider discomfort. Some health care providers did not screen for intimate partner violence because they were not sure how to approach the subject and had concerns with offending patients; other providers believed that referrals would not lead to a change in an abusive relationship (Sherman, 2015). In a qualitative study by Aluko 2015, 93% of medicals students stated IPV training would make it easier for them to screen patients effectively, and 40% of medical students said having a standardized IPV questionnaire would facilitate the screening process(Aluko et al., 2015). Provider training on communication techniques, nowledge of referral resources, and brief IPV screening tools would reduce IPV screening barriers.

Intimate Partner Violence Implications

Intimate partner violence in college can have wide-reaching short- and long-term implications for physical, psychological, and academic health. Immediate consequences can include physical and mental trauma and an increased risk for pregnancy and sexually transmitted infections (*Health Effects of Violence*, 2017). In 2015, 16.8% of homicides nationally listed IPV as a contributing factor(*Surveillance for Violent Deaths — National Violent Death REPORTING...*, 2018). Long-term effects can include chronic physical and mental health issues and an elevated risk for suicide (Dicola & Spaar, 2016). Humiliation, fear, and psychological harm may lead to post-traumatic stress disorder (PTSD) or depression(*Risk and Protective Factors|intimate Partner Violence|violence Prevention|injury Center|cdc*, 2020). Victims who are in an abusive relationship suffer a higher likelihood of being a victim of homicide. Domestic violence is responsible for one in seven homicides worldwide. (Day et al., 2015). Some females develop high-risk behaviors to cope, such as binge drinking, drugs, or risky sexual behaviors (Moscou, 2015). Typically, student victims' academic performance declines, leading them to drop out of college (Tsui & Santamaria, 2015; Wolford-Clevenger et al., 2015).

Barriers to Reporting

Factors that impact the reporting or abuse include embarrassment, fear of retribution, and feelings of shame or self-blame (Cho & Huang, 2017; Demers et al., 2017; Moore & Baker, 2018). Female victims often feel they will get into trouble with parents, the school, or their abusers if they report intimate partner violence. According to Cho (2017) and Demers (2017), victims of violence often don't know who they can report the assault. Instead of making a formal complaint to campus police, health care providers, or counselors, many victims report informally to a friend or family member. "Those that don't seek help are often invisible to those that are in a

position to help" (Cho & Huang, 2017, p. 3). Victims of abuse often do not disclose unless the violent act is so egregious that it takes them to the hospital (Cho & Huang, 2017; Sutherland & Hutchinson, 2018; Svavarsdottir & Orlygsdottir, 2015).

Provider Training

Healthcare providers receive varying degrees of training on Intimate Partner Violence in their educational programs. An increase in intimate partner violence screening occurred when providers received communication and skills training before implementing screening tools. (Day et al., 2015; Zachor et al., 2018). Zachor et al. 2018 compared provider communications skills training (CS) using simulation versus a standard knowledge-based (ST) education session with a control group. The findings suggest little difference between training modalities, CS (9.8%) vs. ST (12.3%), P=0.74. However, there was an increase in IPV discussion after both training types. Didactic training sessions had slightly higher satisfaction with HCP than simulation-based training. Findings suggest the vital importance of provider training on sensitive topics, in addition to the implementation of an evidence-based screening tool.

Theoretical Model

Conceptual Framework

This quality improvement project used RE-AIM as a framework for the process change (Glasgow et al., 2019). RE-AIM is a model designed to improve the adoption and implementation of effective evidence-based interventions. The five tenets of RE-AIM are Reach, Effectiveness, Adoption, Implementation, and Maintenance. Reach relates to the target population. Who would be affected by the implementation of a new process? In this project, the target population consists of health care providers utilizing a new evidence-based practice guideline to screen for intimate partner violence. Effectiveness refers to the impact or the change

that occurs. The modification or impact that arises can be either positive or negative effects of the intervention on healthcare providers, the staff responsible for patient charts, and then screened and referred students. Adoption encompasses the number or proportion of agents willing to adopt the intervention among health care providers and staff. Implementation includes the setting of the process change and the interventions needed to make the change process happen. Implementation included education for the team regarding why change is occurring and the need for the HARK screening tools to be included in all-female patient charts. The final step in the model is maintenance. Is the process change sustainable, and will it be a long-term protocol for the institution (Glasgow et al., 2019). Appendix B.

Project Design

Setting

This quality improvement project was conducted in the Student Health Services (SHS) department of a public university in Georgia. Student Health Services are available to all students that seek care and have paid a student health fee. The total student population of all four campuses in the University system is approximately 19,000. The campus where the project took place has a student body population of about 7,300.

Student Health Services sees students for no-cost or low-cost acute care health needs, well-woman examinations, and sports physicals. The SHS staff includes a physician's assistant who is the director, two full-time nurse practitioners, one part-time nurse practitioner who concentrates on women's health, and a collaborating physician who works one day a week. Support staff includes two front desk staff and three LPN's. Each healthcare provider (HCP) sees between 16-30 students a day. The average number of female patients seen in a month was 300 prior to Covid 19 guideline restrictions. At the beginning of the quality improvement project,

patients were seen on a walk-in basis except for physicals or well-woman appointments. During the project's implantation phase, SHS made changes to accommodate patients safely during the Covid 19 pandemic. All patients required an appointment leading to a reduction in overall patients seen monthly. The average number of female patients examined dropped to an average of 190 monthly.

Resources

The resources needed for this project included access to the charts belonging to females seen in SHS, the HARK IPV screening tool, the PREMIS survey, and contact information for healthcare providers that work at SHS.

Recruitment and Sampling Plan

Recruiting occurred from a convenience sample of all currently employed healthcare providers at SHS (N=7). All healthcare providers employed at SHS at the time of the project were asked to participate in the study. This was the only inclusion criteria. All healthcare providers at SHS were informed of the practice change and provided details of the project before being asked to participate in the PREMIS survey. Three HCP consented to participate in the survey portion of the project. The PREMIS survey was conducted after informed consent was received and before an educational presentation on IPV. The educational presentation was offered to all HCP regardless of their participation in the PREMIS survey.

The principal investigator conducted a retrospective chart review at two points in time. The first was on all female patients seen from February 1, 2020, to February 28, 2020, N= 303. The second was from January 11, 2021, to February 5, 2021, N=185.

Sources of Data

The two data sources that information was obtained from were the Physician Readiness to Manage Intimate Partner Violence Survey (PREMIS) and a retrospective female patient chart review. The chart review and PREMIS data were abstracted by hand. The principal investigator conducted chart reviews for the project before and after implementing the HARK IPV screening tool. PREMIS data were gathered pre and post-educational sessions.

Measurement Tools

Humiliation, Afraid, Rape, Kick (HARK). The evidence-based intimate partner violence screening tool utilized in this project is the Humiliate, Afraid, Rape, Kick (HARK) questionnaire (Sohal et al., 2007). The tool was developed for use in primary care settings from the Abuse Assessment Screen (Wiist & McFarlane, 1999). The HARK questionnaire was compared to a 30-item Composite Abuse Scale (CAS) questionnaire to determine validity. It is a 4-item questionnaire with answer choices being either yes or no. The HARK tool is scored on a 0-4 point scale. Any score ≥ 1 is a positive screening. The short questionnaire makes it possible to complete the assessment in a few minutes and quickly determine whether a patient screens positive or negative for intimate partner violence. It is a reliable and valid tool based on multiple studies (Arkins et al., 2016; Clark et al., 2019; Crane et al., 2017) and encompasses the three tenets of intimate partner violence, physical violence, sexual violence, and psychological abuse. Multiple studies have effectively used the HARK tool with minor adaptions (Iverson et al., 2017; Kimerling et al., 2016; Swailes et al., 2016). The tool's adaptations included not only a partner or ex-partner but also someone you are currently dating or did date. The Swailes et al. 2016 study also asked the patient about lifetime abuse, not just abuse in the past year. All of the previously mentioned studies maintained strong internal consistency. The HARK tool has strong internal

consistency (Cronbach's alpha = 0.90) and a specificity of 95% and a sensitivity of 81%. The HARK tool was compared to The Composite Abuse Scale (CAS), a 30-item reliable and valid tool. The CAS internal reliability is .90 (Sohal et al., 2007). Table 1

Table 1

HARK questions

Humiliation, Afraid, Rape, Kick (HARK) Tool
H Humiliation: Within the last year, have you been humiliated or emotionally abused in other ways by your partner or ex-partner?
A Afraid: Within the last year, have you been afraid of your partner or ex-partner?
R Rape: Within the last year, have you been raped or forced to have any kind of sexual activity by your partner or ex-partner?
K Kick: Within the last year, have you been kicked, hit, slapped, or otherwise physically hurt by your partner or ex-partner?

Note. One point is given for every yes answer.

Physician Readiness to Manage Intimate Partner Violence Survey (PREMIS). The PREMIS tool was developed to measure how well HCP's were prepared to manage IPV (Short et al., 2006). It is a 67-item questionnaire consisting of four categories. The categories include Background, Knowledge, Opinions, and Practice issues. The Background section solicits information pertaining to the type, amount, and perceived effectiveness of prior IPV training. Within this section, two questions contain items related to perceived knowledge and perceived preparation. The Background subscale includes Perceived Preparation and Perceived Knowledge. Perceived knowledge consists of 12 items that ask respondents to rate how prepared they feel about working with IPV victims from 1 (not prepared) to 7 (well-prepared).

The internal consistency of this scale was 0.959. The Perceived Knowledge section asks respondents to rate how much they felt they knew about IPV on a scale from 1 (nothing) to 7 (very much). This scale demonstrated an internal consistency of 0.963. The Knowledge subscale contains seven multiple-choice questions and 11 true and false questions. Content validity was demonstrated based on a review of several content experts. This demonstrated an internal consistency of 0.959. The opinion section contained six subscales with a Cronbach alpha of 0.69-0.85. The last area, practice issues, has 13 survey items asking specific qualities of the HCP's practice. Questions ask if there are in-house IPV protocols, IPV educational material easily accessible to patients, a camera available to document injuries, are there adequate referral resources available, and in what situation do physicians screen for IPV? The practice issues scale was based on the sum of appropriate responses. It showed a significant correlation between scores on practice issues, all background scales, actual knowledge, and opinion scales. This instrument was effectively used to measure background and actual knowledge in a study measuring IPV training effectiveness for Greek general practitioners and residents in general practice (Papadakaki et al., 2013). One subscale of the PREMIS survey, Knowledge, was used in this project to evaluate a change in knowledge pre and post educational session.

Procedures

Implementing an evidence-based IPV screening tool and screening all female patients is the principal practice change. All female patients coming into SHS seeking care were screened using the HARK IPV screening tool. Male students were excluded from this quality improvement project since there are no national guidelines that recommend intimate partner violence screening for that population. However, the HARK tool has been used in research

studies that included males in the population and yielded valid and reliable statistics. This tool could be used for all patient evaluations in the future should guidelines change.

All SHS healthcare providers were offered an educational presentation on IPV on college campuses. The academic training session was held multiple times to ensure attendance. The presentation was conducted by videoconference due to Covid 19 social distance guideline restrictions. The content was based on the CDC's guidelines (CDC, 2017), the National Coalition Against Domestic Violence (*Ncadv | National Coalition Against Domestic Violence*, n.d.), Futures without Violence (*Futures Without Violence*, 2020), and the National Health Resource Center on Domestic Violence (*National Resource Center on Domestic Violence | National Resource Center on Domestic Violence*, n.d.). The presentation objectives were;

- Describe Intimate Partner Violence (IPV) statistics on college campuses,
- Define intimate partner violence,
- Identify academic and health risks of IPV,
- Discuss barriers to reporting and screening,
- Manage interview techniques,
- Describe HARK IPV tool,
- Assess available resources to support victims of intimate partner violence.

The process change also included adding the HARK screening tool to the top of all female patient charts. This task was done by the licensed practical nurses who complete the patient's triage information or front office staff as a reminder for health care providers to screen all female patients.

The next step in the process requires the healthcare providers to assess patients for intimate partner violence and refer them to further resources if they screen positive. Referral

resources were available to HCP for students that screened positive for IPV. A written list of referral resources was included in the educational session.

IRB Approval

Approval was granted from the IRB of both the PI's college campus and the university where the quality improvement project took place. There were minimal risks to human subjects involved with the quality improvement project. Informed consent was obtained from healthcare provider participants prior to the pre-educational PREMIS survey sent to all SHS healthcare providers. Only those consenting to participate completed the PREMIS survey. Retrospective chart audits were conducted to gather data on who was screened for intimate partner violence. All patient information was de-identified. Participating healthcare providers did not encounter any additional stress or physical, psychological, social, or legal risks beyond patient care's normal risks. Students that screened positive for IPV had readily available referrals for counseling.

Data Security

Data was stored in a locked drawer in the Principal Investigator's work office. The paper chart audit was conducted on-site without gathering identifying information. The primary investigator will be the only person who has access to the data as a whole. The PI's DNP committee members had need-to-know access for statistical analysis. The data was collected and stored on a laptop computer with a 10-digit password, using a password-protected Excel spreadsheet. The data will be saved for five years and then destroyed.

Timeline

I. A retrospective patient chart review was conducted from February 1 to February 28, 2020, on female patients seen at Student Health Services main campus over four weeks of February 2020. The following data was extracted by hand from the chart.
    a. Was the patient screened for intimate partner violence? Yes or No
    b. If the patient screened positive for IPV, was the patient referred to support services? Yes or No
    c. Patient age

II. The PREMIS (See Instruments) survey was completed by consenting Health Care Providers (HCP) during the weeks of September 4, 2020-September 18, 2020.

III. An Intimate Partner Violence educational session for Health Care Providers took place in multiple sessions between October 5, 2020-October 18, 2020, for HCP convenience. It consisted of a 30-minute presentation on IPV statistics, barriers to screening and patient reporting, and interview and communication techniques. The educational session was offered to all HCP regardless of their participation in the PREMIS Survey.

IV. During the same timeframe, October 5, 2020-October 18, 2020, that the HCP had their educational session, Student Health Service staff were instructed on inserting the HARK Intimate Partner Screening tool (See Measures) into paper charts

V. Implementation of the Hark tool started on October 26, 2020. A retrospective female patient chart review was conducted post-implementation from February 8, 2021, through February 15, 2021, on an all-female patient seen over four weeks from January 11 through February 8, 2021.
    a. Was the patient screened for IPV?

b. If the patient screened positive for intimate partner violence, was the patient referred to a support service?

c. Patient age

VI. The post-implementation PREMIS survey was completed by participating Health Care Providers from December 2, 2020, through December 8, 2020.

Data Analysis

Descriptive statistics were used to analyze inmate partner violence screening rates and referrals from retrospective chart reviews. Charts were reviewed to evaluate whether HCP's screened female patients for IPV, yes or no. If a patient screened positive for IPV were patients referred to support services, yes or no. Frequencies and percentages were calculated for these data points. The demographic data abstracted from the retrospective chart review of female patients was patient age. Frequencies, means, and percentages were run on the patient's age.

The only quantitative data collected that required cleaning was the knowledge subscale of the PREMIS tool. Data cleansing was performed on all variables in the PREMIS survey. The low number of participants for the PREMIS survey prevented mean substitution from being used for missing data. Therefore, missing items were not replaced. The Knowledge subscale was utilized in statistical analysis to this study's research questions. Analysis of the Cronbach's Alpha for the Knowledge subscale was attempted to determine the internal consistency of the subscale; however, it could not be calculated due to the small number of valid scores. Analysis of normality of the subscale's distribution was also attempted with the Kolmogorov-Smirnov test of normality but was indeterminate because of only two valid scores. All quantitative data for this project was analyzed using SPSS 27 statistical analysis software.

Budget

There were limited resources need to complete this project. The principal investigator provided paper copies of the HARK IPV screening tool for roughly seventy-six dollars. The PI printed the PREMIS survey for minimal cost. The PI developed the educational PowerPoint presentation and presented it via Zoom due to COVID-19 restrictions on campus. Upon completing the Pre and Post PREMIS survey, the PI gave a ten-dollar Starbucks gift card to all HCP and staff at SHS. The total cost was ninety dollars.

Results

This translational quality improvement project aims to increase Intimate Partner Violence (IPV) Screening at Student Health Services at a North Georgia University. There were three aims of this project. The first was to implement an evidence-based Intimate Partner Violence Screening tool; the second was to increase rates of screening for Intimate Partner Violence and refer patients that screened positive to support services, and the third was to increase knowledge of college student Intimate Partner Violence among healthcare providers (HCP) at Student Health Services.

Sample Characteristics

Sample characteristics of the retrospective chart review are listed in table 1. There were (N=303) charts reviewed prior to implementation of the HARK tool. Post-implementation chart review consisted of (N=185) charts. The difference of female patients seen over four weeks post-implementation of the HARK tool may be due to Covid 19 guideline practice changes. The first retrospective study was done when all walk-in patients were seen. Mandated patient appointments were in place during the second retrospective chart review.

Table 1

Demographics of Patient Chart Review

	x(SD)	Range	n (%)
Pre-Implementation			
Patient Age	20.25 (2.56)	18-41	303 (100)
Post-Implementation			
Patient Age	20.59 (3.93)	18-52	185 (100)

The convenience sample (N=3) consisted of healthcare providers consenting to participate in the PREMIS survey. There were (N=7) healthcare providers at the facility that screened patients for IPV. Demographics of the HCP are outlined in table 2. All HCP's were nurse practitioners (NP's) with a range of practicing from 15-26 years. Two NP's cared for over 40 patients a week, with one NP seeing less than 20 patients a week. All NP's were female.

Table 2

Sample Characteristics of HCP

Characteristics	*x*(SD)	Range	n (%)
Age	53(3.606)	50-57	
Years of Experience	22(6.083)	15-26	
Pts Seen per Week			
Less than 20			1 (33.3)
20-39			0
40-59			1 (33.3)
60-79			1 (33.3)
Gender			
Female			3(100)
Male			
Degree			
FNP			1 (33.3)
DNP			1 (33.3)
MSN			1 (33.3)

Clinical Question One: Rates of Screening for IPV

Does using an evidence-based Intimate Partner Screening Tool increase rates of screening for Intimate Partner Violence?

This clinical question was answered through chart reviews and was supported. Chart reviews indicated an increase in IPV screening following the implementation of the HARK evidence-based IPV screening tool. The pre-implementation charts reviewed (N=303) revealed an IPV screening rate of 2.6% screened versus the post-implementation charts (N=185) IPV screening rate of 95.7%. Table 3 outlines the data obtained from each chart review.

Table 3

Retrospective Chart Reviews

	Patient Chart Review	(%)
Pre-implementation of the HARK tool:		
Charts reviewed	n=303	100
Patients screened for IPV	n=8	2.60
Students that screened positive for IPV	n=1	0.30
Students that screened positive for IPV and were referred to support services	n=1	100
Post-Implementation of the HARK tool:		
Charts reviewed	n=185	100
Patients screened for IPV.	n=177	95.7
Students that screened positive for IPV	n=4	2.20
Students that screened positive for IPV and were referred to support services	n=4	100

Clinical Question Two: Referral to support services with a positive IPV screen

Will patients that screen positive for Intimate Partner Violence be referred to support services?

This clinical question was answered through chart reviews and was supported. Pre-implementation chart reviews (N=303) indicated that 100% of patients that screened positive for IPV were referred to support services. Specifically, one patient screened positive for IPV and was referred to support services (100%) during the pre-implementation phase. Post-implementation chart review (N=185) indicated that 2.2% of patients screened positive for IPV,

and 100% of the patients that screened positive were referred to support services. Specifically, four patients screened positive for IPV and were referred to support services.

Clinical Question Three: HCP Knowledge

Does Health Care Provider Intimate Partner Violence knowledge increase after an educational session on Intimate Partner Violence?

A Wilcoxon signed-rank test was conducted to determine whether there was an increase in HCP's IPV knowledge after an educational intervention. There was not a statistically significant increase in knowledge (MDN=22.00) pre-educational session to post educational session. Table 4 represents questions asked for the subscale Knowledge of the PREMIS survey.

Table 4

Knowledge Questions

Questions	N	Correctly Answered Pre/Post	Incorrectly Answered Pre/Post	Mean Pre/Post
What is the strongest single risk factor for becoming a victim of IPV	3	1/3	2/ 0	.33/1
Knowledge of batterers	3	3/3	0 /0	1/1
Warning signs of abuse				
Partner anxiety	3	1/3	2/0	.33/1
Substance abuse	3	2/2	1/1	.67/ .67
Reason IPV victims may not be able to leave				
Fear of retribution	3	3/3	0/0	1/1
Financial dependence on the perpetrator	3	3/3	0 /0	1/1
Religious beliefs	3	3/3	0/0	1/1
Children needs	3	3/3	0/0	1/1
Love for one's partner	3	3/3	0/0	1/1
Isolation	3	3/3	0/0	1/1
Most appropriate ways to ask about IPV				
Are you a victim of IPV	3	3/3	0/0	1/1
Has your partner ever hurt or threatened you	3	3/3	0/0	1/1
Have you ever been afraid of your partner	3	0/3	3/0	0/1
Has your partner ever hit you?	3	2/2	1/1	.67/.67
Knowledge about IPV	3	2/2	1/1	.67/.67
There are common non-injury presentations of abused patients	3	2/3	1/0	.67/1
There are behavioral patterns in couples that may indicate IPV	3	3/3	0/0	1/1

Specific areas of the body are most often targeted in IPV cases	3	2/2	1/1	.67/.67
There are common injury patterns associated with IPV	3	1/3	2/1	.33/.67
Injuries in different stages of recovery may indicate abuse	3	3/3	0/0	1/1
Stages of Change				
Begins making plans to leave	2	2/2	0/0	1/1
Denies there's a problem	2	1/2	1/0	.50/1
Begins thinking abuse is their fault	2	1/2	1/0	.50/1
Continues changing behaviors	2	2/2	0/0	1/1
Obtains order for protection	2	1/2	1/0	.50/1
Knowledge about IPV				
Alcohol consumption is the greatest single factor of the likelihood of IPV	3	3/1	0/ 2	1/.67
There are no good reasons for not leaving an abusive relationship	3	2/3	1/ 0	.67/1
Reasons for concern about IPV should not be included in chart if pt doesn't disclose	3	2/3	1/ 0	.67/1
When asking patients about IPV physicians should use the words abused or battered	3	2/3	1/0	0.67/1
Being supportive of a patients choice to remain in a violent relationship would condone the abuse	3	2/3	1/1	.67/.67
Victims of IPV are able to make appropriate choices about how to handle their situation	3	0/2	3/1	0/.67
HCP should not pressure patients to acknowledge that they are living in an abusive relationship	3	1/2	2/1	0.33/.67
Victims of IPV are at greater risk of injury when they leave the relationship	3	2/3	1/0	0.67/1
Strangulation injuries are rare in cases of IPV	3	2/2	1/1	.67/.67
Allowing partners or friends to be present during a patients history and physical exam ensures safety for an IPV victim	3	2/3	1/0	0.67/0
Even if the child is not in immediate danger, physicians in all states are mandated to report an instance of a child witnessing IPV to CPS	3	3/3	0/0	1/1

Conclusion

There were a total of four hundred eighty-eight charts reviewed. The pre-implementation retrospective chart review (N=303) revealed an IPV screening rate of 2.6% versus the post-implementation chart review (N=185) IPV screening rate of 95.7%. In both pre and post-implementation of the HARK tool, 100% of patients that screened positive for IPV were referred to support services.

Three HCP participants were recruited to assess an increase in IPV in college using the subscale Knowledge from the Readiness to Manage Intimate Partner Violence Instrument. All three of the participants recruited to the study had an increase in mean knowledge score. A Wilcoxon signed-rank test determined no statistically significant increase in Knowledge (Mdn = 22.00) after a post educational session on college IPV. The Pre-educational Knowledge score was (Mdn = 5.00) compared to the post educational Knowledge score (Mdn = 27.50), $z = -1.342$, $p > .005$.

Discussion

This quality improvement project aimed to increase screening rates for intimate partner violence at a university student health services in North Georgia. There was a two-pronged approach to meeting this goal. The first was to implement an evidence-based intimate partner violence screening tool to screen all female patients. A retrospective chart review was conducted pre-and post-implementation of the IPV screening tool to determine screening and referral rates. The IPV screening rates went from 2.6% to 95.7% of female patients cared for at SHS. Compared to the reported 11-15% screening rates in college health settings (Sutherland & Hutchinson, 2018), this is a significant improvement. When patients were identified as being victims of IPV both pre and post-implementation of the HARK tool, 100% of the patients were referred to support services. The second aim of this project was to increase healthcare provider knowledge of intimate partner violence on college campuses. The Physicians Readiness to Manage Intimate Partner Violence Survey was administered to participating healthcare providers pre and post IPV educational sessions. The small sample size (N=3) and the number of incomplete responses (N=1) made analyzing the data difficult. The knowledge subscale's raw scores increased from 22.0 to 27.5; although not statistically significant, it is clinically

significant. Intimate partner violence educational sessions increase healthcare providers' knowledge, leading to a better understanding of college-age victims and reinforce screening practices.

Limitations

Comparing screening rates pre and post-implementation of the HARK tool was not an accurate picture of screening practice. Before the quality improvement project, healthcare providers at SHS screened female patients for IPV at yearly well-women exams. Post-implementation of the HARK tool; all-female patients evaluated at SHS were to be screened for IPV. It is difficult to determine if the increased screening rates are due to the HARK tool's implementation or the practice change of screening all female patients.

The second limitation was the number of healthcare provider participants. Only three of seven healthcare providers consented to participate in the PREMIS survey and educational session. Statistical analysis of the effectiveness of the training session was not reliable due to the small sample size.

Implications

These findings indicate that screening all female patients evaluated in student health services increased rates of screening. Using a standardized, evidence-based intimate partner violence screening tool may contribute to effective increased rates of screening. Student health center healthcare providers may benefit from an educational session

Plans for Future Scholarship

Further research is needed in a number of areas related to IPV. Research on whether IPV screening is sustained after implementing a standardized IPV tool and qualitative data on healthcare provider opinions after implementing the evidence-based screening tool. Further

research on barriers and facilitators of screening college students for IPV is indicated. Research is also needed on whether having an electronic health record embedded with an IPV screening tool leads to successful screening practices.

Conclusion

Intimate partner violence is a grave concern on college campuses. When being seen in student health centers, screening all females is the first step to getting victims to feel comfortable disclosing abuse and referring them to support services. Identification of victims may lead to early intervention and prevent short-term and long-term intimate partner violence complications. The project results showed a 93% increase in identifying IPV victims when using a standardized IPV screening tool and screening all female patients. The difficult task of talking with patients about IPV may be made more accessible by having healthcare providers participate in an IPV training session.

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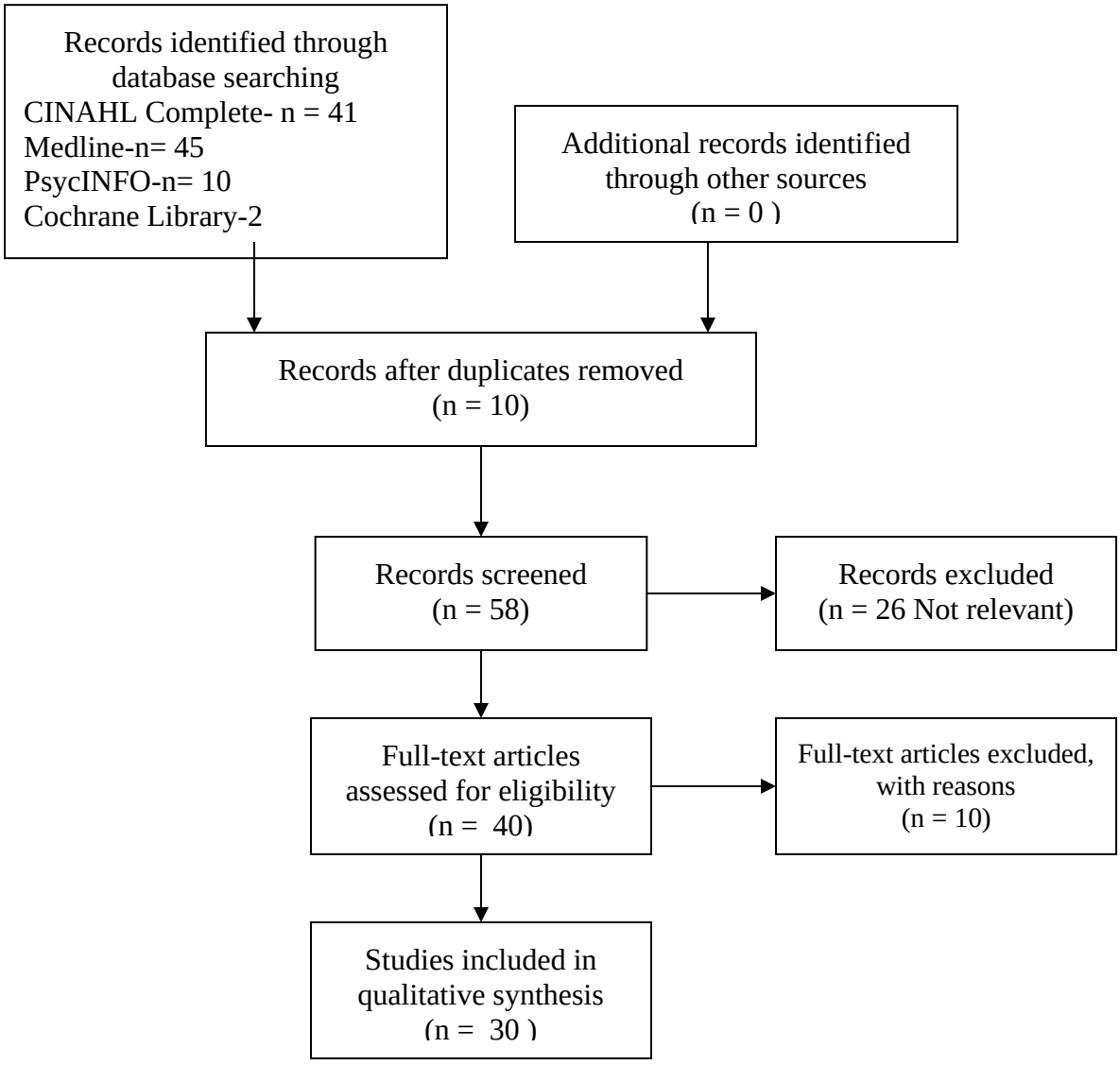
Appendix A

PRISMA Flow Diagram



Note: Developed from: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *PLoS Med 6*(6): e1000097. doi:10.1371/journal.pmed1000097

Appendix B

Re-Aim Theoretical Model