

Educating Healthcare Professionals on Evidence-Based Domestic Violence Interventions

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Abstract

Purpose: The purpose of this quality improvement project was to train healthcare professionals (HCP) on evidence-based interventions for domestic violence (DV).

Background: DV occurs at high rates and negatively impacts physical and mental health.

Intermittently screening patients for DV is healthcare's current response and this is inadequate.

Evidence shows the most effective way to assist DV victims is through active psychoeducation.

Active psychoeducation involves a conversation between the HCP and patient about relationship safety, the sharing of local resources, and a referral to a local DV agency if warranted.

Methods: A virtual educational intervention was recorded and made available to members of a professional nursing organization in the Western United States. The educational intervention provided instruction on the Confidentiality, Universal education, Empowerment, Support (CUES) method, an active psychoeducation technique. The post-education survey was a modified version of Project Catalyst's Post-Training Survey for Community Health Centers with twenty-one questions pertaining to understanding of the training and intention to incorporate CUES into clinical practice.

Results: Eleven participants completed the educational intervention and post-education survey.

Descriptive statistics demonstrated that participants strongly agreed (73%) and agreed (27%) that the training improved their ability to provide active psychoeducation on DV. All participants reported an intention to incorporate CUES into their clinical practice.

Conclusion: Training HCP to provide active psychoeducation on DV to their patients increases professionals' ability to incorporate this evidence-based method into clinical practice.

Keywords: domestic violence, psychoeducation, healthcare professionals, intervention

Educating Healthcare Professionals on Evidence-Based Domestic Violence Interventions

Domestic violence (DV) involves the physical battery, financial manipulation, stalking, emotional abuse, or sexual violence an individual experiences at the hands of their intimate partner. DV is a healthcare issue that negatively impacts the physical and mental health of individuals, the financial health of institutions, and the social health of communities across the globe. An informed, effective response to DV by healthcare professionals (HCP) will reduce the devastating consequences resulting from this phenomenon.

Problem Statement

According to the Centers for Disease Control and Prevention (2021), DV is experienced by an estimated one in four women and one in ten men in the United States. DV costs the United States' economy \$103,767 per female victim and \$23,414 per male victim after calculating reduced occupational productivity, criminal costs, and healthcare costs. Walsh et al. (2015) note that DV is associated with chronic cardiac disorders, reproductive disorders, metabolic disorders, substance use disorders, and mental health disorders in victims. DV has a devastating impact globally, not just nationally. Thirty percent of women around the world will be victims of DV in their lifetime (Yakubovich et al., 2018). This extensive problem impacts the health of populations and individuals and requires an evidence-based response from HCP.

Purpose and Rationale

DV harms victims, their children, healthcare institutions, and the economy. The purpose of this review is to provide an overview of who is impacted by DV, summarize the growing evidence supporting the need for HCP to provide educational interventions to their patients about DV and available resources, discuss the minimal impact that the current practice of universally

screening for DV has on victims, and describe a desired outcome of the healthcare industry implementing the alternative intervention of patient education to address DV.

Background and Significance

Population Affected by DV

Although DV is not limited to a specific demographic, some individuals are at higher risk of DV victimization than others. Yakubovich et al. (2018) report that risk factors for experiencing DV include low socioeconomic status, limited education, minimal social support, growing up with parents who had less than a high school education, or experiencing an unplanned pregnancy. Walsh et al. (2015) report that an additional risk factor for experiencing DV is a strong adherence to rigid, outdated gender norms. Protective factors against DV include older age and marriage (Yakubovich et al., 2018). More research is needed to better understand the risk factors for becoming a perpetrator of DV. One known risk factor for DV perpetration is witnessing DV as a child (Kimber et al., 2018). Although DV victimization is oftentimes associated with lower socioeconomic status, heterosexual, cisgender females, it is important to remember that DV can occur in any relationship.

One in ten men in the United States is a victim of DV in their lifetime (Centers for Disease Control and Prevention, 2021). Shelton (2018) notes that lesbian, gay, bisexual, transgender, and queer (LGBTQ) populations are also impacted by DV and oftentimes excluded from the rhetoric. LGBTQ individuals may be faced with threats of outing and bias from police and HCP, making DV more likely to go undetected. Messing et al. (2015) report that immigrant and refugee DV victims face their own unique challenges preventing help-seeking behaviors, including language barriers and perpetrators who threaten deportation.

Education Provision Intervention

It is vital that those suffering from DV be aware that their experience is not normal relationship conflict and understand that resources exist and can be accessed if the victim feels it is in their best interest to do so. HCP can best support victims of DV by providing an educational intervention and list of available resources to all patients, regardless of whether or not the HCP thinks that patient may be a DV victim. HCP need to avoid assumptions about victim profiles and remember that anyone can be a DV victim. Bridges et al. (2015) note that psychoeducation has shown efficacy in the treatment of depression, cancer, and diabetes. The researchers also found efficacy in the use of psychoeducation to increase understanding of DV in college students. Spangaro (2017) notes that providing universal patient education on DV is an efficacious first-line response to the treatment of DV in healthcare settings.

Universal Screening for DV

Healthcare's current response to the DV epidemic is universal screening. Lee et al. (2019) note the Joint Commission includes universal screening for DV as an accreditation requirement for hospitals. However, screening is far from universal. Depending on the provider, hospital, or unit culture, screening is typically given to females only, is limited to certain age ranges, or occurs only when a patient has specific risk factors for DV (Lee et al., 2019). Approximately ten percent of DV victims report being screened for DV when encountering healthcare settings (Riedl, 2019). O'Doherty et al. (2015) report that screening for DV in healthcare settings has no significant impact on victim outcomes. Phares et al. (2019), note that HCP encounter significant barriers to screening, often resulting in screening not occurring. Barriers include HCP attitudes, lack of education on the topic of DV, HCP's lack of knowledge in evidence-based DV interventions, time constraints, lack of privacy, and providers' discomfort

and avoidance of uncomfortable conversations (Phares et al., 2019). Simply screening for the presence of DV does little to help those suffering from DV, yet this remains current practice.

Desired Outcome of DV Education Provision

HCP often fail to properly identify DV and appropriately intervene due to ineffective screening protocols. This practice negatively impacts people and systems. Victims of DV continue to be harmed both physically and mentally, children reared in violent homes continue to be exposed to trauma, and healthcare systems experience financial burdens by continually intervening in cases of acute physical injury, suicide attempts, or substance abuse associated with DV. A desired outcome for this significant problem would be a future state where HCP are educated on the importance of giving all patients DV education and resources. This simple, cost-effective intervention has the ability to reach more DV victims and promote positive outcomes compared to the ineffective current practice of universal screening. Positive outcomes for DV victims would include promoting safety and increasing resource utilization rates.

Summary of Background and Significance

DV victims are not limited to a singular demographic. Due to the high prevalence of DV and harsh reality that victimhood can be experienced by anyone, HCP must employ the most effective, evidence-based interventions to support DV victims. The current practice of screening is ineffective. Although the intention is for screening to be universal, barriers often prevent screening from occurring. DV victims are left undetected and uncared for by the healthcare system. Evidence supports an alternative approach to caring for DV victims. Universal active psychoeducation, in the form of conversations about DV and the provision of DV information and local resources, is a more effective treatment option. HCP must be educated on this much needed practice change.

Internal Evidence

A nonprofit coalition of DV organizations in the Western United States is seeing firsthand the negative consequences associated with the current practice of screening for DV in healthcare settings. DV victims encounter healthcare settings, but are rarely screened for DV. HCP miss opportunities to provide these victims with education and resources. Although this nonprofit coalition of DV organizations does not collect hard data on DV screening or education rates, soft data is available. Through close contact with member organizations, this coalition organization continually learns of inconsistencies in HCP's screening practices and understanding of the importance of patient education and resource provision.

PICO Question

This inquiry has led to the clinically significant PICO question, "In healthcare professionals, how does providing patient education and referral, compared to treatment as usual, impact feelings of competence in the ability to care for domestic violence victims?"

Search Strategy

A review of the current literature was completed in order to answer the PICO question. Four databases with information relevant to the topic of DV interventions were extensively searched – Cochrane, PubMed, PsycINFO, and CINAHL. Keywords generated from all components of the PICO were utilized in the search process. Keywords for the population included *domestic violence, intimate partner violence, spousal abuse, domestic abuse, healthcare workers, healthcare providers, healthcare professionals, clinicians, doctor, nurse, and allied health*. Keywords for the intervention included *resources, information, education intervention, pamphlets, and handouts*. Keywords for comparison intervention included *screen, inquire, and question*.

The initial search of the Cochrane Library database included the keywords *domestic violence, patient education, and screening*. This yielded five results. Article titles and abstracts were screened for relevance to the PICO question. No exclusions were added to the search due to the low volume of studies yielded.

The initial search of the PubMed database included the keywords *domestic violence, intimate partner violence, patient education, and screening*. This yielded 4,711,320 articles. Exclusions were utilized to narrow down to more relevant results and included publication within the past five years and English language. Key words were changed to *domestic violence, healthcare, and intervention* and this yielded a more manageable 135 results. Article titles and abstracts were reviewed and selected based on applicability to the PICO question.

The initial search of the PsycINFO database included the keywords *domestic violence, patient education, intervention, and screening*. This yielded 484,599 results. Exclusions were applied and included limiting to peer-reviewed articles only, articles published within the past five years, and the keyword *domestic violence* appearing in publication title. This yielded 119,137. Keywords were changed to *domestic violence, handout, pamphlet, and patient education materials* which yielded 254 results and *domestic violence and healthcare intervention* which yielded 36 results. Results were screened for relevance to the PICO question.

The initial search of the CINAHL database included the keywords *domestic violence, domestic abuse, intimate partner violence, screening, and patient education*. This yielded 394 articles. Exclusions were applied to narrow down to the most relevant articles and included publications within the last five years, peer-reviewed articles, and English language. This yielded 112 results. Article titles and abstracts were read and selected for inclusion based on relevance to the PICO question.

After searching the four databases described above, 31 articles were deemed to be highly relevant to the PICO question. A rapid critical appraisal of all 31 articles was completed in order to narrow down to the 10 most relevant, highest quality studies. The highest quality studies are outlined in Appendix A.

Critical Appraisal and Synthesis of Evidence

Melnyk and Fineout-Overholt's (2019) rapid critical appraisal was completed on the 10 studies selected for inclusion in the evaluation table. The 10 studies were comprised of largely high-quality evidence, including three systematic reviews and five randomized controlled trials. Two pretest-posttest intervention studies were also utilized due to their high applicability to the PICO question (see Appendix A, Table 1). Bias was not observed in any of the 10 studies and all studies reported their funding sources. Funding sources primarily consisted of research grants from the education, non-profit, and international health institution sectors. All studies were current evidence, generated within the last five years. Although studies gathered evidence from across the globe, more research was generated in high-income countries. Low-income countries are underrepresented in the 10 studies included in the evaluation table (see Appendix A, Table A1).

Noteworthy heterogeneity is present across studies' measurement tools and demographics. In four studies, measurement tools were generated by researchers for the specific purpose of completing that particular study. Although developed by a team of experts, these measurement tools have unknown validity and reliability, weakening the evidence. Study demographics also showed significant differences. Two of the 10 studies focused on HCP practices when screening or educating patients on DV. The remaining eight studies mainly focused on women of childbearing age, however, significant differences existed within this

population. For example, studies gathered evidence on rural, urban, English speaking, non-English speaking, Medicaid recipients, and a wide-variety of education levels and socioeconomic statuses.

Despite the heterogeneity present between the 10 studies, many similarities were also observed. All studies focused on DV interventions in the healthcare setting. Seven out of 10 studies focused on outpatient interventions and two out of 10 studies focused on online interventions. The interventions utilized in the 10 studies focused on screening for DV or DV education. DV education focused on either passive psychoeducation, typically the provision of written information without a discussion about DV between HCP and patient, or on active psychoeducation, which typically included a discussion about DV between HCP and patient along with a written resource list and referral to a DV agency when appropriate. Active psychoeducation demonstrated the greatest efficacy in impacting outcomes, although studies varied in how active psychoeducation was delivered. Some studies utilized brief interventions with written resources and referrals, whereas other studies utilized intensive interventions with repeated follow-up. The 10 studies examined similar outcomes, including DV knowledge, awareness of DV resources, and confidence that HCP was equipped to assist with DV (see Appendix A, Table A2).

Discussion

DV is a serious public health issue that negatively affects the physical, mental, and financial well-being of people across the globe. The healthcare setting is an optimal place to implement interventions to combat DV because DV victims often present to inpatient and outpatient locations with complaints such as fractures, reproductive disorders, post-traumatic stress disorders, substance use disorders, and suicidal ideation or suicide attempts that occur

secondary to DV. The current healthcare response of selectively screening less than half of patients about DV concerns is not effective. This literature review shows the efficacy of brief, active psychoeducation in promoting patients' understanding of DV, awareness of DV resources, and belief that an HCP can help with DV safety planning or referrals to DV agencies (see Appendix A, Table A2). Brief, active psychoeducation consists of a short conversation between HCP and patient about DV coupled with a provision of DV resources and potentially a referral to a DV agency that can provide further assistance if so desired by the patient. This literature review highlights the training HCP need in caring for DV victims (see Appendix A, Table A2). HCP would benefit greatly from education on the importance of brief, active DV psychoeducation and how to universally incorporate this intervention into their patient encounters.

Theory Application

Theoretical frameworks and conceptual models support a grounded understanding of complex ideas. This challenging task is completed by providing a systematic view of relationships between variables (Butts & Rich, 2018). The Health Belief Model was developed in the 1950s by the United States Public Health Service to guide understanding of the complexities influencing individual's health-promoting behaviors or lack thereof. This model shows that health-promoting behaviors are influenced by an individual's understanding of the risks and benefits of making a change, an individual's understanding of the perceived threat, and an individual's self-efficacy. Self-efficacy, perception of a threat, and understanding of risks and benefits are all modifiable variables. By modifying these variables, health-promoting behaviors can be influenced (Butts & Rich, 2018).

The Health Belief Model was utilized to methodically view the phenomenon of HCP delivery of DV education (see Appendix B, Figure 1). This model was selected because relationships where DV is occurring are complex and DV victims often need to weigh conflicting interests when making decisions about health-promoting behaviors. It is important for HCP to understand that health-promoting behaviors are influenced by an individual's weighing of pros and cons, their understanding of the dangers, and their belief in their ability to make a change. By providing brief, active psychoeducation, HCP can modify some of the variables influencing an individual's DV experience. HCP can increase understanding of the health risks associated with DV and impact an individual's self-efficacy through empathic conversation and resource provision.

Implementation Framework

Implementation frameworks offer a roadmap in the evolution of an evidence-based project (Davidson et al., 2017). The Academic Center for Evidence-based Practice Star Model of Knowledge Transformation (ACE Star) was selected as the implementation framework for this project (see Appendix B, Figure 2). The ACE Star model consists of a circle surrounding a five-pointed star. The circle represents the infinite, cyclical nature of change and the five-pointed star represents five repeated tasks in project implementation. These tasks include discovery of quality evidence, summary of evidence, translation of evidence into plans for practice, integration into practice, and critical evaluation of the process and outcomes (Davidson et al., 2017). The ACE Star model aligns well with a DV education evidence-based project. This project requires a gathering and synthesizing of quality evidence on the topic of DV, a translation of this evidence into an evidence-based intervention, intervention implementation, and critical evaluation of this entire process.

Implications for Practice Change

The high prevalence of DV and the negative physical, mental, and financial sequelae associated with DV demonstrate the importance of implementing an evidence-based practice change in healthcare's response to DV. The far-reaching impact of DV means that stakeholders in the fight against DV will come from a variety of backgrounds. These stakeholders will include DV victims, DV survivors, children growing up in homes with DV, HCP, insurance companies, DV agencies, healthcare systems, employers of DV victims, economists, and advocacy groups for females, immigrants, and LGBTQ individuals.

Stakeholders invested in DV outcomes will hope to see improvements in the following areas: an increase in patients' understanding of DV, an increase in awareness of DV resources, and an increase in patients' confidence that HCP can help with DV. A standardized tool measuring these outcomes would be beneficial in streamlining the tracking and later the dissemination of intervention outcomes. However, before these outcomes can be tracked, HCP must first receive training on DV and appropriate interventions. The evidence shows that the most effective intervention is a brief, active psychoeducation-based conversation between HCP and patient, along with resource provision and potential referral to a DV agency. HCP must be educated on why this change is necessary and how to incorporate this change into their daily practice. An intervention educating HCP in DV education is the first step in reaching improved outcomes on DV knowledge, resource awareness, and patients' perception of HCP role in DV. A post-intervention survey administered to HCP who received education on evidence-based DV interventions along with a validated confidence scale would be the first step in invoking positive DV outcomes.

Potential Outcomes

Providing HCP with education on how to implement a brief, active psychoeducation intervention for DV would have a significant impact on DV victims, their families, the healthcare system, and other key stakeholders. Adequately addressing DV in the healthcare setting would improve the physical, mental, and financial health of DV victims by increasing awareness of what constitutes abusive behavior and increasing awareness of local DV resources, including advocacy groups and shelters. Educating HCP in an informed, evidence-based DV response would empower victims and potentially turn a DV victim into a DV survivor.

Methods

Ethical Considerations

Consent Process

Quality-improvement project participants were provided with a consent letter prior to receiving the educational intervention or post-intervention survey. The consent letter made participants aware that the educational intervention and post-intervention survey were voluntary activities that did not carry risks greater than the completion of ordinary daily tasks.

Institutional Review Board Approval

Permission to complete the educational intervention and to evaluate the efficacy of education through a post-intervention survey was obtained through Arizona State University's Institutional Review Board (IRB). The application submitted to the IRB included the pre-recorded virtual education, a link to the online survey, a copy of the participant consent letter, and letters from the involved organizations demonstrating support for the project.

Project Purpose

The purpose of this evidence-based project was to promote HCP's understanding of DV and ability to provide effective DV interventions. The expected impact of the educational

intervention was to increase HCP's knowledge of DV prevalence, understanding of DV health consequences, and familiarity with DV interventions so that HCP would be better equipped to aid DV victims encountered in healthcare settings.

Description of Population and Setting

The educational intervention and post-intervention survey were administered to members of a professional nursing organization based in the Western United States. Eligibility criteria for participation included voluntary consent, age 18 years or older, English speaking, and membership in the professional organization. No financial incentive was provided to participants. Participants were primarily registered nurses, student nurses, and advanced practice nurses. The majority of participants held a bachelor's degree and worked in inpatient healthcare settings.

Project Description and Timeline

The educational intervention was delivered virtually through a recorded presentation uploaded to the website of the professional nursing organization. The education provided was an abbreviated version of Project Catalyst's Confidentiality, Universal education, Empowerment, and Support (CUES) training. The CUES method is a brief, active DV psychoeducation intervention that HCP can learn and incorporate into their clinical encounters. Project Catalyst is a national initiative focused on reducing human trafficking, DV, and reproductive coercion. Project Catalyst is sponsored by multiple agencies within the United States Department of Health and Human Services. The abbreviated form of CUES training utilized in this project focused only on DV, excluding information on human trafficking and reproductive coercion.

Project implementation was completed in the Fall of 2020. The participant consent letter, recorded education intervention, and post-intervention survey were accessible to members of the

professional organization for a ten-week period. Data analysis of survey results was completed in November 2020.

Instrumentation

A post-intervention survey was utilized to measure the impact of the educational intervention. The survey was a modified version of Project Catalyst's Post-Training Survey for Community Health Centers. Written authorization for utilization of the survey was obtained from the creator of the survey. Modifications were made to the original survey to exclude references to reproductive coercion and human trafficking as these topics were not covered in this project. Psychometric properties of the modified survey are unknown. The survey consisted of 5 questions regarding participant demographic information, 9 questions regarding DV knowledge, trauma informed care, impacts of DV on health outcomes, knowledge of DV resources, and other elements of CUES training, and 7 questions regarding the intent to incorporate CUES training into clinical practice.

Data Collection and Data Analysis

The online post-intervention survey was administered through SurveyMonkey. Data was collected through SurveyMonkey and then translated to an Excel document. Data was inputted into Intellectus statistical software program for descriptive statistical analysis.

Budget

The proposed budget for this project included a SurveyMonkey account for \$384.00. Resources available to students at Arizona State University for no cost included access to a Zoom account for recording of the educational intervention, access to Intellectus statistical software, and access to statistics tutors. Others completing similar projects could anticipate

spending \$125.00 for these resources. Project costs were minimal, so no outside funding was sought or received.

Results

Participant Demographics

Eleven participants completed the post-educational intervention survey. Participants were primarily registered nurses (36%), students (27%), and advanced practice nurses (18%). Eighty-one percent of participants held a bachelor's degree or higher level of education. The majority of participants had been practicing in the field of nursing for five years or less (73%).

Survey Responses

The educational intervention increased participants' understanding of DV and the CUES method. Participants strongly agreed (64%) and agreed (36%) that the CUES training increased their understanding of the impact of DV on health. Participants strongly agreed (82%) and agreed (18%) that the education improved their understanding of the components of the CUES method. Participants strongly agreed (73%) and agreed (27%) that the training improved their ability to provide brief, active psychoeducation on DV. In addition to increasing participants' understanding of DV and CUES, the training also increased participants' intent to provide universal, active psychoeducation on DV to patients. Participants strongly agreed (64%) and agreed (36%) that after the educational intervention, they were more likely to universally educate their patients on DV. Participants strongly agreed (55%) and agreed (45%) that following the training they were more likely to refer patients to DV community programs and advocacy services when appropriate.

Project Impact

This project demonstrated the improvement DV education has on HCP's understanding of DV and its connection to physical and mental health. The project also shows the positive impact DV education for HCP has on HCP's intent to educate their patients on DV, provide DV resources, and make referrals to DV agencies when appropriate. This project does not convey statistical significance because the modified version of Project Catalyst's Post-Training Survey for Community Health Centers had unknown validity and reliability. However, the project's descriptive statistics demonstrated that all participants were positively influenced by the educational intervention. When HCP are better informed on DV and evidence-based DV interventions, patients will see better outcomes.

Discussion

Project Summary

This project utilized the ACE Star model to guide meaningful change. A thorough review of the available literature demonstrated the efficacy of HCP provision of brief, active psychoeducation on DV in DV outcomes. This evidence guided the project's intervention of training HCP how to provide brief, active DV psychoeducation. Descriptive statistics obtained from the post-educational intervention survey showed that HCP who received training on the CUES method were better able to implement evidence-based DV interventions.

Project Limitations and Strengths

A significant strength of this project was the implementation of the educational intervention in a virtual format during the COVID-19 global pandemic. The virtual education allowed HCP to receive the CUES training in a safe, remote location. Another strength of this project was the availability of quality, current research related to the problem being addressed. Weaknesses of this project included the measurement instrument's unknown validity and

reliability and small sample size. Obtaining IRB approval for advertising and creating an advertising strategy for the virtual education and survey may have generated a larger sample size.

Conclusion

DV is prevalent and results in poor physical and mental health outcomes while draining limited healthcare resources. Healthcare's current response of selectively screening for DV is inadequate and HCP must be informed of evidence-based interventions. This project illustrated the positive impact that training HCP on evidence-based DV interventions has on HCP's understanding of DV and intent to educate their patients on DV. HCP play a vital role in decreasing the impact of DV on individuals and communities.

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Appendix A

Evaluation and Synthesis Tables

Table A1

Evaluation Table of Quantitative Studies

Citation	Theory/ Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement/ Instrumentatio n	Data Analysis	Findings/ Results	Quality of Evidence; Application to practice
Alvarez et al. (2017). Provider screening and counseling for intimate partner violence: A systematic review of practices and influencing factors Funding: NIH grant, Johns Hopkins research grant Bias: none Country: 25 studies from USA, studies	Neuman's System Model (secondary prevention) - Inferred	Design: SR and MA Purpose: understand HCP DV practices	N: 35 DS: Embase, PubMed, CINAHL, Scopus, Web of Science, Cochrane Inclusion Criteria: SP were HCP reporting on screening and counseling women about DV, studies in either English or Spanish	IV: DV screening and intervention DV1: HCP practices DV2: barriers to screening DV3: facilitators to screening	Preferred Reporting Items for Systematic Reviews and Meta-Analyses	Data systematically recorded in database, reviewed by authors for themes	DV1: <50% of HCP routinely screen, wide variety of questions used to ask about DV, some are vague, some HCP ask about DV in private, many do not, responding with empathy and resource provision are underutilized	LOE: I Strengths: examined many types of HCP and healthcare settings Weaknesses: included studies with low LOE, many studies looked solely at screening and not at intervention,

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Table A1

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also from Belgium, Canada, Colombia, Finland, England, Sweden, Nicaragua, and India			Exclusion Criteria: studies without details on HCP practice habits, studies that included patients as participants				although some HCP make appropriate referrals DV2: lack of reimbursement for screening, challenge to see patient privately, lack of time DV3: clear screening protocol and referral guidelines outlined by clinic, HCP education on DV and available resources	excluded studies where HCP screened or counseled men on DV Conclusions: HCP need education on how to care for DV victims, HCP need clear clinic protocols Feasibility to PICO: HCP and their patients would benefit from HCP

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								receiving DV education
Bridges et al. (2015). The effect of brief, passive psychoeducation on knowledge and ratings of intimate partner violence in the United States and Argentina Funding: Arkansas Department of Higher Education Grant Bias: none Country: USA and Argentina	Learning Theory - Inferred	Design: RCT Purpose: Evaluate effect of PPE on DV knowledge and abuse recognition	N: 100 n: 51 (EG) n: 49 (CG) Demographics : No significant difference between EG and CG. College students, average age 20 years, 72 % female, 38% white, 56% Latinx, 68% reside USA, 32% reside Argentina	IV: PPE DV1: DV knowledge DV2: ability to identify type of DV in vignettes DV3: impact of culture on DV understanding , compare USA to Argentina	8-item test created by researchers; unknown validity, reliability 6 vignettes describing non-abusive conflict and different types of DV (economic, social, physical, sexual, and emotional) created by	DV1: independent samples t-test DV2: ANOVA DV3: two-way ANOVA	EG had better DV knowledge scores. EG better able to identify subtle forms of DV in vignettes than CG. DV1: p = .003 (medium effect) DV2: EG mean 3.96, CG mean 3.68	LOE: II Strengths: RCT design, detailed explanation of test and vignettes Weaknesses : sample was college students, potentially higher SES, primarily white or Latinx, and female;

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Table A1

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			Setting: testing conducted online in either Spanish or English		researchers; unknown validity, reliability		(medium-large effect) DV3: EG p= 0.86, CG p=0.17 (no significant difference between groups)	materials with unknown validity and reliability, no long-term follow up Conclusions : PPE can educate public about DV and available resources Feasibility to PICO: PPE shows efficacy in improving DV outcomes, especially if

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Table A1

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								paired with APE
Decker et al. (2017). Implementing trauma-informed partner violence assessment in family planning clinics Funding: Maryland Department of Health and Mental Hygiene, Futures Without Violence, and Office of Women’s Health Bias: none Country: USA	Theory of Planned Behavior – Inferred	Design: single group pre-test, post-test Purpose: learn about impact of an APE intervention on DV	N: 132 Demographics : English speaking women ages 18-35 Setting: two family planning clinics in Maryland, one urban, one suburban	IV: ARCHES, an APE DV intervention, takes 3-5 minutes to complete, focuses on UE with small brochure, empathy, and real-time referrals to resources DV1: patient belief that HCP cares about DV	Computer based survey assessing lifetime exposure to DV; 3-month follow up assessed understanding of DV resources Unknown validity and reliability	Logistic regression models to obtain p values	DV1: p=0.04 DV2: p=0.04	LOE: III Strengths: 3-month follow up, intervention is brief and structured Weaknesses : low retention rate, non-randomized study design, little information on data analysis

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				DV2: patient belief that HCP can help with DV				<p>Conclusions : APE on DV helps patients see HCP as DV supports with ability to arrange help</p> <p>Feasibility to PICO: HCP can provide better quality care to patients through APE on DV</p>
Divakar et al. (2019). Digital education of health professionals	Learning Theory – Inferred	Design: SR and MA	N: 6 n: 631	IV: digital DV education	GRADES	Post-intervention SMD	DV1: SMD 0.67, 95% CI, p=0.05	LOE: I Strengths: rigorous

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<p>on the management of domestic violence: Systematic review and meta-analysis by the digital health education collaboration</p> <p>Funding: World Health Organization, Nanyang University grant</p> <p>Bias: none</p> <p>Country: 5 studies from USA, 1 study from Netherlands</p>		<p>Purpose: understand efficacy of DV digital education for HCP</p>	<p>DS: EMBASE, Medline, Cochrane, PsycINFO, Web of Science, Educational Resource Information Centre, Cumulative Index of Nursing and Allied Health Literature</p> <p>Inclusion Criteria: studies that examined efficacy of digital DV education for</p>	<p>DV1: DV knowledge</p> <p>DV2: HCP attitude toward DV</p> <p>DV3: HCP self-efficacy in caring for DV patients</p>			<p>DV2: SMD 0.67, 95% CI, p=0.04</p> <p>DV3: SMD 0.47, 95% CI, p=0.71</p> <p>5 out of 6 studies demonstrate that digital education improves DV knowledge in HCP</p>	<p>study grading criteria, focused on variety of HCP</p> <p>Weaknesses : studies utilized non-validated instruments, few studies found on topic</p> <p>Conclusions : digital education may be a useful way to train HCP on DV and</p>

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Table A1

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			HCP, RCT, cluster RCT					appropriate response Feasibility to PICO: HCP can learn about APE and DV through online learning
Gupta et al. (2017). A nurse-delivered, clinic-based intervention to address intimate partner violence among low-income women in Mexico City: Findings from	Transtheoretica l Model of Health Behavior Change – Inferred	Design: cluster RCT Purpose: learn if APE delivered by nurses improved levels of DV, safety planning,	N: 950 n: 470 EG n: 480 CG Demographics : heterosexual women between ages 18-44 who had experienced DV in the past	IV: nurse safety planning intervention DV1: experiencing DV over next 12-months	11-question research assistant delivered screening tool Unknown validity and reliability	GLIMMIX procedure	DV1: p=0.01 DV2: p=0.01 Both EG and CG saw statistically significant improvement in safety	LOE: II Strengths: large sample size, low attrition, 15- month follow up Weaknesses : only

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Table A1

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a cluster randomized controlled trial Funding: Vanguard Charitable Endowment Program, National Institute of Mental Health grant Bias: none Country: Mexico		resource utilization, or quality of life in DV victims	year, average age 30, 90% married or partnered, 63% less than high school education, 81% Catholic Setting: 42 public health clinics in Mexico City	DV2: safety planning behaviors EG received screening, nurse assisted referrals, counseling, and safety planning CG received screening and referral card			planning and DV reduction	examined heterosexual women, unknown details about screening tools Conclusions : in-depth counseling is not more effective than screening and referral in reducing DV and improving safety planning Feasibility to PICO:

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								HCP often lack time for in-depth counseling, training HCP in brief, APE is more feasible
Klevens et al. (2015). Does screening or providing information on resources for intimate partner violence increase women's knowledge? Findings from a randomized controlled trial	Transtheoretica l Model of Health Behavior Change	Design: RCT Purpose: to understand the role of screening and resource provision in women's understanding of DV and DV resources	N: 2,708 n: 909 digital screen and refer (EG) n: 893 no screen, resource provision only (EG) n: 898 no screen, no resource provision (CG)	IV: digital screen and refer, or resource provision without screening DV1: understanding of DV DV2: understanding	Partner Violence Screen ($\alpha = 0.80$)	Chi square tests	DV1: p=0.58 DV2: p=0.52	LOE: II Strengths: RCT design, 12-month follow up Weaknesses : 13% attrition rate, females only Conclusions : resource

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Table A1

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<p>Funding: Centers for Disease Control and Prevention</p> <p>Bias: none</p> <p>Country: USA</p>			<p>Demographics : average age 39 years, 100% women, 48% white, 60% uninsured, 30% Medicaid</p> <p>Setting: 10 primary care clinics in Chicago</p>	<p>of DV resources</p> <p>Digital screening occurred by women watching a video on DV then answering questions on computer about DV status</p>				<p>provision alone does not assist DV victims, no significant benefit from digital screening (screening not done by HCP)</p> <p>Feasibility to PICO: HCP need to be trained in providing an empathic response and APE</p>

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Madden, K. (2017). An intimate partner violence informational program in a hospital fracture clinic: A pre-test post-test intervention study Funding: Canadian Institutes of Health Research Bias: none Country: Canada	Learning Theory – Inferred	Design: pre- test, post-test intervention study Purpose: determine efficacy of PPE in changing patient perceptions about discussing DV	N: 160 n: 80 (CG) n: 80 (EG) Demographics : 78% Caucasian, 37% married, 63% with children, mean age 46, 53% female, 73% with bone fracture Setting: orthopedics clinic in Canadian hospital	IV: PPE on DV DV1: patient willingness to discuss DV DV2: patient belief that staff had DV resources	16-question survey regarding view of clinic as a place to discuss DV and receive resources for DV Survey developed by orthopedic and DV experts, modeled after previous research, but unknown validity and reliability	Independent t-test	DV1: p=0.99 DV2: p=0.29	LOE: III Strengths: controlled experiment Weaknesses : results clinically significant, but not statistically significant, severe pain may limit patient's exposure to PPE Conclusions : PPE supports active APE

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								in caring for DV victims Feasibility to PICO: PPE from HCP is not enough, HCP need to be trained in APE
Miller et al. (2015). A school health center intervention for abusive adolescent relationships: A cluster RCT Funding: Futures Without Violence Bias: none	Learning Theory – Inferred	Design: cluster RCT Purpose: evaluate efficacy of APE on DV knowledge	N: 7 school / 939 students n: 4 schools / 447 students (EG) n: 3 schools / 492 students (CG) Demographics : 76% female, 5% white, 95%	IV: School Health Center Healthy Adolescent Relationships Program (SHARP) DV1: recognition of DV	Recognition of Adolescent Relationship Abuse Scale ($\alpha= 0.85$) Generalized Self-Efficacy Scale ($\alpha=0.89$)	Wald Log – linear chi-square test Post-hoc intensity adjustment analysis completed based on whether student	Before adjustment, no statistical significance. After intervention intensity adjustment, EG showed greater DV knowledge and DV	LOE: II Strengths: RCT design, 93% participant retention Weaknesses : lack of diversity in sample,

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Country: USA			non-white, high school students age 13-18 years Setting: 7 high school health centers in California	DV2: intention to change violent relationships DV3: knowledge of DV resources SHARP is an APE intervention administered by HCP during routine health visits	Conflict Tactics Scale and Sexual Experiences Survey ($\alpha=0.49$)	reported provider utilized SHARP method	resource understanding than CG. CI: 95% DV1: p=0.11 DV2: p=0.62 DV3: p=0.14	small number of clusters, short duration follow up Conclusions : APE shows some efficacy in the treatment of DV Feasibility to PICO: HCP and their patients will benefit from HCP learning APE

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<p>O'Doherty et al. (2015). Screening women for intimate partner violence in healthcare settings</p> <p>Funding: World Health Organization, Cochrane Collaboration, and UNICEF</p> <p>Bias: none</p> <p>Country: Canada, USA, Japan, Portugal, New Zealand</p>	<p>Neuman's System Model (secondary prevention) - Inferred</p>	<p>Design: SR and MA</p> <p>Purpose: understand efficacy of screening for DV in healthcare settings</p>	<p>N: 13 studies n: 4,959 women</p> <p>DS: Cochrane, OVID Medline, Embase, CINAHL PLUS, PsycINFO, ProQuest, Conference Proceedings Citations Index, DARE, WHO ICTRP, clinicaltrials.gov</p> <p>Inclusion Criteria: RCT or quasi-RCT studies that compared</p>	<p>IV: screening for DV</p> <p>DV1: identification of DV</p> <p>DV2: DV referrals</p>	<p>Instruments not specified</p> <p>Measurements of DV identification and referral rates</p>	<p>GRADES</p>	<p>DV1: minimal effect considering high prevalence of DV</p> <p>DV2: no difference in number of referrals compared to alternative intervention of no screening</p>	<p>LOE: I</p> <p>Strengths: studies examined women in diverse healthcare settings and countries, thorough examination of the literature</p> <p>Weaknesses: excluded studies that examined males, mostly high-income countries</p>

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			screening to treatment as usual, participants were female only and age 16 or above, participants went to a healthcare setting or had a home visit Exclusion Criteria: studies that had APE or PPE, targeted males or women under age 16, studies not completed in healthcare setting					Conclusions : screening for DV has a small, minimal impact on DV identificatio n and no impact on DV resource allocation or women’s health outcomes Feasibility to PICO: screening, or treatment as usual, is not enough, HCP need to learn APE

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Table A1*Evaluation Table of Quantitative Studies*

Citation	Theory/ Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement/ Instrumentatio n	Data Analysis	Findings/ Results	Quality of Evidence; Application to practice
Sharps et al. (2016). Domestic violence enhanced perinatal home visits: The DOVE randomized clinical trial Funding: NIH/NINR grant Bias: none Country: USA	Dutton's Empowerment Model	Design: RCT Purpose: evaluate efficacy of APE in reducing DV in perinatal period	N: 239 n: 124 (EG) n: 115 (CG) Demographics : no significant difference between groups, rural and urban women, age 14 or above, low income, experiencing DV, pregnant, < 32 weeks' gestation Setting: multi- location, rural and urban home settings	IV: Domestic Violence Enhanced Home Visitation Program (DOVE) – APE focusing on empowerment , autonomy, resource awareness, and safety planning DV1: reduction in DV	Conflict Tactics Scale 2 ($\alpha=0.94$)	Independent sample <i>t</i> -tests	DV1: $p=0.01$ at 1, 3, 6, 12, 18, and 24- month follow- up	LOE: II Strengths: followed women over 24 months, large sample size Weaknesses : 18.8% of recruits refused to participate, high attrition rate after 12- month follow-up Conclusions : APE is effective in reducing DV against high-

Key: **ANOVA** – analysis of variance; **APE** – active psychoeducation; **CG**- control group; **CI** – confidence interval; **DS** – databases searched; **DV#** – dependent variable; **DV** – domestic violence; **EG** – experimental group; **GRADES** - Grading of Recommendations Assessment Development, and Evaluation tool; **HCP** – healthcare professional; **IV** – independent variable; **LOE** – level of evidence; **MA** – meta-analysis; **N** – number of studies in SR or number of participant in a study; **n** – number of participants in a systematic review or number of participants in a subset of a study; **PPE** – passive psychoeducation; **RCT** – randomized controlled trial; **SD** – standard deviation; **SMD** – standardized mean differences; **SP** – study participants; **SR** – systematic review; **UE** – universal education; α – Cronbach's alpha

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Evaluation Table of Quantitative Studies

Citation	Theory/ Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement/ Instrumentation	Data Analysis	Findings/ Results	Quality of Evidence; Application to practice
								risk women in both rural and urban areas Feasibility to PICO: HCP and their patients will benefit from HCP learning about DV APE

Key: **ANOVA** – analysis of variance; **APE** – active psychoeducation; **CG**- control group; **CI** – confidence interval; **DS** – databases searched; **DV#** – dependent variable; **DV** – domestic violence; **EG** – experimental group; **GRADES** - Grading of Recommendations Assessment Development, and Evaluation tool; **HCP** – healthcare professional; **IV** – independent variable; **LOE** – level of evidence; **MA** – meta-analysis; **N** – number of studies in SR or number of participant in a study; **n** – number of participants in a systematic review or number of participants in a subset of a study; **PPE** – passive psychoeducation; **RCT** – randomized controlled trial; **SD** – standard deviation; **SMD** – standardized mean differences; **SP** – study participants; **SR** – systematic review; **UE** – universal education; **α** – Cronbach’s alpha

Table A2*Synthesis Table*

Author	Alvarez et al.	Bridges et al.	Decker et al.	Divakar et al.	Gupta et al.	Klevens et al.	Madden	Miller et al.	O'Doherty et al.	Sharps et al.
Year	2017	2015	2017	2019	2017	2015	2017	2015	2015	2016
LOE	I	II	III	I	II	II	III	II	I	II
Design	SR & MA	RCT	Pre/post	SR & MA	C-RTC	RCT	Pre/post	C-RCT	SR & MA	RCT
Study Characteristics										
Setting										
Inpatient	X								X	
Outpatient	X		X		X	X	X	X	X	
Home									X	X
Online		X		X						
Sample Size/Number of Studies	35 studies	100	132	6 studies	950	2,708	160	939	13 studies	239
SP = HCP	X			X						
SP = Patients		X	X		X	X	X	X	X	X
Interventions										
Screening	Rarely done		X			X			X	
Resource Provision			X		X	X				X
PPE		X		X			X			
APE			X		X			X		X
Outcomes										
DV Knowledge	≠	↑		↑		≠		↑	≠	↑
DV Resource Awareness					↑	≠		↑	≠	↑
Confidence in HCP to help with DV	≠		↑	↑			↑			↑

Key: **APE** – active psychoeducation; **C-RCT** – cluster randomized controlled trial; **HCP** – healthcare professional; **LOE** – level of evidence; **PPE** – passive psychoeducation or online education; **RCT** – randomized controlled trial; **SP** – study participants; **SR & MA** – systematic review and meta-analysis; **X** – study exhibited this phenomenon; ↑- increased; ↓- decreased; ≠ - no change

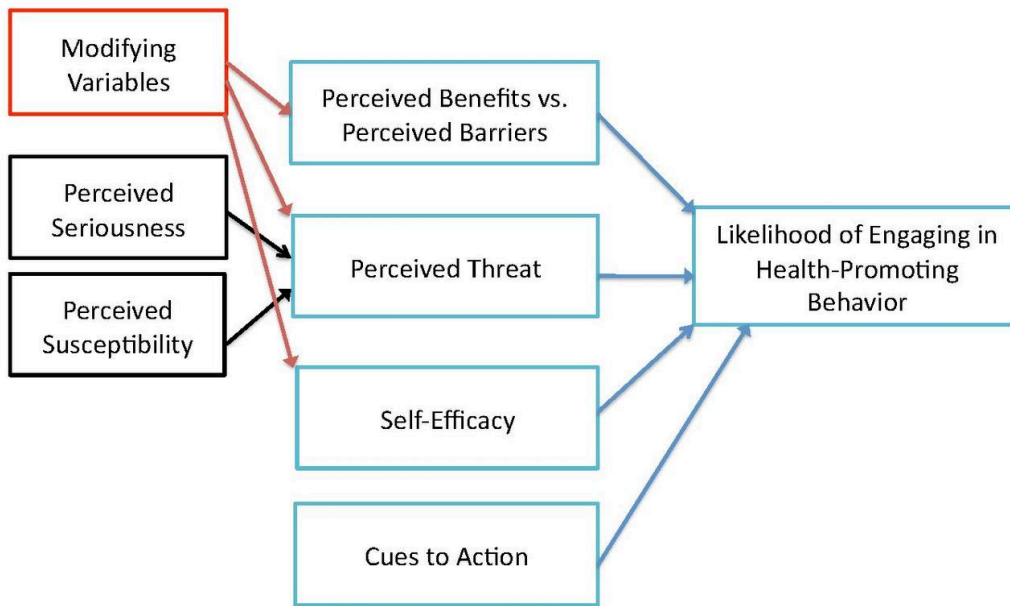
Appendix B

Models and Frameworks

Figure 1

The Health Belief Model

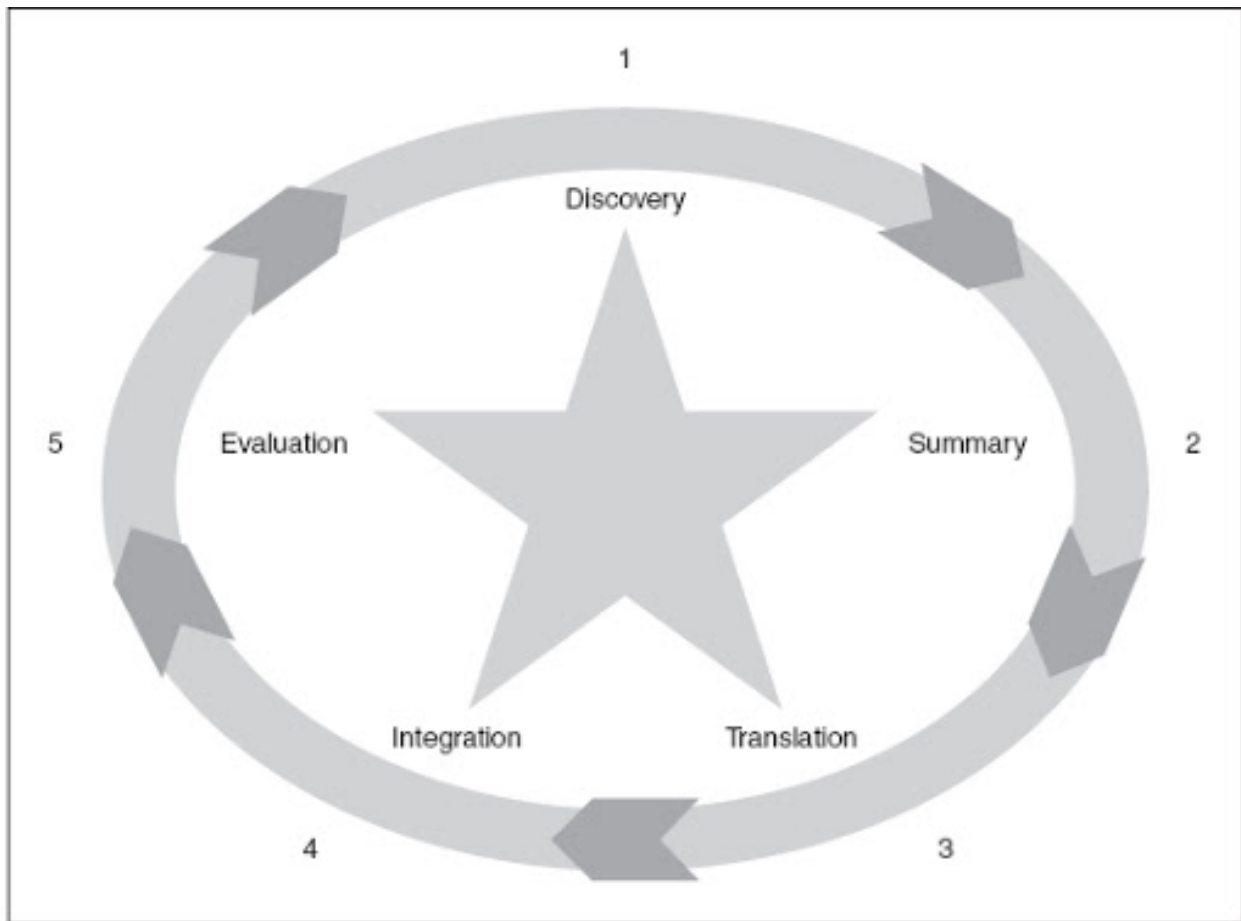
The Health Belief Model



U.S. Public Health Service (1952).

Figure 2

ACE Star Model of Knowledge Transformation



Stevens, K.R. (2004).