

SEXUALLY TRANSMITTED DISEASE EDUCATION FOR ADOLESCENTS

By

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Abstract

An interactive sexually transmitted infection (STI) education tool was developed to assist a non-profit agency, who for the purpose of this paper will be referred to as CCS, in meeting their annual organizational goals including: empowerment, further knowledge of the internal functionality of the female body, and decrease sexually transmitted infection (STI), consecutive pregnancies, and delayed overall risky sexual behaviors. The use of the tested and validated *I Sing* instrument as a pre and posttest instrument positively promoted the use of the interactive STI educational tool that the female adolescents can interact with the educator all at one time to improve their STI knowledge and decrease risky behaviors. The findings of this project included 100% adolescent satisfaction and 100% complete implementation of the project into the CCS organization so the organization could continue to educate adolescents in the same way regarding STI. This submission discusses the project development, intervention, stakeholders, evaluation, and change management process and how the change will be maintained long term in order to decrease risky sexual behaviors in adolescents.

Key words: sexually transmitted infection, sexually transmitted disease, health promotion, education, adolescents, STI treatments, prevention, and adolescent STI education.

Dedication

I dedicate this work to empowering all adolescents that desire the ability to make safe, educated decisions about their sexual health in order to decrease the incidence of sexually transmitted infections.

In addition, this work would not be possible without Audrey Ross' guidance, support, and drive that she instilled in me. God knew what he was doing when he placed her and my husband in my life. Together, they pushed my boundaries, respected my decision, and supported my vision. My husband never blinked an eye at any goal or idea that I have set to accomplish; often he knew I could do it before I did!

Finally, each day that I look into my children's eyes, and wrap my arms around them, I want them to know the dedication that I have to them is unwavering. To increase their self worth and empower them to make the best choices is the best work I will ever do. With hard work and accepting failures in order to flourish, nothing is impossible.

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CHAPTER 1. INTRODUCTION

Developing an adolescent sexually transmitted infection (STI) education process was the core focus of this pilot project. To do this appropriately three project objectives were focused on: identifying a model of care to decrease risky sexual behaviors, demonstrate effectiveness of adolescent participation in STI education, and evaluating the success of the implementation of an adolescent STI education. The pilot project was based on the Iowa systems model which focuses on quality improvement projects and guides the organization and project developer through clinical decision-making and evidence based practice based on both views. Specifically, the need of the Center for Children Services (CCS) to develop a consistent, evidence-based STI education program that could be provided to all adolescents in the same manner throughout the organization was presented to the author. Using the Iowa systems model (Doody & Doody, 2011) it has been found that this project is problem focused and has been determined as a priority for the CCS organization, specifically for the Parents Too Soon (PTS) program.

Currently in a county in Illinois, as compared to 2011 Centers for Disease Control and Prevention (CDC) national statistics, there is a high rate of sexually transmitted infection in adolescents. In order to address this problem, a quality improvement project was designed that allowed the adolescent to be a part of the educational process. This project substantiates the problem-focused triggers from the first step of the Iowa systems model that promote the need to implement a practice change that can improve the sexually transmitted infection (STI) rate and quality of education, as well as describe the clinical relevance, frame the clinical question using the problem, intervention, comparison, outcome model (Kloda & Bartlett, 2013), and the consequences of not addressing the problem.

Findings from phone call survey and face-to-face interviews completed by CCS determined that over the past ten years STI education has been provided through a variety of ways. For example there are one-day discussions during physical education class, six-week health classes at the public high schools, and no information shared at parochial schools. By using research specific to adolescent STI education it was determined that providing more detailed STI rates for a

county in Illinois identified direct significance and importance of educating adolescence regarding STI awareness.

Description of the Problem, Environment, and Target Population

Problem

The problem was identified as a lack of a consistent way to educate the adolescents while engaging them in the educational process during the CCS home visits and group education. At CCS the education provided to the adolescents for STI education is provided through pamphlet handouts with no open discussion among the adolescents or program employees. Using the Iowa systems model (2011) a systematic educational process was developed and implemented for the Center for Children Services organization, specifically for the PTS program.

Environment

The Robert Wood Johnson Foundation (2012) determined through their research that a county in Illinois is ranked 99 out of the 102 counties in Illinois for negative health behaviors. More specifically, there were 512 STI's reported in that county in Illinois (total population of 81,509) in 2012. This statistical STI information far outreaches the total 469 reported STI cases per capita for the state of Illinois. In line with this is the total birth rate is 40 for Illinois compared the county in Illinois teen birth rate of 65, further suggesting risky sexual behaviors among adolescents (Robert Wood Johnson Foundation, 2012). In 2011, according to the Centers for Disease Control and Prevention (CDC) most recent reportable STI statistical comparison, in 2011, this county in Illinois reported 602 cases of Chlamydia as compared to 52,971 cases of Chlamydia for the state of Illinois. Gonorrhea accounted for 164 total reported cases in the county in Illinois, while 13,594 cases were reported for Illinois in 2011. Finally, three cases of Syphilis were reported for the same county in Illinois and 1,134 cases reported for Illinois (Illinois Department of Public Health, 2011). The varied statistical analysis of the county in Illinois when compared to the state can be associated with the county's Health Departments closure in 2010 of the family planning department, further delaying the most up to date and accurate STI numbers for the county.

Target Population

Research regarding engaging adolescents in learning has been well documented and proves that adolescents are more receptive when they are engaged in their

learning. Edinburgh and Saewyc (2008) support in-home education, including STI education which included active adolescent participation, as it assisted in providing empowerment and decreasing overall risky sexual behaviors. CCS case managers are already distributing informal STI, birth control, and safe sex education. This STI education project will restructure the education and cause consistency in educating the adolescents across the organization and participants of the PTS program.

Purpose of the Capstone Project

The purpose of the Capstone Project was to bring evidence based education project to the PTS program. To cultivate a well-developed health care project it is important to incorporate the PICO framework to develop a precise and goal-driven clinical question. The PICO question follows: Among the mothering and pregnant adolescents, ages 12-19, using the PTS Program at a county in Illinois's CCS Organization, does sexually transmitted infection education transmitted via hands-on or tactile demonstration lead to decreased incidence of risky sexual behaviors compared to the current educational tool?

Significance of the Capstone Project

The clinical problem is significant to the CCS organization based on an interview this author had with the organization's program director, who stated that many of these adolescent parents have an STI or previous STI with no knowledge of how they got the infection or how to treat it (Program director, personal communication, November 21, 2013). The clinical issue is in line with their annual goal; to delay or prevent subsequent pregnancies, delay at risk behaviors, and decrease STI as a whole.

Definition of Relevant Terms

I Sing the Body Electric: The instrument used in this study (see Appendix D & E) was adapted from the *I Sing the Body Electric Youth Survey* of the Provena United Samaritans Medical Center (PUSMC, 2010), which was modeled on the CDC Youth Risk Behavior Survey (YRBS). Questions for this current research were designed to fit the information needs of the PTS participants. Center for Children Services (CCS) a non-profit agency that provides an array of social services that offer a safe haven for youth in crisis and empower them to succeed, high quality and accessible healthcare for the whole family regardless of the ability to pay. Health Belief Model (HBM) is the framework used to compare the questions from the pre and post survey using the *I Sing* questionnaire to the concepts within the HBM model including perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action, and self-efficacy (Sharma, 2011). Parents Too Soon (PTS) program is a voluntary program focusing on the high risk target population of first time teen parents, ranging age 13 to 19 years of age. Sexually Transmitted Infection (STI) is caused by bacteria, viruses, protozoan, fungus, and parasites and includes Syphilis, Chlamydia Trachomatis, Herpes, Gonorrhea, Genital Warts, Trichomoniasis.

Assumptions

Going into this project there were three basic assumptions made. By implementing a consistent, evidence based practice STI education for the adolescents in the PTS program the assumption is there would be a decrease in STI. The STI education is developed so that it could be easily reproduced during all meetings with the PTS adolescents and provided in the same manner every time. The final assumption is the project would be implemented into the entire organization.

Limitations

Limitations to this quality improvement project include the small sample size, pilot project, and one-month post education assessment. Due to the sample size being small, the results gleaned from the data can only be generalized at this site and for this county in Illinois. A longitudinal project would demonstrate STI education and decreased risky sexual behaviors success more definitively for this population.

Capstone Project Objectives

Project Objectives:

1. Identify a model of care to decrease risky sexual behaviors

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2. Demonstrate effectiveness of adolescent participation in STI education
3. Evaluate the success of implementation of an adolescent STI education

CHAPTER 2. THEORETICAL FRAMEWORK AND LITERATURE REVIEW

Theoretical Framework

The Health Belief Model (HBM) was used to develop and evaluate the extent of participant buy in to the STI interventions being implemented. The Health Belief Model was utilized as the framework to compare the questions from the pre and post survey using the *I Sing* questionnaire to the concepts within the HBM model including perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action, and self-efficacy (Sharma, 2011). Perceived susceptibility: when participants are more likely to come in contact with an illness or condition the more likely they are to take precautions. Perceived severity: the severity of how seriously the illness or condition can affect a participant and their ability to function impacts their decision to be cautious. Perceived benefits: how beneficial is the suggested method of preventing or reducing the illness or condition? If the method is seen as advantageous in greatly reducing the illness or condition the more likely the participant is to use the method. Perceived barriers: how much the method costs, its convenience, comfort to use, and is it upsetting to the participant or their environment? Cues to action: the cues are both internal (how does this affect the participant's body) and external (interpersonal communication, media) that causes the participant to want to take action. Self-efficacy: the confidence and empowerment that a participant feels to take action on the current behavior (Sharma, 2011). The HBM relates to the intervention directly through the adolescents' verbalizing how important it was to understand STI, treatments, and how to prevent them. The adolescents specifically stated that this information could keep their sexual choices safer in the future.

Summary of Relevant Research

To provide a background for understanding how adolescent STI education has been conducted, a literature review was performed using the following

question. Among the mothering and pregnant adolescents, ages 12-19, using the PTS Program at a county in Illinois's CCS organization, does sexually transmitted infection education transmitted via tactile demonstration lead to decreased incidence of risky sexual behaviors compared to no current educational tool?

The author conducted an electronic search of digital databases via the Capella University library portal of the literature utilizing the following databases: Cumulative Index to Nursing and Allied Health Literature (CINAHL), Google Scholar, and ProQuest.

The literature review established importance of the use of the health behavior model to develop and evaluate the extent of participants' buy-in to the interventions being provided using six articles. All six studies provided support in using intense counseling type interventions to receive buy in and thus improved knowledge from the adolescents. The titles and keywords for all searches comprised of three main constructs: (a) sexually transmitted disease [(disease) AND (infection)] and (b) health promotion [(education), (prevention), OR (adolescent STI education)] and (c) STI treatments [(adolescents)].

For all searches general limits included *time frame* (see below), *report type* (academic journal, full-text), and *publication language* (English). The searches in

CINAHL, Google Scholar, and ProQuest databases were limited to 2008-present [2012] as a time frame. This search resulted in 823 citations as follows: CINAHL, 48 citations; Google Scholar, 323 citations; Proquest, 452 citations. Titles and abstracts of the 823 were reviewed for relevance according to the following inclusion criteria: (a) sexually transmitted disease (infection) of adolescents ages 12-19; (b) health promotion in-group settings for adolescents with STI or risky sexual behaviors; (c) STI treatment education for adolescents. Exclusion criterion was adolescent STI education presented to individual adolescents. If a study met all initial criteria, full-text was retrieved and evaluated to determine final eligibility. This process resulted in the six relevant studies discussed in the summary of evidence below.

While the methodologies varied from meta-analysis, mixed method, pilot testing CD-ROM, quasi-experimental, randomized control trial, and cross-sectional correlational studies; a positive conclusion was developed that demonstrated the intense interventions and follow up is successful in evaluating the education disseminated. Inconsistency lies in the selection of study site and involvement in the education being provided. Inconsistency results in revolving risky sexual behaviors long term. This synthesis literature determines that there is a gap in the current practice of dissemination of sexual education information to the younger sexually exposed female adolescent.

Centers for Disease and Control Data

Until 2011, the sexually transmitted infection (STI) rates had relatively decreased or remained the same in the United States. The three reportable STIs

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include Syphilis, both primary and secondary, Gonorrhea, and Chlamydia have all risen in the United States in 2011 according to the CDC, (CDC, 2011a). Specifically, in 2011, 200 more cases of Syphilis were reported to the CDC than in 2010. Gonorrhea cases in the United States rose 4.0% in 2011, which correlates to 321,849 cases in the nation or 104.2 cases per a 100,000 population. Finally, Chlamydia trachomatis was responsible for 457.6 cases per 100,000 population or 1,412,791 cases of sexually transmitted infection in our nation in 2011, making this the largest amount of infection cases ever reported to the CDC for any reportable condition (CDC, 2011a).

According to the CDC (2011a) most recent reportable STI statistical comparison, a county in Illinois reported 602 cases of Chlamydia in 2011 compared to 52,971 cases of Chlamydia for the state of Illinois. Gonorrhea accounted for 164 total reported cases in a rural county in Illinois, while 13,594 cases were reported for Illinois in 2011. Finally, three cases of Syphilis were reported for the county in Illinois and 1,134 cases reported for Illinois (Illinois Department of Public Health, 2011).

Synthesis of Literature

Six articles were chosen. Of those, one was a level I meta-analysis, three were level II (mixed method, random control trial, and pilot study), one was a level III quasi-experimental analysis, and one was a level IV cross-sectional correlational study. There were two over-arching themes that gleaned from the synthesis-the success of adolescent group education when providing STI education and risky sexual behaviors that increased the likelihood of repeat STI and the need to use condoms during each encounter.

Adolescent Group Education

Champion and Collins' (2010) study proved 70 adolescents aged 14-18 using group education and individual education to be successful when educating the adolescents regarding AIDS. The findings suggested an overall decrease in risky sexual behaviors and less embarrassment to discuss the use of condoms among the adolescents and educators. This fosters support in group education and adolescent empowerment.

Interactive STI group education was also supported by Ito, Kalyanaraman, Ford, Brown, and Miller (2008), who used an interactive CD-ROM aimed to prevent sexually transmitted infections among female adolescents. There were 47 female adolescent participants aged 15-19 who attended a health department clinic

randomized to receive the CD-ROM and didactic education, or didactic education session only. The findings concluded no significant change in intention to engage in sexual intercourse within the next three months between groups before or after the intervention. Limitations are due to many participants reporting a previous STI potentially creating resistance to counseling.

Kan et al. (2012), compared the effects that education, health, and child care had on decreased repeat pregnancy, adolescent education outcomes, and improving effective contraception use short term via means of home visits, school-based education, and mentoring. The mothers in the intervention group were less likely to experience repeat pregnancies within 12 months when using long-acting reversible contraception.

Kuyper et al. (2009), compared effects of motivational interviewing (MI) versus educational counseling on the use of condoms and partner notification at the 6-month follow up. Using 428 participants the study proved that participants were more likely to use condoms with known and unknown partners long term, were more comfortable, and had increased self-efficacy using the MI intervention method. A pre and posttest analysis was used to compare results. This type of group

education and post survey evaluation further supports the STI education that was conducted in the same manner at CCS.

Marion, Finnegan, Campbell, and Szalacha (2009), used 342 low-income African-American women from west side Chicago who were at least 18 years old and reported a minimum of two STI diagnoses during the past year. Using the intensive individualized intervention system of the WWP a 20% decrease in reported STI diagnoses over time was reported past the first six months.

Supporting the many ways to educate adolescents regarding sexual health and STI.

Risky Sexual Behaviors

In comparison, Nkansah-Amankra, Diedhiou, Agbanu, Harrod, and Dhawan (2011) used precursors to sexual risk exposures associated with HIV/AIDS infection among a representative sample of 1,498 students in 9-12 grades from 29 Colorado public high schools. Results proved that variables were important precursors to early sexual behaviors. For female adolescents who used two illegal substances the likelihood of early sexual experience increased by 12 times compared to exposure to three or more illegal substances increased the same odd to 44-fold. This supports the use of the *I Sing the Body Electric* instrument to evaluate the state of the adolescents who will be receiving the STI education.

This synthesis of literature determines that there is a gap in the current practice of dissemination of sexual education information to the younger sexually exposed female adolescent in a group or home setting. Ito et al. (2008); Kan et al. (2012); and Nkansah-Amankra et al. (2011) support the notion that targeted interventions are more effective, yet knowledge alone cannot sufficiently affect the sexual risk behaviors and the precursors of these behaviors. Consequently the project will prove to decrease the likelihood of contracting primary or recurrent STIs among adolescent females through strengthening their knowledge base with hands-on learning.

CHAPTER 3. CAPSTONE PROJECT DESIGN

Project Design and Description

Based on evidence that support adolescent frank discussions and hands-on interventions, this educational intervention to improve the STI knowledge was developed. Visual aids along with classroom education were presented to the adolescents during a regular PTS group meeting at CCS. Using the *I Sing* instrument, education was evaluated using the instrument as a pre and post education instrument.

Capella University's Institutional Review Board (IRB) approved this STI education project. The IRB determined the project to be exempt from continuing annual review based on the design and non-identifying nature of the project. The sample

included 13 pregnant or mothering adolescent participants, ages 12-19, during a regularly scheduled PTS group meeting at CCS. Adolescent participants were not identifiable, no parental permission or individual permission was required due to the participants or their guardian/parent having previously signed a consent form to participate in the PTS group. Due to this CCS consent process this project was exempt from additional parental consent.

The education was disseminated through display models on a flip chart that include Syphilis, Chlamydia Trachomatis, Herpes, Gonorrhea, Genital Warts, and proper condom technique. The education was presented to adolescents in a format that allowed them to become actively involved in their education. Borrowing the framework from the *I Sing* instrument, the project was developed to assess changes in knowledge of sexual behaviors among participants. The project is a Level VI descriptive project using descriptive statistics and qualitative data design concepts. This is appropriate when the project manager seeks to explore the characteristics of a specific occurrence identified in a single sample population such as that of CCS adolescents (Burns & Grove, 2001). Data retrieved are analyzed and interpreted to gain meaning and formulate conclusions and hypotheses that will direct future research or assist in the planning of interventions to meet a particular population need.

This project determined that education of sexually transmitted infection is successful when disseminated in a consistent interactive way when compared to no formal instruction methodology in decreasing the incidence of risky sexual behaviors (Champion & Collin, 2011).

Rationale for Design Framework

Ito et al. (2008); Kan et al. (2012); and Nkansah-Amankra et al. (2011) demonstrate in their articles that educational models meet the evidence for best practice in educating adolescents' in-group settings regarding STI education. The CCS organization requested a consistent STI education process that could be easily repeated by all home visitors, case managers, or doulas in their program.

Using the Health Belief Model (HBM) tied the evidenced of the intervention directly to the intervention through the captive audience. The HBM supports the education presentations to participants that cue the participant to want to make healthier choices through educational empowerment and buy-in.

Capstone Project Intervention

For this project, the participants were given the *I Sing* pre survey directly before the STI education. The pre and post tool had no name or identifying information on the tool, and the participants submitted the survey on a table in a pile that could not identify the adolescent participants. The STI education was provided to the PTS adolescent group, specifically the prenatal and infant group, consisting of 13 pregnant or mothering adolescents during their regularly scheduled monthly meeting.

Initially, when developing the toolkit for this project, the focus was on development of STI 3D models that were designed specific to the look and feel of the disease with no genitalia attached to any of the STI models. The purpose was that the adolescents could interact with the models of the STI's in a more realistic fashion, and all educators could demonstrate the diseases consistently every time the STI education was presented.

This was especially important so that the toolkit could be taken into public school systems for adolescent STI education across the county in Illinois, without concern of showing gender/genitalia and be consistent in the education that was presented to the adolescents. The models were developed using a 3D printer; however due to limited printing capabilities including color and cost, the toolkit needed to be revised for this project.

What was created instead was a more creative, interactive process. The education was disseminated through display models that include Syphilis, Chlamydia Trachomatis, Herpes, Gonorrhoea, Genital Warts, Trichomoniasis, and proper condom technique. A flipchart, that was purchased for less than \$30 dollars, which had pictures of each disease and small snippets of STI information next to each disease with presenter information on the backside of the chart, was

purchased. In addition, a prescription for each STI disease was prescribed and attached to the flip chart using velcro so that the adolescents could remove the treatment of each disease. This allowed the adolescents to have consistent education each time and still be able to have interactive STI group education. The Velcro was strategically placed over any genitalia on the flip chart so that no gender anatomy was displayed.

A posttest was then given 30 days from the day of STI education presentation to compare their initial and gained knowledge. The posttest determined knowledge was gained during the interactive STI model education and demonstration.

In order to make an effective long term practice change, the pilot project was initiated, evaluated, and continues to recur over the course of time within the organization. As the case managers do home visits, the participant is asked during the visit what they would be interested in knowing more about or working on during the following meeting. This individualizes the care, information, and projects that are worked on between case managers and participants.

This project determined interactive education of STI is effective when disseminated via display models when compared to no formal instruction methodology in decreasing the incidence of risky sexual behaviors including repeated unprotected sexual encounters and incidence of sexually transmitted infections. The education was disseminated through tactile display models that include: Syphilis, Chlamydia Trachomatis, Herpes, Gonorrhea, Genital Warts, and proper condom technique. Each disease model displayed had its corresponding treatment exhibited next to the model. For those disease models with no cure, "No Cure" was displayed next to those disease models.

Assessment Tools

The *I Sing* instrument is an instrument adapted from the CDC YRBS instrument. The *I Sing* instrument is a tested and validated survey developed by PUSMC (2010) and formulated specifically for the population of the county in Illinois. The instrument gathers information regarding health behaviors of 9th through 12th grade students in a county in Illinois. Questions about personal safety, violence related behavior, depression/suicide, tobacco use, alcohol use, drug use, physical activity, nutrition, weight issues, abstinence, and sexual behavior resulting in pregnancy, AIDS or other sexually transmitted diseases are incorporated (PUSMC, 2010). The instrument results were compared to the HBM concepts in order to analyze the impact of the project on the adolescents' risky sexual behaviors. Within the post instrument four additional patient satisfaction questions were developed for feedback to improve the project. The patient satisfaction results demonstrated no suggestions for improvement or change of the project.

For this pilot study, the participants were given the *I Sing* pre and post test to determine their prior and gained knowledge, as well the likelihood to use a condom during each sexual encounter thereafter. In addition, the posttest determined knowledge that was gained during the tactile STI model demonstration.

Strengths of descriptive design concept include the design capability to allow the researcher to acclimate or modify the design instrument to address the

variables of the phenomena under study, and to conduct the study with relatively little time commitment or capital investment (Eaden, et al., 1999). In addition, the descriptive design concept does not require complete control of the assessed variables by the researcher, thereby limiting investigator bias within the project.

A survey instrument, pre-and-post education enables educators to: (a) measure knowledge deficit and gain, (b) evaluate the education provided, and (c) assess response to the educational tool (Jaworski & Carey, 2007). This provides a quality formative and summative evaluation. Using the *I Sing* pre and posttest analyzed data; any positive feedback that suggests improved knowledge among the adolescents would constitute formative success, as this is a move in a positive direction. Taking adolescents with little to no correct STI information and instituting quality self-awareness and disease processes and identification will constitute successful implementation of this quality improvement project. Using the descriptive analysis fifty percent or higher improvement in summative knowledge or awareness of STI information constitutes project success.

Using the *I Sing* pre and posttest analyzed data; any positive feedback that suggests improved knowledge among the adolescents would constitute success, as this is a move in a positive direction. Taking adolescents with little to no correct STI information and instituting quality self-awareness and disease processes and identification will constitute success.

Other Evaluative Strategies

In order to make an effective long term practice change, the pilot project was initiated, evaluated, and then will continue over the course of time within the organization, with the group directors continuing the education. During the time that the STI education project was occurring the pre and posttest occurred, allowing for continued information to be gathered over time. This formative process will allow the continued stakeholder education to be evaluated and change, as well as be flexible, with the needs of their organization and adolescent population that receives the stakeholder STI education information.

For this project to become a successful long term STI education improvement in the years to come, all stakeholders must follow through. This would include the executive stakeholders of CCS; board of directors, director of the CCS, home visitors, program supervisors, and all case managers in the organization. As well, the mothering females, paramours, and their families should be educated and continually involved so that the new STI knowledge becomes a successfully embedded as common talk in their homes. Figure 1 depicts the implementation time frame for the project.

CHAPTER 4. ANALYSIS OF IMPACT

Findings

Data from the surveys were compiled using Microsoft Excel analytic software. The author reviewed the post survey results, the data suggests support from the adolescents and that the STI education was helpful and supported participant knowledge of STI's and their respective treatments (see Appendix B). Specifically, 5 of the 13 adolescents surveyed had experienced the diagnosis of an STI in the past 12 months prior to the education. At the one-month post education survey none of the eight adolescents completing the survey had been diagnosed with an STI.

Next, when asked in the pre-survey what form of birth control was used in their last sexual encounter three stated no method of birth control was used, four used a condom, two used Depo-Provera, and three reported some other method of birth control was used. At the one-month post education survey of the eight respondents four respondents reported no method was used to prevent pregnancy, two used condoms, and two reported using some other method of birth control. This suggests that six of the eight of those adolescents who were pregnant found it insignificant to use a birth control or STI prevention method while pregnant.

Additionally, when asked if any of the adolescents had ever been forced to have sexual intercourse when they didn't want to, five of the 13 adolescents responded in the affirmative (see Appendix C). Correspondingly, when asked in the pre-survey how many sexual partners the adolescents had in their life three of the adolescents had only one partner, one respondent had two partners in their life, three adolescents had three partners, one adolescent had five partners, and four of the adolescent respondents had six or more partners in their lives. No correlation was investigated between forced sexual encounters and number of sexual partners; a future project could review this correlation.

Finally, due to positive feedback from all 13 PTS program members, the project was unchanged and able to be presented during an in-service meeting to the director, supervisor, home visitors, and doulas. All of these key stakeholders unanimously approved the quality improvement project and the new process is implemented at the organization at this time. The director and this author have been in direct contact; the display was purchased by the organization and the treatments were given to the director to complete the board so that the same process can be carried out long term at all STI education meetings with the adolescents. As a result, additional directors at the organization have reached out requesting that I come to their groups to educate their group members and key stakeholders using the same information. The evaluation process provides successful project data at this time; therefore project could potentially be used across the county and state for adolescent STI education. See figure 1 which illustrates the project.

Figure 1. Model of Education

CHAPTER 5. IMPLICATIONS AND CONCLUSIONS

Implications for Practice

If adolescent STI interactive education could be improved, the Healthy People 2020 initiative for adolescent STI's could be drastically reduced. Employing a model such as the HBM allows the educator to ensure that the adolescent participants to have buy-in to the importance the concepts being presented to them. Using the HBM supports the understanding that the more support and interaction there is between the educator and adolescent, the more likely that the adolescents will be to maintain the change long term. This could improve graduation rates, adolescent empowerment, and improve adolescent health holistically for our adolescents as future leaders. Eradicating this STI issue in the future for the betterment of our adolescents, population, and the world will improve adolescent health as a whole. The Healthy People 2020 initiative (2013) supports the initiative of STI education stating that the adolescent population accounts for half of the 19 million new STI's annually among ages 15-24, with \$15.9 billion dollars of the U.S. health care systems total cost going to treatment of STI annually. Yet STI goes unacknowledged by healthcare providers, public, and policymakers with no active policies in place for essential primary prevention and care. This global health issue has affected our own small community with increasing urgency in the past 10 years. The evaluation provides successful project data; the project could potentially be used across the county for adolescent STI education in school systems, at state, and national level conferences to promote cost effective hands-on learning for adolescents. This could mean that we could potentially eradicate STI for our adolescents before the 2040 Healthy People initiatives are developed, leaving room to focus on the newer concerns of our adolescents in future society.

Summary of Outcomes as Related to Evidence-Based Practice

The STI quality improvement project is detailed, has multiple layers of support, knowledgeable stakeholders, and a goal-oriented organization used for the project dissemination. The tested and validated *I Sing* questionnaire developed

specifically for the adolescent population of the county in Illinois; Illinois provides a quality evaluation tool for this project, the outcomes support the use of HBM to prove successful outcomes for the adolescents. Using the HBM substantiated the importance of STI education to the CCS adolescent. The education was provided to the adolescent females in a way that cued them to action to be an interactive part of their education. The female adolescents were able to verbalize why STI education was important, perceived severity: the severity of how seriously the illness or condition can affect a participant and their ability to function impacts their decision to be cautious, the importance of using condoms as a line of defense to prevent STI, and perceived benefit: how beneficial is the suggested method of preventing or reducing the illness or condition? If the method is seen as helpful in greatly reducing the illness or condition the more likely the participant is to use the method. Perceived barriers: how much the method costs, its convenience, comfort to use, and is it upsetting to the participant or their environment? . Finally, PTS adolescents' self-efficacy was noted as improved. This is supported in the findings from completed post-surveys stated an improved understanding of condom use, and awareness and treatments of STI's presented.

This evaluation method determined the project could have the intended change that the project champion and organization were looking for in order to meet their goal: to delay or prevent subsequent pregnancies, delay at risk behaviors, and decrease STI's as a whole.

Conclusions

In summary, effective use of the clinical question includes utilizing the best systems model; in this case the Iowa model, its multiple steps of disseminating research, and well formulated evidence based practice into the clinical setting to formulate an organizational policy that is currently non-existent (Doody& Doody, 2011). The systems level model included a summation regarding how the organizations staff, training, no capital costs to the organization, and motivation

for the organization to buy into the process occurred (Doody& Doody, 2011). Given the aforementioned statistical data regarding the county's adolescent STI population, not addressing this issue to develop a policy would have continued to promote unsafe and uneducated risky sexual behaviors that our county nor state can tolerate. This is a pilot project of what this author wants continue for future projects within our public school systems and at other organizations. This project fostered support of continuing to gather STI risky behavior data from CCS at the 6-month and 1 year post initiation of the quality improvement project in order to continue the longitudinal data compilation. From the supportive results, developing this project supports creating wider range increased knowledge for social change among adolescents being involved in their education processes in future projects.

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APPENDIX A. STATEMENT OF ORIGINAL WORK

Academic Honesty Policy

Capella University's Academic Honesty Policy (3.01.01) holds learners accountable for the integrity of work they submit, which includes but is not limited to discussion postings, assignments, comprehensive exams, and the dissertation or capstone project.

Established in the Policy are the expectations for original work, rationale for the policy, definition of terms that pertain to academic honesty and original work, and disciplinary consequences of academic dishonesty. Also stated in the Policy is the expectation that learners will follow APA rules for citing another person's ideas or works.

The following standards for original work and definition of *plagiarism* are discussed in the Policy:

Learners are expected to be the sole authors of their work and to acknowledge the authorship of others' work through proper citation and reference. Use of another person's ideas, including another learner's, without proper reference or citation constitutes plagiarism and academic dishonesty and is prohibited conduct. (p. 1)

Plagiarism is one example of academic dishonesty. Plagiarism is presenting someone else's ideas or work as your own. Plagiarism also includes copying verbatim or rephrasing ideas without properly acknowledging the source by author, date, and publication medium. (p. 2)

Capella University's Research Misconduct Policy (3.03.06) holds learners accountable for research integrity. What constitutes research misconduct is discussed in the Policy:

Research misconduct includes but is not limited to falsification, fabrication, plagiarism, misappropriation, or other practices that seriously

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deviate from those that are commonly accepted within the academic community for proposing, conducting, or reviewing research, or in reporting research results. (p. 1)

Learners failing to abide by these policies are subject to consequences, including but not limited to dismissal or revocation of the degree.

Statement of Original Work and Signature

I have read, understood, and abided by Capella University's Academic Honesty Policy (3.01.01) and Research Misconduct Policy (3.03.06), including the Policy Statements, Rationale, and Definitions.

I attest that this dissertation or capstone project is my own work. Where I have used the ideas or words of others, I have paraphrased, summarized, or used direct quotes following the guidelines set forth in the *APA Publication Manual*.

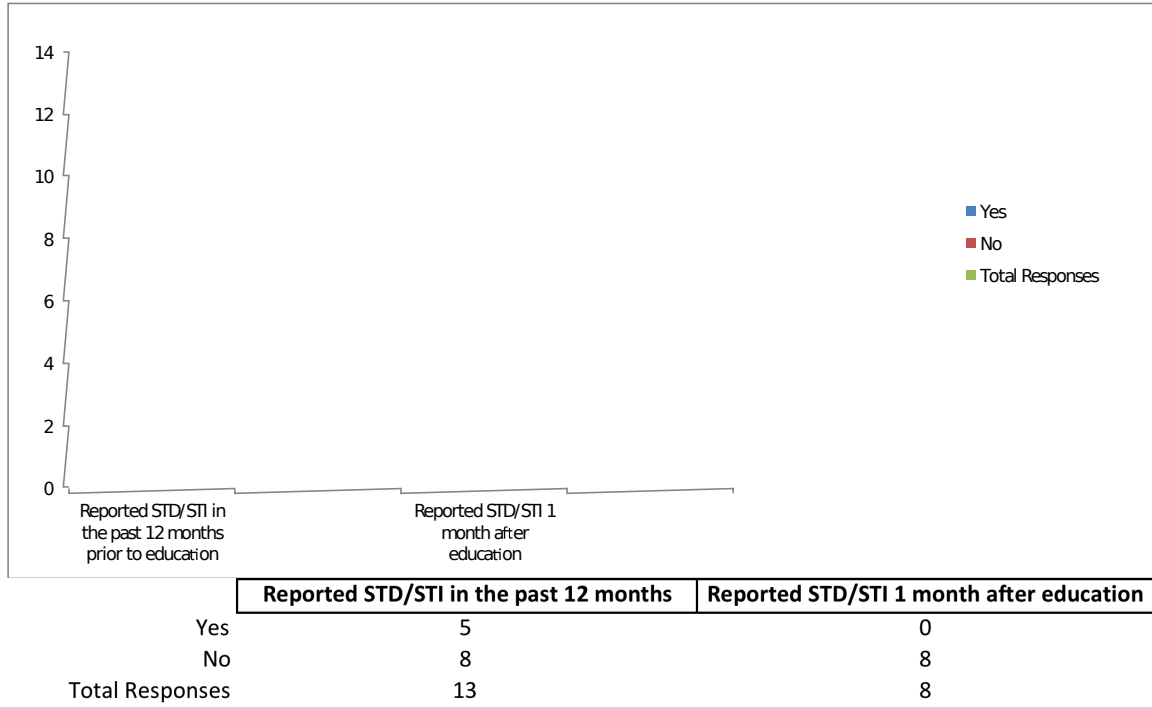
Learner name
and date

Chastity Osborn November 2, 2014

Mentor name
and school

Lydia Forsythe, Capella University

APPENDIX B. SURVEY RESULTS



APPENDIX C. FORCED SEXUAL INTERCOURSE SURVEY RESULTS

5. Have you ever been physically forced to have sexual intercourse when you did not want to?		
	Yes	No
Pre-Survey	5	8
Post-Survey	3	5

APPENDIX D. PRE-SURVEY QUESTIONNAIRE

From I Sing the Body Electric Survey, by Provena United Samaritans Medical Center, http://www.provena.org/usmc/body_usmcfoundation.cfm%20?id=588. Adapted with permission.

Important Instructions

Do not put your name or any other information on your answer sheet that might identify you, even though there is space for that purpose.

Choose only one answer for each question.

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If you wish to change your answer, please completely erase your first answer.
If you have any questions, feel free to ask and the project manager will come to you.

Begin

1. How old are you?

- A. 12 years old or younger
- B. 13 years old
- C. 14 years old
- D. 15 years old
- E. 16 years old
- F. 17 years old
- G. 18 years old or older

2. What is your gender?

- A. Female
- B. Male

3. How do you describe yourself? (Select one or more responses.)

- A. Native American/American Indian
- B. Asian American
- C. Black/African American
- D. Hispanic or Latino
- E. White
- F. Multi-racial
- G. Other

4. With whom do you live **MOST OF THE TIME?** (Select one)

- A. Both parents
- B. Parent and stepparent
- C. Mother only
- D. Father only
- E. Legal guardian
- F. Foster parent
- G. Group home

- H. Grandparents only
- I. Living independently

5. Have you ever been physically forced to have sexual intercourse when you did not want to?
- A. Yes
 - B. No

Sexual Behavior

6. How old were you when you had sexual intercourse for the first time?
- A. I have never had sexual intercourse.
 - B. 11 years old or younger
 - C. 12 years old
 - D. 13 years old
 - E. 14 years old
 - F. 15 years old
 - G. 16 years old
 - H. 17 years old or older
7. During your life, with how many people have you had sexual intercourse?
- A. I have never had sexual intercourse.
 - B. 1 person
 - C. 2 people
 - D. 3 people
 - E. 4 people
 - F. 5 people
 - G. 6 or more people
8. Did you drink alcohol or use drugs before you had sexual intercourse the last time?
- A. No
 - B. Yes

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9. The last time you had sexual intercourse, what one method did you or your partner use to prevent pregnancy? **(Select only one response.)**

- A. I have never had sexual intercourse.
- B. No method was used to prevent pregnancy
- C. Birth control pills
- D. Condoms
- E. Depo-Provera (injectable birth control)
- F. Withdrawal
- G. Some other method
- I. Not sure

10. How many times have you been pregnant or gotten someone pregnant?

- A. 0 times
- B. 1 time
- C. 2 or more times
- D. Not sure

11. During the past 1 month, has a doctor or other health professional told you that you had a sexually transmitted disease or infection (STD or STI) like herpes, gonorrhea, chlamydia, or genital warts?

- A. Yes
- B. No
- C. Don't know/ Not sure
- D. Haven't been to a doctor or clinic in the past 12 months

THIS ENDS THE SURVEY

Thank you for your thoughtful answers.

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From I Sing the Body Electric Survey, by Provena United Samaritans Medical Center, http://www.provena.org/usmc/body_usmcfoundation.cfm%20?id=588. Adapted with permission.

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- G. Other

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- A. Yes
- B. No
- C. Don't know/ Not sure
- D. Haven't been to a doctor or clinic in the past 12 months

PATIENT SATISFACTION SURVEY:

- 1. What did you like most about the project?**

- 2. What did you like least about the project?**

- 3. Any suggestions for improvement of the project?**

- 4. Ideas or suggestions to improve the presented education?**

THIS ENDS THE SURVEY

Thank you for your thoughtful answer