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Perceived Barriers for Implementing Primary Sexually Transmitted Infection Prevention Programs for Adolescents in the Tampa Bay Area

by

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A thesis submitted in partial fulfillment of the requirements for the degrees of Master of Arts Departments of Anthropology College of Arts and Sciences

and

Master of Public Health Department of Community and Family Health College of Public Health University of South Florida

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Keywords: youth, community based programs, providers, health education

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DEDICATION

This work is dedicated to my family and the youth in the Tampa Bay area.

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I would like to thank the participants for their contribution to this research. This project would not be possible without each of the interviewee's time commitment and their passion for educating the youth in the Tampa Bay Area. I would also like to extend my appreciation to the staff and members of the Connect to Protect® Tampa Bay Coalition and the University of South Florida's Department of Pediatrics, Division of Infectious Diseases for an invaluable experience during my internship.

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TABLE OF CONTENTS

LIST OF TABLES	
LIST OF FIGURES	iii
ABSTRACT	iv
CHAPTER 1: INTRODUCTION	1
Sexually Transmitted Infections in Adolescents	1
Research Questions	
Summary	
CHAPTER 2: LITERATURE REVIEW AND THEORETICAL FRAMEWORK	8
Approaches for Sex Education in the US	8
National Funding for Primary STI Prevention	
Provider Based Research	
Literature Review Summary	
Theoretical Framework	
Summary	
Research Setting: Tampa Bay area	
CHAPTER 3: METHODS	35
Analysis	
CHAPTER 4: RESULTS	41
Summary of Program Descriptions	41
Description of Participants	
Perceived Barriers	
Summary of Results	
CHAPTER 5: CONCLUSIONS	67
Discussion	67
Conclusions	72
Limitations and Recommendations	
CHAPTER 6: REFERENCES CITED	77

APPENDICES	86
Appendix A: IRB Approval	87
Appendix B: Survey Guide	
Appendix C: Internship Experience and Context	

LIST OF TABLES

Table 1: Sexually Transmitted Infections for Youth in the United States per 100,000 persons for the year 2010	42
Table 2: Description of Programs	42
Table 3: Perceived Barriers	53

LIST OF FIGURES

Figure 1: Map of Florida	30
Figure 2: Map of Hillsborough County, Florida	31
Figure 3: Map of Pinellas County, Florida	31

ABSTRACT

Adolescents continue to be at increased risk for contracting sexually transmitted infections (STI's). This research study describes the perception of barriers that providers in the Tampa Bay area encounter when implementing primary STI prevention programs for adolescents within the community context. This study used semi structured interviews to explore perceived barriers for implementing primary such programs for adolescents in the Tampa Bay area programs. Participants reported faith based institutions/churches and schools as common sectors for presenting a variety of barriers for implementing their program. Perceptions of barriers were described as, the need to tailor program messages and presentations based on restrictions from school officials and parent's opposition to the program; the lack of appropriate places for program activities and distribution of program materials. Other issues that were identified by several participants were lack of political support for programs at the national level and the need for more funding to administer programs.

CHAPTER 1: INTRODUCTION

Sexually Transmitted Infections in Adolescents

Nationally, the burden of new sexually transmitted infections (STIs) is an estimated 19 million per year, with young people accounting for almost half of those infections (Centers for Disease Control and Prevention, 2011). In the United States for 2010, the CDC (2011) reported that gonorrhea cases were 100.8 per 100,000 cases, chlamydia cases were 426.0 per 100,000 cases and Syphilis (primary and secondary) were 4.5 per 100,000 cases. For youth specifically, rates in 2010 reported by the CDC (2011a) for gonorrhea, syphilis, and chlamydia among youth ages 15 to 19 years and 20 to 24 years are represented in Table 1.

Table 1.Sexually Transmitted Infections for Youth in the United States per 100,000 persons for the year 2010

Sexually Transmitted Infections	15to19 years	20to24 years
Gonorrhea	409.7	490.3
Syphilis	4.3	13.5
Chlamydia	2,049.1	2,270.2

^{*}These data retrieved from the Centers for Disease Control and Prevention, 2011a
In 2009, 33% of new HIV infections were in people ages 13 to 29 years (CDC 2011a).
Although the burden of STIs in youth is high across the Unites States, there are distinct differences in the impact of STIs by gender and racial/ethnic groups.

Data show that gonorrhea continues to disproportionately affect African Americans, with young Black women ages 15 to 19 years mostly infected with chlamydia, and syphilis cases are reported mostly among men across the US (CDC, 2011b). Most recently, the CDC reported an increase in chlamydia rates for women in all states from 2009-2010. During 2010 the reported rates for chlamydial infection in young Black women was higher when compared to their White counterparts,

"The chlamydia rate among black females aged 15–19 years was 7,719.1 cases per 100,000 women, which was 6.6 times the rate among white females in the same age group (1,172.1 cases per 100,00). The rate among black women aged 20–24 years was over five times the rate among white women in the same age group" (CDC 2011c:1)

Despite a decline in gonorrhea infections from 2002 to 2003 among African American women, their infection rates are still 20 times higher than the rates for whites (CDC 2006b). The reported infection rate for chlamydia in African American women was more than 7.5 times the rate in White women in the US (CDC 2006b). Chlamydia affects young women at higher rates than young men (CDC 2004). African American adolescents are also unequally affected by HIV and account for "55% of all HIV infections reported among persons aged 13-24" (CDC 2006a). The local state and county data are also comparable.

In Florida during 2010, the rate for chlamydia cases was reported at 403.2 per 100, 000, for gonorrhea at 108.8 per 100,000 and for syphilis 6.4 per 100, 000 (CDC 2011). According to the CDC, Florida ranked 6th nationally in reported primary and secondary syphilis in 2010.

More specifically, in the local Tampa Bay area, the overall pattern of infection is strikingly similar to the national and state trends with young people being greatly impacted by STIs and with disproportionate rates in racial/ethnic minorities. In Hillsborough County, Florida, 70.9% of the reported chlamydia cases were in persons ages 15 to 24 for cases reported in the year 2010. In this same age group in Hillsborough county during the same year, the rates for each reportable STI were as follows: chlamydia was 412.1 per 100,000, syphilis was 8 per 100, 000, and gonorrhea was 103.6 per 100, 000. For Pinellas County, Florida, 71.6% of the reported chlamydia cases were in persons 15 to 24 while 33.1% of syphilis cases were reported for persons in the same age group (FDOH 2011). Also in Pinellas County according to the Florida Department of Health, 2005 data, in the age range of 15 to 19 years old African American girls accounted for 166 of the reported gonorrhea cases, while their White and Hispanic counterparts accounted for 44 and 23 cases respectively (2006). In 2010, 57.6% of Syphilis cases were reported in Black non Hispanics compared with 31% White, and 11% Hispanic (FDOH 2011). Similar disparities are seen in the other reportable STIs as well.

There are also data on the sexual behaviors reported by Florida youth, obtained from the Youth Risk Behavior Survey (YRBS), a nationally implemented self administered school based survey (CDC YRBS 2011d). Of those high school youth in Florida who responded to the YRBS in 2011, 48.2% had ever had sexual intercourse, 7.6% had sex before age 13 years, 34% had sex with at least one person during the three months before the survey, 35.7% did not use a condom during last sexual intercourse, 12.1% did not use any method to prevent pregnancy during last sexual intercourse, and 15.5% were never taught in school about AIDS or HIV infections (CDC-YRBS 2011d).

Based on data at the national and local levels, it is clear; there is a need for multiple levels of intervention for STI prevention, especially for youth populations. An essential approach for risk reduction in adolescents is primary prevention programs. Primary STI prevention or structured sex education usually occurs in one of two settings for adolescents: in school or in a community organization. In the school setting, educators can reach the majority of school aged youth attending public schools, as it is mandated that youth be enrolled in school until the age of 16 in Florida public schools (FDOE 2011b). Community based sex education, on the other hand, takes place in a variety of settings that range from afterschool programs to faith based institutions. Locally, the schools require some level of health education with includes reproductive health and prevention. In the community setting, there has been state level funding available which several agencies in the Tampa Bay area to provide a variety of curricula are implemented for STI prevention in youth (FDOH 2007).

Research Questions

At the inception of this research, one of the major contributors to community based adolescent primary prevention for STIs was the Florida Department of Health (FDOH). The FDOH main resource for adolescent STI education, *It's Great to Wait* is funded under Title V, with an emphasis on pregnancy prevention and abstinence until marriage as its primary method for preventing both pregnancy and STIs at the community level (FDOH 2007). Although there is health education within the schools that address some STI prevention issues, there are academic priorities within the education system, that prohibit the time commitment and efforts that are needed for pregnancy and STI prevention.

Florida State Statute 1003.43 (1)(i) does require that students receive one half credit of instruction on the topics of sexually transmitted disease and HIV prevention as a requirement for high school graduation (FDOE 2012). According to the Florida Department of Education (FDOE), comprehensive health education instruction is required, yet in reference to HIV/AIDS instruction, abstinence until marriage is the standard (FDOE 2007). Within Hillsborough County, there was also additional funding through the Centers for Disease Control and Prevention Division of Adolescent health for HIV/AIDS prevention in the schools until June 2008. This funding provided prevention education to students in middle and high schools. After that time the funding was not renewed (CDC 2007).

Despite the efforts of the FDOH and the FDOE, there are community based organizations, religious organizations, and other institutions within the community that provide additional STI prevention services that include comprehensive reproductive health education and/or abstinence only. While a listing of federal and state funded abstinence based STI prevention programs throughout the state of Florida is available through a Florida Department of Health FDOH website, a listing of comprehensive reproductive education programs is absent (FDOH 2007). Therefore, it is also not clear, what community based comprehensive STI prevention interventions exist for youth in the Tampa Bay area. There is an even greater need to go further to identify efforts that exist for those populations that are at greatest risk for contracting STI's. Additionally, there should also be an examination of the context in which prevention is implemented at the local level. This is evident given the disparity in STI rates in youth.

For example, the CDC reported the chlamydia rate in 2010 for Hispanic women aged 20-24 years was 2,714.4 per 100,000 compared to1,357.9 per 100,00 for White women aged 20to24 years (CDC 2011 b:1). Another important point to understand is what barriers exist for implementing community based programs. For example, community organizations that administer comprehensive sex education may face funding barriers because of policy at the national level. Abstinence only education funding, could limit the availability of funding opportunities Political and economic forces may dictate the specific curriculum that is used within community based organizations providing sex education. It is important to explore current attitudes of program directors and program staff towards implementing primary STI prevention programs and the barriers that each program faces within the current political and economic context.

In identifying the community based resources some of the main issues that this research project sought to understand are first the political and economic context in which community based STI prevention is being implemented and second the barriers that exists for providers. The specific research questions that were addressed in this research are:

- 1. What programs and resources exist specifically for adolescent primary STI prevention in the Tampa Bay area (comprehensive and abstinence only)?
- 2. What barriers exist in implementing a community based comprehensive STI prevention program in the Tampa Bay area?
- 3. Are the programs that exist reaching the populations that are at highest risk for contracting STI's?

By addressing these research questions, this project seeks to examine the role of larger social and political issues in health education and how they play out at the local level.

This research project goals were to describe the community based primary sex education programs for adolescents that exist within the Tampa Bay Area, the context in which they exist, identify the guiding principles of the programs, explore the perceived barriers that program directors and program staff identify to implementing their programs, and to identify the resources that exist within the community organizations. The research aims were also to explore the perception of barriers that local providers encounter when implementing primary STI prevention programs within the community context. *Summary*

The risks for STIs remain high for adolescents at both the local and national levels (CDC 2011). Locally, in the Tampa Bay area there are several efforts focused on primary prevention despite barriers in funding. Identifying perceived barriers and the exploring the context in which they exist may help to inform local programs about unique challenges encountered in order to inform future efforts.

CHAPTER 2: LITERATURE REVIEW AND THEORETICAL FRAMEWORK Approaches for Sex Education in the US

In primary prevention for STIs or sex education, there are two main approaches that seem to be in opposition; abstinence only and comprehensive sex education (Perrin and DeJoy, 2003). Abstinence only and compressive sex education prevention programs both have the goal of preventing STIs and pregnancy, while the methods and underlying messages of prevention differ. Comprehensive sex education programs tend to provide a variety of prevention methods including abstinence and barriers methods, while abstinence only programs do not teach alternative ways of prevention such as barrier methods. Abstinence only programs rely on abstinence from sexual intercourse until marriage and place an emphasis on building social relationships as the primary method for prevention (Advocates for Youth 2012). Advocates for Youth, a leading youth sexual health organization dedicated to adolescent sexual and reproductive health in the US and abroad, defines comprehensive sex education as sex education that,

"...teaches about abstinence as the best method for avoiding STDs and unintended pregnancy, but also teaches about condoms and contraception to reduce the risk of unintended pregnancy and the infection with STDs, including HIV. It also teaches interpersonal and communication skills and helps young people explore their own values, goals, and options" (2012:1).

This definition, in contrast to an abstinence only sex education curriculum, focuses on the inclusion of a variety of risk reduction behaviors, with abstinence from sex being the "best method" for STI infection and unintended pregnancy (Advocates for Youth 2012:1). The same organization defines abstinence only education as, "...teaches abstinence as the *only morally correct option* of sexual expression for teenagers. It usually censors information about contraception and condoms for the prevention of sexually transmitted diseases (STDs) and unintended pregnancy" (Advocates for Youth, 2012:1). The main points for opposition in the comprehensive and abstinence only approaches are whether moral values should be infused when presenting sexual health information and prevention methods to adolescents and should this have a direct impact on funding the programs and implementation of the programs at the local levels (Perrin and DeJoy 2003;Santelli 2006). This debate also continues despite the evidence showing an increase in the STIs for adolescents and disproportionate impact on young women and racial/ethnic minorities (CDC 2011).

The debate over comprehensive sex education versus an abstinence only sex education programs is long standing with much opposition for both approaches.

According to some researchers, evidence regarding the effectiveness for abstinence only education is not strong, yet federal dollars have been poured into funding these programs (Kirby, and Rolleri, 2005; Brückner and Bearman 2005; Kirby 2008; Kohler et al. 2008; Stanger-Hall and Hall 2011). This also presents a dilemma because there is data suggesting that comprehensive approaches to sex education are also effective (Kirby, and Rolleri 2005 and Kirby, Rolleri and Wilson 2007).

Abstinence only education has faced much criticism from the academic and medical communities. In their review of US policies and programs for abstinence and abstinence-only education, Santelli and colleagues (2006), note that abstinence education under the terms defined by title V funding does not address youth that are already sexually active or Gay Lesbian Bisexual Transgender and Questioning youth (GLBTQ) (2006). Programs that teach abstinence until marriage and emphasize that "sexual activity outside the context of marriage is likely to have harmful psychological effects", do not address a substantial number of the adolescent population (Santelli et al. 2006:74; Collins et al. 2002). Furthermore, Santelli et al. argues this claim of "harmful psychology effects" is not supported with evidence (2006:74). Santelli and colleagues argue that abstinence only programs "systematically ignore sexually experienced adolescents" and do not meet the needs of youth who are GLBTQ because they "largely ignore issues surrounding homosexuality (except when discussing the transmission of HIV/AIDS), and often stigmatize homosexuality as deviant and unnatural behavior" (2006: 77-78). Stanger-Hall and Stanger point to the United States leading in teen pregnancy rates when compared with other developed nations in their argument for comprehensive sexuality education in schools (2011). In their review of state laws, they found that the stronger the emphasis on abstinence only as state law, the higher average the teen birth rate (2011). Other arguments against abstinence only programs include the lack of peer review evaluations of programs and limit adolescent's access to health information (Advocates for Youth 2007).

According to Collins and colleagues (2002), many supporters of abstinence only education maintain that "sex before marriage is inappropriate or immoral and that abstinence is the only method which is 100% effective in preventing pregnancy and STIs", while others are concerned that information such as that material discussed in a comprehensive sex education curriculum may actually promote sexual activity among youth (Collins, et al. 2002:12; Perrin and DeJoy, 2003). There are currently only a few published studies supporting the use and effectiveness of abstinence only curriculum. One study published by Denny and Young evaluated a widely used abstinence only curriculum Sex Can Wait with upper elementary, middle, and high school students (2006). Measuring knowledge and intent, prior to administering the program then again during an 18 month follow-up, the researchers found that when compared to "current practice" the students that received the curriculum, had positive outcomes (Denny and Young 2006:415). Specifically, when compared to the students who did not receive the intervention, the elementary group showed increased knowledge and was less likely to report sexual intercourse within the past month, the middle school group reported less participation in sexual activity ever and in the last month, and the high school group had greater knowledge and intent to continue abstinence (Denny and Young 2006). Although this study presents evidence for abstinence only curriculum the researchers also agree with critics on the need for more evaluation of abstinence only curricula. Despite the debates, there is evidence of effectiveness for both approaches for STI prevention.

The CDC has identified a list of programs that work to reduce sexual risk behaviors for HIV prevention and none of them involve teaching abstinence as the only method for prevention, but abstinence is listed as the only way to ensure no transmission

of an infection (CDC 2001). The Diffusion of Effective Behavioral Interventions project (DEBI) is a National project that was developed based on the CDC work in identifying the effective strategies proven to show positive behavior outcomes for HIV prevention that were demonstrated by research (CDC 2011; DEBI 2012). The CDC provides capacity building and training to local organizations on implementation on the evidence based HIV prevention programs, many of which are targeted for specific populations (DEBI 2012).

Kirby and his colleagues have also identified seventeen characteristics of effective sex education programs. Kirby et al., reviewed eighty three evaluations of sex education programs for youth, reviewed HIV prevention programs for adults, identified the common characteristics with evidence for behavior change, and reviewed the studies to identify the characteristic for developing effective curricula (2006).

In their review of the eighty three programs specifically for youth, fifty six of these programs were in the United States, nine in developed/industrialized countries and the other eighteen in developing countries (2006). In their evaluation, the studies were reviewed and results were reported in four sections which are as follows: 1) characteristics of the studies reviewed, 2) impact of programs on sexual risk behaviors and pregnancy and STI rates, 3) impact of programs on mediating factors for sexual risks behaviors, and 4) characteristics of curricula-based programs that positively affected behaviors (Kirby et al., 2006:4). Results for the characteristics of the studies reviewed showed that most of the programs were carried out in the United States and two thirds of the studies were implemented in high risk communities. The authors report that 83% of the interventions were for preventing STD/HIV, 51% of those programs included only

STD/HIV prevention and 31% included pregnancy prevention. "Virtually all" of the programs are described as encouraging "specific sexual and protective behaviors" (Kirby et al., 2006:13). Of the studies reviewed, the authors reported more than 80 % used at least one theory to guide their program. Theories used included:

- Social Learning Theory/ Social Cognitive Theory -54% of Interventions
- Theory of Reasoned Action-19% of Interventions
- Health Belief Model-12% of Interventions
- Theory of Planned Behavior-10% of Interventions
- Information, Motivation, and Behavioral Skill Model- 10% of Interventions (2006:13)

Methodological characteristics of the studies were also reviewed by the authors. An experimental design was used with half of the studies (51%) and the others implemented a quasi-experimental design. For inclusion in this study evaluation, all of the studies had to measure behavioral impact for at least three months. Most of the studies (59%) measured impact of behaviors for a year or longer (Kirby et al., 2006). Overall, the author's suggests that the programs provided "very strong evidence" of positive behavioral impact such as delaying the onset of sexual behavior, reducing the frequency of sex and reduced sexual activity (Kirby et al., 2006:23). In reviewing the sex education programs, the authors divided the program characteristics into three categories that contributed to behavioral impact and positive outcomes; the process of developing the curriculum, the contents of the curriculum itself, and the implementation of the curriculum. Within these categories the findings suggests there are seventeen common characteristics of effective programs. Kirby et al. list the characteristics as:

- "Included multiple individual (and sometimes groups) with expertise in different areas in the design of the curriculum
- 2. Assessed the relevant needs and assets of the young people they were targeting.
- 3. Used a logic model approach to develop the curriculum.
- 4. Designed activities consistent with community values and available resources (staff time, staff skills, facility space and supplies).
- 5. Pilot tested the program.
- Focused on at least one of three health goals: The prevention of HIV, other STDs and/or unintended pregnancy.
- 7. Focused narrowly on specific behaviors leading to these health goals, have clear messages about these behaviors, and address situations that might lead them and how to avoid them.
- 8. Focused on specific sexual psychosocial factors that affect the specified behaviors and changed some of those factors.
- 9. Attempted to create a safe environment for youth to participate.
- 10. Included multiple instructionally sound activities designed to change each of the targeted risk and protective factors.
- 11. Employed instructionally sound teaching methods that actively involved the participants, that helped participants personalize the information, and that were designed to change each group of risk and protective factors.
- 12. Employed activities, instructional methods and behavioral methods that were appropriate to the youth's culture, developmental age, and sexual experience.
- 13. Covered topics in a logical sequence.

- 14. Secured at least minimal support from appropriate authorities.
- 15. Selected educators with desired characteristics (whenever possible), trained them, and provided monitoring, supervision and support.
- 16. Implemented needed activities to recruit and retain youth.
- 17. Implemented curricula with reasonable fidelity."

(Kirby et al., 2006: 30-42).

Despite the identification of the common characteristics of effective programs for sex education, the authors also, discuss limitations. Some of these limitation included lack of studies that focused on youth engaging in same sex sexual behavior risks, weak study design, and few measured their impact on STDs and pregnancies (Kirby et al. 2006). The Tool to Assess Characteristics of Effective Sex and STD/HIV Education Programs (TAC) was later developed based on the research of Kirby et al., 2006 (Kirby et al 2006 and Kirby et al., 2007). The authors state the TAC is designed "to assess curricula and to select one that is likely to be effective at changing behavior in your community, to adapt a selected curriculum so that it better matches the needs and resources of your own community, to develop from scratch a new effective curriculum for your community and implement a curriculum more effectively in your own community (Kirby et al., 2007:4). *National Funding for Primary Prevention*

Despite the controversy, what has been clear is that there is a national endorsement of abstinence only education exemplified through federal funding streams.

These funding streams include the Adolescent Family Life Act passed in 1981, Temporary Assistance for Needy Families Act (TANF) enacted in 1996 among other federal funding, and the Special Projects of Regional and National Significance-Community-Based Abstinence Education (SPRANS-- CBAE) created in 2000 (Siecus 2005). One of the more recent developments in the government's endorsement of an abstinence only approach occurred when the TANF also know as the welfare reform act, added in its passage the social security act, Title V, Section 510(b) which allocates \$50 million annually for abstinence only sex education to states with the states being required to match every four federal dollars with three dollars (Siecus, 2005). Title V funding is distributed to community based organizations or any organization that is eligible. States can also use the funds for state health department projects like the It's Great to Wait program in Florida (Florida Department of Health 2007). In addition to providing funding for states, Title V was extremely influential in shaping abstinence only education because it also provided a definition by which abstinence only curricula is to follow or at least endorse as a condition of receiving federal dollars (Perrin and DeJoy 2003; Siecus 2005). According to the USA Social Security Administration (2007) Title V definition consists of eight criteria that programs receiving funding have to support in order to be eligible to receive and use funds that are allocated for abstinence prevention. As Perrin and DeJoy point out, according to federal guideline, a program does not have to highlight each point, but cannot be inconsistent with any of the criteria (2003).

Title V section 510 (b) explicitly defines the criteria of an abstinence only sex education program as,

- "has as its exclusive purpose, teaching the social, psychological, and health gains to be realized by abstaining from sexual activity;
- 2. teaches abstinence from sexual activity outside marriage as the expected standard for all school-age children;
- teaches that abstinence from sexual activity is the only certain way to avoid outof-wedlock pregnancy, sexually transmitted diseases, and other associated health problems;
- 4. teaches that a mutually faithful monogamous relationship in context of marriage is the expected standard of human sexual activity;
- 5. teaches that sexual activity outside of the context of marriage is likely to have harmful psychological and physical effects;
- 6. teaches that bearing children out-of-wedlock is likely to have harmful consequences for the child, the child's parents, and society;
- 7. teaches young people how to reject sexual advances and how alcohol and drug use increases vulnerability to sexual advances; and
- 8. teaches the importance of attaining self-sufficiency before engaging in sexual activity."

(USA Social Security Administration 2007:1)

Title V funding was one of the primary national funding streams for states and local agencies to administer sex education.

In June 2009, this funding expired and funds were shifted to a newly formed entity, the US Department of Health And Human Services, Office of Adolescent Health (OAH). It was then restored later that year in the amount of \$250 million to be used over 5 years (Siecus 2010, OAH 2012). The the Consolidated Appropriations Act of 2010 established the OAH, which "collects and disseminates information on adolescent health to the public and to health professionals. OAH works in partnership with other HHS agencies to support evidence-based approaches to improve the health of adolescents and monitors trends in adolescent health" (2012:1). The OAH also administers a grant for evidence based and innovative approaches to address teen pregnancy prevention.

Provider Based Research

Few studies have explored sex education provider perceptions on these specific issues while there have been a variety of provider based research studies on reproductive health and sex education in the US and internationally. The studies that explored provider's perceived barriers specifically to implementing primary STI and HIV programs were conducted by Scales and Kirby (1983) and more recently Owczarzak and Dickson-Gomez (2011). In their study, Scales and Kirby (1983) used quantitative survey methodology for collecting data. A total of one hundred and four participants from various professional backgrounds were instructed to rank items from a list of pre-identified barriers based on importance using a five point Likert scale. The study was implemented with participants that resided in twenty three different communities across the US (Scales and Kirby 1983:312). Scales and Kirby developed a list of barriers based on a review of the existing literature, extensive discussions with experts, and on interviews with supports and opponents of sex education (1983:312).

The list included one hundred and sixty five barriers based on organizational characteristics and community characteristics. The barriers identified for organizational characteristics included staff and administration characteristics, coverage of topic, and financial characteristics. Barriers for the community characteristics included beliefs and attitudes of community members, historical background of the community, characteristics of state legislation, and characteristics of federal legislation (Scales and Kirby 1983). Results showed that fear of community opposition was the greatest barrier identified. Participants also identified several barriers related to the lack of support. These included lack of parental support, lack of school board support, and lack of supportive coalitions (Scales and Kirby 1983). Participants indicated several perceived barriers related to beliefs of community members regarding sex education, "(a) sex education causes experimentation (b) certain topics shouldn't be taught (c) sex education undermines parent's values, (d) sex education teaches techniques of sexual intercourse, and (e) sex education undermines parental authority" (Scales and Kirby 1983:320). Participants also rated the lack of funds at the federal level as a barrier. Additionally, other barriers for implementation were rated as unimportant. These include the inclusion of certain topics such as masturbation and contraception. Also, the structure of the classes and/or locations, competition between sex education programs, concern about the training of the sex education facilitator received low rankings as perceived barriers for implementation. Scales and Kirby (1983) also examined the relationships among barriers by using factor and cluster analyses on the barriers with median ratings of 3.5 or higher based on the five point scale.

The results showed factor 1(politics and community organizing) explained 55% of the total variance, factor 2 (attitudes and skills of program staff and administrators) explained 14% of the variance while factor 3 (beliefs of the community about sex education and sexual behavior) explained 10% of the variance. Scales and Kirby conclude that the study identified several important barriers that are related to the community and political context as for sex education programs. Although the study did not specifically measure barriers, based on the results of their perception, the authors suggest overcoming the barriers identified at the community level in order to effectively develop sex education programming. These include political and community trainings, mobilization of community coalitions, and additional training of sex educators to address opposition of program implementation (Scales and Kirby, 1983).

Recently, Owczarzak and Dickson-Gomez (2011), examined HIV provider perceptions toward implementation of evidence based HIV prevention interventions. The research took place in Wisconsin with community based organizations (CBOs) implementing CDC DEBI programs. Using semi structured interviews, the researchers explored barriers and facilitators in adopting and implementing the programs. Twenty two interviews were completed with providers from eight difference agencies which were transcribed and coded based on key analytical concepts programs (Owczarzak and Dickson Gomez 2011:172). Some of the codes were type of HIV prevention services provided as a whole and perceived barriers to implementation (Owczarzak and Dickson Gomez 2011:172) The participants were employed with agencies that ranged from an AIDS Service Organization to other agencies that included prevention in their services.

The results were reported as barriers and facilitators that were a result of intervention, organizational, and program levels. The results for the intervention level barriers included discrepancies between the agencies target population and the intended target population of the DEBI, participant recruitment and retention, time intensive nature of the DEBI programs, little motivation from agency staff to shift resources from existing programs to DEBI programs, and conflicts between the broader organizational identity and the DEBI programs (Owczarzak and Dickson Gomez 2011:173-174). Participants identified the intervention level facilitator as the target population of the DEBI interventions fitting the client population served by the agency (Owczarzak and Dickson Gomez 2011:174). At the organizational level, the participants reported the following barriers for implementation: staff turnover, prioritization of existing programs, and scarce resources for prevention. Facilitators at the organizations level included: success when intervention is supported by upper level management and guidance on implementation and adaptation (Owczarzak and Dickson Gomez 2011:175-176). Barriers for implementation at the program level were identified as: concerns for adaptation, modification and fidelity of DEBIs, and local staff concerns about training facilitators lack of hands on experience (Owczarzak and Dickson Gomez 2011:176-177). Facilitators at the program level were accessible training facilitators that were available to provide guidance, DEBI program's emphasis on "core elements" and fidelity, and the fit between the programs the intended target populations (Owczarzak and Dickson Gomez 2011:177).

Owczarzak and Dickson- Gomez (2011) found providers perceptions to be important influences for acceptability and adaptability of evidence based HIV prevention programs.

Studies have also explored providers' perceptions in the context of reproductive health with the use of interview and focus groups methods. Mantell and colleagues (2003) investigated provider views on dual protection from STI's and unintended pregnancy. In this study, the providers were employed at family planning clinics in New York City. This study utilized semi structured interviews with twenty two (out of twenty three service) providers within seven primary care clinics (Mantell et al. 2003). The interviews lasted 45 to 75 minutes and the topics discussed were provider training and experience in family planning, perceptions of the challenges and rewards in working with clients, and perceptions of clients' STI and pregnancy risks (Mantell et. al, 2003: 72). Data were coded and analyzed based on the interview guide topics (Mantell et. al, 2003: 72). Results for STI and pregnancy risk assessment show that providers perceived this as an important aspect of their role, while "eighteen of the providers believed that risk assessment should be conducted universally; however, four providers thought that risk assessment should be conducted only at a client's first visit or when a client indicates being at risk" (Mantell et. al, 2003: 73). In terms of the provider perceptions for the dual method use for women (both barrier method and hormonal contraception), the study found that half of the providers recommended this method for all women, while the other perceived it necessary for "certain types of women". The authors suggest there is a need for additional training on counseling patients in addition to training on the use of both male and female condoms for contraception and STI prevention.

Internationally, provider based studies were also implemented for sex education.

These studies included interviewing and focus group methods to explore provider perceptions.

Mufune (2008) explored stakeholder perceptions and attitudes towards sexual and reproductive health education in Namibia. Interviews with eight key informants and eighteen focus groups were conducted. The focus group participants ranged from youth (both boys and girls), teachers, parents, and health workers. The interview and focus group data were transcribed and systematically examined for themes (Mufune 2008). Themes that emerged were: available sex education programs, appropriate age for sex education, who should initiate sex education, issues addressed by teaching materials, sources of sexual and reproductive information, affairs between teachers and school girls, healthcare workers and sexual and reproductive education, teaching materials on sex education and sexuality, training offered on sex and sexuality, reactions on sex and sexuality, parents and sexual and reproductive health, and churches and sexual and reproductive health (Mufune 2008:149-154). Findings from this study indicate that there was overall support for sexual and reproductive health education due to the context of HIV/AIDS related deaths within the community. Participants indicated the need to initiate education "at an early age" (Mufune 2008:149). There were also several barriers identified. The barriers for implementing sex education with youth included lack of teacher training on the health topics which prevented implementation of the programs, lack of teaching materials on the topic, and guidance from the church encourages abstinence versus barrier methods often taught in prevention courses (Mufune 2008:149-154).

Tuoane and colleagues (2004) in their assessment of family planning services collected data through surveys with fifty two providers conducting focus group with fifty women in the community.

This study was conducted in urban and rural areas in the Maseru District of Lesotho. The fifty two providers represented all of the providers in the facilities selected to participate, and seven focus groups were comprised of a total of fifty female contraception users. Community level data which was previously collected from a survey on family planning was also used in the assessment. The results from this large scale assessment identified several barriers for provision of family planning services. Barriers existed at the family planning facilities which included lack of easily accessible, lack of infrastructure (i.e. pipe water and electricity), and lack of educational materials for clients (Tuoane et. al, 2004:79-81). The participants also identified the cost of services despite a government mandate for uniform costs as a barrier to seeking services (Tuoane et. al, 2004:81). There were also issues related to providers' biases towards particular methods for family planning identified as barriers for women seeking services. Providers reported dispensing contraception in small doses to ensure follow up and because of resources shortages, which would in turn limit the use of contraception by some women (Tuoane, et al.,2004: 83).

Although these studies were not conducted in the US and therefore the cultural and political economic contexts vary in each study, they do demonstrate the use of examining providers' perspectives to contribute to reproductive health research. The results also demonstrate the use of qualitative methods in identifying barriers for program implementation and to understand providers' perceptions towards prevention education.

Literature Review Summary

In the US, STI prevention education programs face opposition based on the type of approach implemented: comprehensive sexuality education or abstinence only education (Collins, et al. 2002; Perrin and DeJoy, 2003; Denny and Young 2006 Santelli et al. 2006; Kirby, Rolleri, and Rolleri, 2005; Brückner and Bearman 2005; Kirby 2008; Kohler et al. 2008; Stanger-Hall and Hall 2011). Despite the criticism for both approaches, there are funding streams and policies that support both approaches (Siecus 2005; OAH 2012). There is also evidence that supports both approaches (Denny and Young 2006; Santelli et al. 2006; Kirby, Rolleri, and Rolleri, 2005; Brückner and Bearman 2005; Kirby 2008; Kohler et al. 2008; Stanger-Hall and Hall 2011). Kirby and colleagues (2006 and 2007) and the CDC (2001) have put forth the most extensive reviews of STI and HIV prevention programs detailing evidence of effective programs. These programs are more comprehensive in their approach and have also shown evidence in modifying youth sexual risk behaviors (CDC 2001; Kirby et al., 2006 and 2007).

The need to understand provider perceptions and barriers to implement primary STI prevention programs is relevant because providers play an integral role in program implementation. Nationally and internationally, research exploring provider perceptions using qualitative methods have demonstrated that provider perceptions can be explored to inform programming (Scales and Kirby 1983; Owczarzak and Dickson-Gomez 2011). Several studies have shown that when implementing STI prevention programs in the US, barriers can exist at the program level, institutional level, community level, and at the national level (Scales and Kirby 1983; and Owczarzak and Dickson-Gomez 2011).

Theoretical Framework

This research project explored provider perceptions of STI prevention using a critical medical anthropology (CMA) perspective and with consideration for an ecological perspective of health education (Singer 1995; Glanz et al. 2002). Using the underlying understanding that health is impacted by biology and environment it was very important to explore the contextual factors utilizing these perspectives in this research project given the role that environment and policy plays in both perspectives (Goodman and Leatherman 1998; Glanz et al. 2002). Consideration for the context in which disease occurs is a key factor of CMA, but more importantly there is an emphasis on the roles of power structures in disease acquisition (Singer 1995, 1998) To use this CMA perspective in order to understand barriers involved in primary STI prevention means to explore the individual perception of risk and control of health outcomes and to incorporate the relationships between power relations, inequality and economics, within the context of disease (Singer 1995, 1998; Goodman and Leatherman 1998; Glanz et al. 2002). Singer explains this exploration at the micro level is "high on the agenda of this approach" (1998). According to Singer, this approach is also concerned power relationships provider and patient interactions (1998:106-107). As opposed to the the biomedicalization of medical anthropology, which focuses more on the disease, illness and "examining the social origins of disease" (1998: 106).

Singer explains the development of medical anthropology as "inherently biologically oriented" at the same time recognizing the cultural and social influence (1998:93).

Despite the recognition of culture in medical anthropology, the development stemmed from the need for the inclusion of power structure as it relates to health and less reliance on the biomedical explanation of health (Singer 1998). In Singer's, discussion on the development of CMA, he specifically explains the development of CMA compared with medical anthropology as a,

"...direct response to perceived shortcomings and limitations of this kind in conventional medical anthropology. The development of CMA reflects both a turn towards political-economic approaches in anthropology generally, as well as an effort to engage and extend the political economy of health approaches by uniting it with cultural sensitivity and in-depth local study of anthropology." (1998:104)

This focus on political economy is an essential component of the CMA in the examination of micro and macro level contributors of disease. In defining the political economy approach to anthropology, Roseberry offers the following definition:

- a) the social relations and institutions through which control over fundamental resources is controlled and expressed;
- b) the relations and institutions through which social labor is mobilized and appropriated; and
- c) the location of these points of control within specific social fields (1998:75)

The political economy approach is important for discussing how primary prevention for STI's adolescent is implemented.

Several studies have explored provider perceptions and program, but it is also important to describe the perceptions of the providers while examining both micro and macro level factors that contribute to implementation of primary prevention programs for STIs in adolescents.

In spite of Critical Medical Anthropology's rich theoretical foundation in political economy, this very stringent focus on the concept is the focus of critiques for this perspective. There are arguments that the overwhelming reliance on system causality and exploration of power dynamics as the cause of disease shifts the focus from individual choices that contribute to disease acquisition. Critiques of the approach, specifically critical praxis credit the approach as idealistic in exploring oppression with the goals of equality (Morgan 1995). Others raise concern in the construction of who is powerless versus who is powerful and the "tendency to identify with and idealize with the powerless" (Johnson 1995:107). These concerns for the CMA perspective raise valid questions, yet there can be serious consequences when individuals are disenfranchised and choices about their health are restricted (Goodman and Leatherman 1998). Despite the critiques, CMA provides an important prospective that examines micro level and macro level factors to explain the biological and environmental health effects.

This research specifically explores health education programs for adolescents therefore it was also directed by key concepts in health education. Glanz, Rimer and Lewis, explain health education as "not only instructional activities and other strategies to change individual health behavior but also organizational efforts, policy directives, economic supports, environmental activities, mass media, and community level programs" (2002:9).

This perspective of health education is the ecological approach. Glanz and colleagues also explain that there are two main ideas from this approach in health education; first "behavior is viewed as being affected by, and affecting multiple levels of influence" and second "behavior both influences and is influenced by the social environment" (2002:9). The ecological model of health behaviors specifically cites five levels of influence on health behavior which are: intrapersonal factors, interpersonal processes and primary groups, institutional factors, community factors and public policy (Glanz et al. 2006: 465). Some of the main principles of the ecological models used to ground this research to explore the local context of STIs prevention are the understanding that political processes can impact health interventions and the holistic approach of multiple level of influence on health behaviors (Glanz et al. 2006). This research is based on gaining insight into provider perceptions rather than gaining information about the functioning of the specific programs. Therefore, individual level health behavior theories were not used to directly influence the framework of this research.

Summary

Funding for STI prevention, provider constraints and motivations to implement programs, and access to available resources for adolescents are the specific issues that were examined using the CMA perspective and ecological models of health. Given the increased risks and disease disparities for STIs in adolescent populations, primary prevention is an important intervention effort. Despite this acknowledgement there are broader contextual factors that contribute to resource allocation for prevention programs.

By using this theoretical perspective to explore context of STI prevention, the goal is to describe the context in which barriers and facilitators occur in order to inform prevention efforts for adolescents. As it relates to the goals of this project, these approaches are significant in order to examine the political economic context of implementing primary STI prevention for adolescents.

Research Setting: Tampa Bay Area

The research setting was the Tampa Bay Area which is located in the west central coast of Florida as shown in Figure 1. Tampa Bay area encompasses the metropolitan areas of Tampa, St. Petersburg and Clearwater Florida.



Figure 1: Map of Florida
*Retrieved from US Census Bureau. 2010 Florida Selection Map
http://quickfacts.census.gov/qfd/maps/florida_map.html

Specifically, Tampa is located in Hillsborough County, FL as shown in Figure 2 by the outlined area. St Petersburg and Clearwater are located in Pinellas County illustrated in Figure 3 by the highlighted area on the map.

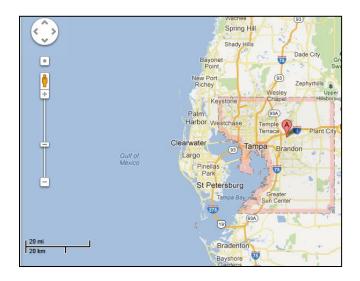


Figure 2: Map of Hillsborough County, Florida *This map retrieved from Google maps 2012a: Map of Hillsborough County http://maps.google.com/maps?q=hillsborough%20county&um=1&hl=en&biw=1366&bih=562&ie=UTF-8&sa=N&tab=il



Figure 3: Map of Pinellas County, Florida *This map retrieved from Google Maps 2012b: Map of Pinellas County https://maps.google.com/maps?ie=UTF-8&q=pinellas+county

The research interviews took place in Hillsborough County, Florida, which is where most of the program services are located.

However, several of the programs described in this research serve youth populations in both Hillsborough and Pinellas Counties. Both counties are accessible by car to each of its residents by local bridges and roadways.

Hillsborough County, FL, population 1,229,226 is comprised of 3 municipalities Tampa, Temple Terrace and Plant City, with Tampa being the largest (US Census Bureau 2010 and Hillsborough County 2012). According to the 2010 US census, 23.9% of residents were under the age of 18 and racial and ethnic minorities accounted for 28.7% of the population. Over 85% of persons 25 and older obtained a high school diploma, while 28.7% of persons 25 and older had obtained a bachelors degree or higher. The per capita income in the past 12 months was \$27,252; the median household income was \$47, 129 as reported by the 2010 US census. In Hillsborough County, 15.2% of persons were reported as living below the poverty level in 2009 (US Census Bureau 2010).

The population of Pinellas County, FL, is 916, 542 and the County has 24 municipalities. The programs described in the research project were located in the cities of St Petersburg and Largo FL (Pinellas County 2012). According to the 2010 US census, 18.8% of residents were under the age of 18 and racial and ethnic minorities accounted for 17.9% of the population. The percent of persons 25 and older that obtained a high school diploma was 87.8, while 26.7% of persons 25 and older had obtained a bachelors degree or higher. The per capita income in the past 12 month was \$28,872; the median household income was \$43, 200 as reported by the 2010 US census. In Pinellas County, 13.3 % of persons were reported as living below the poverty level in 2009 (US Census Bureau 2010).

As for Hillsborough County school students, public school reports an annual enrollment of 192,547 students in Pre-K-12 during the 2011-2012 school years. There are a total of 260 schools throughout the school district, including elementary through high schools, magnet schools, career centers, and charter schools.

The Hillsborough County public school system has an operating budget of \$1.685 billion with a majority of its funding coming from State dollars followed by, local and federal funding (Hillsborough County Schools 2011). During the 2010-2011 school year, Pinellas County public schools total enrollment for students in grades k-12 was 102, 672. With a total number of 140 schools including magnet adult and career centers, the operating budget for the same school year was \$891 million (Pinellas County Schools 2011).

In the state of Florida, under state statue 1003.428 2(a)(6) public schools require students to have "One credit in physical education to include integration of health". Specifically, regarding HIV education the FS 1003.46 mandates each school district follow the standards listed below:

- "Teach abstinence from sexual activity outside of marriage as the expected standard for all school-age students while teaching the benefits of monogamous heterosexual marriage.
- Emphasize that abstinence from sexual activity is a certain way to avoid out-ofwedlock pregnancy, sexually transmitted diseases, including acquired immune deficiency syndrome, and other associated health problems.
- Teach that each student has the power to control personal behavior and encourage students to base actions on reasoning, self-esteem, and respect for others.

• Provide instruction and material that is appropriate for the grade and age of the student."(FDOH 2011b:1)

These requirements are maintained by the state of Florida and applicable to students in both counties where the research was conducted.

CHAPTER 3: METHODS

The goal of this research was to understand provider perceptions of barriers for implementation and to describe the context in which STI programs were implemented in the Tampa Bay area. In a review of the reproductive health literature, several studies utilized qualitative research methods to gain insight from providers; semi-structured and in-depth interviews were most often used, in addition to surveys and focus groups (Scales and Kirby 1983; Owczarzak and Dickson-Gomez 2011;Mantell et al. 2003; Tuoane, Madise, and Diamond 2004). Qualitative inquiry was the research methodology used to understand the barriers perceived by program providers in the Tampa Bay area in this research project. Specifically, this study utilized semi-structured interviews as the primary method when interviewing participants. Semi structured interviewing is used in the design of qualitative research because it allows the researcher to follow a guide, yet the interviews contain "much of the freewheeling quality of unstructured interviews". (Bernard 2006: 212). An additional method used in this project includes curriculum/program material review when provided by the participant.

A semi structured interview guide was developed to gather general information about the research participants' experiences implementing the program, general information about the program, characteristics of the population served by the program, and perceived barriers and facilitators for implementing the program in the Tampa Bay area (See appendix A for interview guide).

The interviews were conducted in person on a one –to- one basis in Hillsborough and Pinellas Counties. The interview guide was used for consistency with all participants. All interviews were recorded on a Sony AX series digital voice recorder. Hand written notes were taken during the interview; afterwards the interviews were transcribed in Microsoft word 2007 for analysis. The interviews took place between November 2008 and March 2009 at various locations such as private office spaces and public cafés.

Participants were recruited using purposive sampling, due to the specific inclusion criteria of the study (Bernard 2006). To be included in the study participants had to be adult volunteers and participants had to be employed with an organization implementing prevention programs for youth. The initial research participants were selected based on their present and/or past role as an employee in an agency or program focused on STI prevention for adolescents in the Tampa Bay area. Then other participants were recruited based on referrals from interviewees. In an ideal qualitative inquiry, the researcher seeks to achieve saturation, or what Creswell defines as "find information that continues to add until no more can be found" through multiple interviews (1998:56). I attempted to do this by contacting each of the agencies that were implementing STI prevention programs for adolescents Hillsborough and Pinellas Counties and interviewing the staff members and program directors. Other key informants, such as staff or program directors who were employed with programs that no longer existed and those with expert knowledge in primary prevention of STIs locally were also included in the study. Prior to starting recruitment, I preformed a search of existing local youth agency directories (Connect to Protect Tampa Bay 2006 and Hillsborough Healthy Teen Network Directory 2008) and located ten agencies providing STI prevention to adolescents.

The enrollment goal was twenty participants with the expectation of at least two representatives from ten agencies that were found in the local youth agency directories.

The first step in conducting the study was to identify the programs. After receiving approval from the University of South Florida's (USF) Institutional Review Board (IRB- study # 107174G) to conduct to the study, Youth STI prevention programs were located using existing directories of youth serving agencies (The Connect to Protect® Tampa Bay Youth Directory 2006 and Hillsborough Health Teen Network Directory 2008), in addition to talking with community informants and STI treatment providers. After locating the prevention programs, the program directors and staff were contacted via telephone and email. During the initial telephone and email contact, the research project was described to potential participants and they were asked to participate in an interview about their perceptions implementing STI prevention programs for adolescents. The initial contact yielded twelve programs. Once a participant agreed to participate in the study, a date and time was scheduled at a private or semi private location such as a program office where the semi-structured interviews were conducted. The participant often selected the interview location due to convenience and concern for their privacy. Participation in the research project was completely voluntary and there was no incentive given for the interviews. Participants indicated the results of the study would be helpful in their prevention efforts therefore the results of this study may provide assistance to the participants for future implementation. Prior to starting the interviews, the informed consent process was reviewed and each participant provided their consent by signing the consent document approved by the USF IRB.

Each participant was allowed to ask questions regarding the study and also given a copy of the informed consent document. Additionally, the participants also gave their permission to be recorded for the interview. During the interview I followed a blank copy of the interview guide for consistency during every interview. Each question on the guide was asked in a similar manner, but depending on the content and responses of the participant, various probes were used to explore the subject. The blank interview guide was also used to take notes of participant responses during the interview which were later reviewed during the analysis.

After completing the interviews each participant was also asked if there was someone in their organization that should participate in the research study. The participants were also given the opportunity to refer additional community contacts outside of their organization. The initial contacts provided referrals for interviews that yielded an additional seven contacts for participation. Overall, two participants declined to participate. One participant declined due to time conflicts and the other did not provide a reason for not participating. There were a total of seventeen participants in the study, representing twelve prevention programs. Fourteen of the participants were employed as program staff and three served as community informants. The community informant's employment ranged from an executive director of a prevention agency to prevention coordinator at a local government entity and a former prevention coordinator for a school based STI prevention program. Although the informants were not directly involved with implementing programs during the time of the interviewed, they were included as participants because they had in-depth knowledge about how prevention programs were implemented locally.

Analysis

The goal in the analysis of these data was to identify and describe the common themes discussed by the participants regarding perceived barriers for implementing primary STI prevention programs for adolescents. In order to elicit themes from the interviews, a systematic content analysis was used to describe the interview data. Bernard defines analysis as "the search for patterns in data and for ideas that help explain why those patterns are there in the first place" (2006:452). In order to identify the patterns, each of the interviews was carefully organized and the reviewed in the same manner. After the interviews were recorded on a Sony AX Series digital voice recorder and saved on the voice recorder, they were uploaded to a personal computer to the Sony digital voice editor 3 software for transcription. The interviews lasted between thirty minutes and one hour depending on the participant's responses. Digital voice editor version 3 software was used to for transcription. The interviews were transcribed in Microsoft Word office 2007. The transcripts were initially coded by agency name and participant's role/job description. The transcriptions yielded over two hundred and fifty pages of text. Participant responses were then entered into a Microsoft Excel office 2007 spreadsheet based on topics and themes developed from the semi structured interview guide. In addition to the topics and themes, information about the programs and participants was also entered in the spreadsheet. Program information included: population served, type of program implemented and location of implementation. The participant information entered on the Excel spreadsheet included job title and number of years implementing the program.

Patterns were then identified based on phrases from the participant responses and questions from the interview guide (Creswell 1998, Bernard 2006). Codes were developed from an initial review of the interviews and grouped into general themes using the interview guide as a framework for organizing the themes. Frequencies of themes were also tabulated for each interview. All interviews were compared based on the themes and frequency of themes discussed by the participants. General characteristics of each program and participant experience in implementing the program were also included in the analysis. The data were also specifically organized by the following themes: (1) barriers to implementing programs (2) facilitators for implementing programs (3) local factors that influences programs, and (4) national factors that influence programs. Each theme was then expanded into specific descriptors.

Although, this was a relatively small study with methods that are reproducible, this research is not meant to be generalizable for implementation of all STI prevention programs for adolescents. The purpose of the analysis was to describe the perceived barriers for implementation in the context of policy and funding constraints for primary STI prevention programs in the Tampa Bay area described during the study period. The perceptions of respondents are localized to the Tampa Bay area and this study does not measure barriers, but seeks to explore and describe what providers observe within their programs and community.

CHAPTER 4: RESULTS

Summary of Program Descriptions

To find out about the perceived barriers for implementing primary STI prevention programs for adolescents in the Tampa Bay area, seventeen semi structured interviews were conducted with fourteen program staff from twelve local prevention programs that serve adolescents. Additional interviews were conducted with three community informants who were involved in prevention efforts for adolescent HIV prevention. One community informant worked for a previously funded prevention program that was no longer funded during the time of the research project. Another served as a regional prevention coordinator, and the final was an executive director for community prevention agency with several prevention programs for adolescents. The community informants were not directly involved in daily implementation or planning of structured prevention programs for adolescents, but had expert knowledge about primary prevention in the local context. Of the twelve programs included in this research project, five identified as using curricula that were abstinence only or abstinence based compared with seven programs identifying as using curricula that were abstinence plus or comprehensive. While three programs reported using evidence based Diffusion of Effective Behavioral Interventions (DEBIs) for the populations that were served by the programs locally. All of the programs had specific considerations for adolescent populations, but some programs targeting subpopulations among adolescents.

For example, programs that targeted subpopulations focused on young men that have sex with men (YMSM) or young women of color. A summary of the key characteristics of each program is provided in Table 2 (n=12). Below is also a detailed description of the programs.

Table 2: Description of Programs

Programs (A-G)	Abstinence or Comprehensive Approach	Funding Type	Key Program Characteristics
A	Comprehensive	Federal Funding	 Served youth 13- 24 years Primary and secondary HIV prevention STI prevention HIV testing and Linkage to Care Administered in the community and school settings
В	Comprehensive	Federal Funding	 Served youth up to ages 24 STI and HIV prevention DEBI YMSM targeted intervention Administered in the community setting
С	Comprehensive	Federal Funding	 YMSM youth of color targeted intervention HIV prevention and sexual health DEBI Administered in the community setting

D	Abstinence plus	Various (Public and private funds)	 Served school aged youth grades K-12 HIV and STI prevention in grades 9-12 Administered in the school setting
Е	Comprehensive	Various (Public and private)	 Served youth of all ages HIV and STI prevention Administered in school and community settings
F	Abstinence only	Federal funding	 Served adolescents in the middles and high school grades 6-12 STI prevention and relationship building curricula Administered in school and community settings
G	Comprehensive	Federal funding	 Served adolescents 13-24 years Primary and secondary HIV and prevention STI prevention HIV testing and counseling and linkage to care Administered in the school and community settings

Н	Abstinence only	Federal funding	 Served adolescents in middle and high school STI prevention Administered primarily schools(community setting upon request)
I	Abstinence only	Federal funding	 Served adolescents in grades 9-12 STI prevention Administered primarily in the school system (community setting upon request)
J	Abstinence based	Private funding	 Youth STI and HIV prevention Administered in the hospital and community settings
K	Comprehensive	Federal funding	 Served African American adolescents 12- 24 HIV prevention DEBI Administered in the community setting
L	Abstinence only	Various (Private and public funding)	 Served adolescents 12 to 18 years STI and pregnancy prevention Administered in schools and the community

Program A was described as a comprehensive sexual health education program that served adolescents ages 13-24 years. This program was administered through a federally funded grant to provide primary prevention education, HIV counseling and testing, STI testing, secondary HIV prevention for youth living with HIV/AIDS, and linkage to care services if a youth is identified as HIV positive. The services were provided in Hillsborough County. The program staff visited various community locations where youth congregated to provide their testing services. If the youth tested had a positive HIV test, the program staff provided support services that included scheduling and attending a follow up appointment. The HIV/STI primary prevention curriculum was developed by staff using internet resources. The educational prevention was delivered via Microsoft Power Point presentation and interactive activities. The interactive activities included quiz games about STI acquisition and risk factors. Anatomy and sexual health terms were also covered during the education session. The program was administered in the middle and high schools and community setting by peers (young adults 18-30 years) and program staff contracted at a local community based organization.

Program B was described by the participant as a comprehensive sexuality education program using one of the DEBIs for YMSM up to age 24 years. This program was funded by the CDC and provided a primary HIV prevention intervention with a focus on monitoring and evaluation. The intervention was delivered in person via group sessions and served youth in Hillsborough County area. The participants also provided self reported pre-test and post- test for evaluation and monitoring.

Monitoring of the intervention included ongoing evaluation of implementation plans.

This program was administered in the community setting by program staff.

Program C was funded by a federal prevention grant to provide a DEBI for adolescent YMSM of color. This intervention was described as a comprehensive sexual health intervention that consisted of twelve contact hours of structured intervention sessions. The intervention was implemented at community agencies by program staff. The sessions were administered over a two month period and focused on reducing risk for HIV and social issues associated with being an YMSM. Some of the specific topics covered during the group sessions were making good choices, partner selection, condom negotiation skills, and safer sex practices such as a reducing the number of sex partners and increased testing. These topics were covered by using skills training such as teaching participants to use barrier methods and how to communicate with partners. The intervention was provided to participants in the Hillsborough County.

Program D was part of a community based organization that received funding from public and private sectors to provide prevention education to youth in grades k-12. This organization's programs were implemented at schools and community agencies. The HIV/STI prevention and pregnancy prevention education were primarily implemented at schools. Information packets were mailed to schools with descriptions of each program that is offered. Classroom teachers then made requests to the program for staff to visit their students for a presentation. One of the activities that was offered in the pregnancy prevention curriculum was the provision of battery operated computerized baby that students could take home. This activity allowed students to experience caring for a lifelike baby for one night.

Students participating in this activity would have to figure out why the computerized baby was crying. The babies would need to be fed, diapered and burped during the entire activity. The pregnancy prevention curriculum also prompted students to consider future goals and objectives with a series of questions provided by the program staff. The HIV/STD curriculum was described as abstinence plus and available for high school students grades 9 to 12 and discussed risks, transmission, where to get tested, transfer of bodily fluids, and refusal skills for sexual activity. This curriculum was developed by program staff with the help of classroom teachers and approved by the school system in both Hillsborough and Pinellas Counties. The program was administered by program staff in a 1 to 2 hour sessions. The education sessions also consisted of pre and post test evaluations. The pre and post test evaluations were administered by the classroom teacher prior to program presentation then after the program was implemented.

Program E was a local chapter of a national organization and described its health education program as comprehensive sexuality education for youth of all ages. This chapter was located in Pinellas County and served youth throughout the Tampa Bay area. The program was administered in school and community settings using a curriculum developed locally by the health educator. Topics included primary prevention for STIs/HIV, anatomy, understanding puberty, risk reduction, negotiation skills, parent/child communication, and women's health. The program staff administered all prevention activities via interactive games such as question and answer, demonstrations and power point presentation.

Program F was an abstinence only prevention program federally funded to provide STI prevention for adolescents in the school and the community setting. The program served youth in Hillsborough County. Program staff administered the curriculum in a group setting such as classrooms, afterschool clubs, church groups, and community groups. The program topics included waiting until marriage to have sex, setting goals, and relationship building. There activities were administered using a Microsoft Power Point presentations, interactive activities, and group discussions. The curriculum used was selected from the list of abstinence only programs for federally funded entities.

Program G was a federally funded peer education program for HIV prevention in adolescents housed in a adolescent clinic program. The programmed served youth ages 13to24 years primarily in Pinellas County, but the program staff participated in activities in Hillsborough County as well. The program provided HIV counseling and testing for adolescents and secondary HIV prevention programs for youth living with HIV/AIDS, and linkage to care services for adolescents that were identified as HIV positive, in addition to the prevention intervention. The prevention education materials were developed by program staff. The prevention intervention consisted of a comprehensive sexual health education program delivered via Microsoft PowerPoint presentation and interactive activities in the school and community settings. Some of the activities included games, measuring the risk level of sexual activity, and learning to use barrier methods such as condoms.

Program H was an abstinence only prevention program with federal funding to provide prevention education for adolescents.

The program was administered using an approved abstinence only curriculum for providers receiving federal funding. In addition to the federally approved curriculum, the staff also used locally developed materials. School based prevention education was the primary focus of this program. Some of the prevention education was also implemented for youth at community settings. The program was delivered using skits, interactive programs, intense training during a summer program for school aged youth. An abstinence contract was encouraged for youth who participated in the program, but was not required. This contract was a pledge that the youth would abstain from sexual activity until marriage and the youth would abstain from drugs and alcohol. The program and activities covered various topics such as abstinence from sexual activity, abstinence from drugs and alcohol, making choices for better health, and responsible relationships with peers. Program staff and trained youth mentors administered the program. This program was primarily implemented in Pinellas County, but served students through programs in Hillsborough County as well.

Program I was an abstinence only program that was federally funded to provide STI prevention education for adolescents. The program used a federally approved curriculum for the abstinence only grant funding. This program primarily served youth in schools, but also provided education to youth in the community upon request. The program was implemented to students in small group settings. In schools, targeted students were in afterschool clubs or classrooms for the sex education program. Program staff implemented the program with youth in grades 9to12 via PowerPoint presentations and interactive discussions.

The topics included abstaining from sexual activity, abstaining from drugs and alcohol, discussions about the social differences between girls and boys, refusal skills for sexual activity, character, self control, and healthy peer relationships. The curriculum also encouraged students to consider currents and future goals. The program was implemented in Hillsborough County.

Program J was a hospital based program delivered by program staff for adolescents in the community. The program was privately funded. The program was described as abstinence based and was developed using prevention materials from local and national organizations. The program was provided to students in schools upon request by the classroom teacher. Staff also went to community locations such as juvenile detention centers, and churches to administer the program. Youth were able to attend sessions at the hospital for a fee. Topics included STI prevention, adolescent puberty, sexual intercourse, and sexual and reproductive anatomy. The session was administered via PowerPoint presentation during one session lasting approximately 3.5 to 4 hours.

Program K was a prevention program of a community level research HIV prevention protocol for African American adolescent's ages 12 to24 years. This project was funded by a federal research grant. This program used a DEBI curriculum for HIV prevention with an emphasis on a peer outreach model. The program was comprehensive and covered topics such as risk reduction readiness for changing risks, and encouraging young women to seek social support to lower their risk. During weekly sessions, the program staff trained adolescent women peer outreach workers on topics that included STI/HIV prevention, barrier methods, and stages of behavior change.

The training was administered using Power Point presentations, interactive activities, and group discussion. The outreach workers were also trained in approaching and then speaking with other young women about role model stories. These role model stories were collected by program staff through interviews that detailed a behavior change that reduced the risk for HIV. The outreach workers would then go into the community to pass out the role model stories along with risk reduction materials such as condoms and information on community resources. The outreach workers would discuss the role model stories and the behavior change featured in the stories with young ladies in the community.

Program L was a prevention initiative of a local clinic for women's reproductive health. This program was funded through grants and private support. This program offered primary prevention in group sessions for adolescents' ages 12 to18 years and individual counseling sessions for adolescents in crises on topics such as unwanted pregnancies or STI infections. The curriculum used was abstinence only. The curriculum was administered in afterschool programs, in school clubs and in community settings by program staff using interactive activities and discussions. The program covered topics such as consequences of sex, setting goals, and decision making. *Description of Participants*

The participants included a sample of program staff and community informants.

The program staff job position's ranged from executive directors, program administrators and peer educators. Participants that volunteered in this study were directly involved in the implementation of each program.

Their responsibilities included delivery of the prevention programs, design of the program, recruitment of youth participants, HIV/STI testing, and linkage to care services. At the time of the interview the participants experience in administering their programs ranged from six months to 10 years. The community informants worked in various positions that supported adolescent prevention programs. Their positions included and executive director, public health prevention coordinator and a former prevention coordinator at the school system. The community informant's experience in prevention education ranged from 11 to 18 years. The participants provided information for twelve programs and the barriers for implementation in the Tampa bay area.

Perceived Barriers

Participants were asked to describe the barriers for implementing their prevention programs for adolescents within the local context. Many of the participants described similar barriers despite differences in program characteristics. There were twelve prevention programs described in this study. Seven (58%) of the programs identified as comprehensive sex education programs while five (42%) programs identified as abstinence only programs. The primary sectors for which participants identified barriers for implementing their program were the public school system followed by faith based institutions, specifically churches. Eight (67%) participants identified schools as presenting barriers for program implementation. This represented 6 comprehensive programs (inclusive of two staff members from the same program) and one abstinence only. Nine (75%) participants identified the churches as a barrier for implementation of their programs. Of those participants that identified the churches as a barrier, four of the programs were comprehensive and five were abstinence only.

Barriers for program implementation included: tailoring the program message and presentation based on restrictions from school officials and parents opposition to the program; lack of appropriate places for program activities and distribution of program materials; lack of transportation for youth to seek prevention services; difficulty in following up with youth for testing service and group sessions due to lack of phone services or valid phone number; limited teacher and classroom time for programs implemented in the school setting; stigma from churches; churches wanting a faith based curriculum; community perception about the program; funding constraints within the agency; and national policies on funding for prevention education. Table 3 (n=12) presents a summary of the perceived barriers as identified by the participants representing the programs.

Table 3: Perceived Barriers

Perceived Barrier for Implementing Prevention Program	Number of Comprehensive Programs that Identified Barrier (total# of Comprehensive programs=7)	Number of Abstinence Only Programs that Identified Barrier (total# of Abstinence only programs=5)
Tailoring the program message and presentation based on restrictions from school officials and parents opposition to the program	6 (50%)	2 (17%)
Lack of appropriate places for program activities and distribution of program materials	3 (25%)	0 (0%)
Lack of transportation for youth to seek prevention services	4 (33%)	0,0%

Difficulty in following up with youth for testing service and group sessions due to lack of phone services or valid phone numbers	4 (33%)	0 (0%)
Limited teacher and classroom time for programs implemented in the school setting	3 (25%)	2 (17%)
Stigma from churches	4 (33%)	1 (8%)
Churches want a faith based curriculum;	0 (0%)	5 (42%)
Community perception about the program	2 (17%)	5 (42%)
Funding constraints within the agency	7 (58%)	5 (42%)
National policies on funding for prevention education	4 (33%)	5 (42%)

Of the twelve programs contacted for this project, eight (67%) identified the public school system as a location for current implementation. All others discussed the wanting to present their program in the schools. Each of the seventeen interviewed participants acknowledged the reach of the public school system in primary prevention for STIs in the adolescent target population. The majority of the participants implementing programs described their efforts to gain access to students within the schools, some with success, while others facing much opposition. Despite the participant's successful efforts of implementing STI prevention programs in the public schools, there was recognition of restrictions within the school district about what messages were delivered to students.

This posed a barrier for programs in implementing their programs with fidelity. One participant said,

"When we go in to the school to talk about HIV and AIDS they want us to do the more science based as to how the immune system works how the virus affects the immune system. But they really don't want us to talk about how you can contract it so that it affects your immune system. So we get a lot of resistance from the school system because they think that we're going to go in and promote sex and encourage the kids to talk about sex. So we have to tailor out messages".

(Interview 101, female program coordinator, implementing the program for 2 years)

Another participant also commented on a similar barrier and expressed concern about the program lesson plan approval process in the public school system. This participant was concerned about which program components to remove versus which components to include.

"There are no barriers for the high schools. The middle schools, I'm to get through that approval right now and the major barrier is that they have rules about what the students can be learning. My barrier is making this a lesson in a way that they won't say, "No, you can't come into our schools." I don't want to compromise too much of our mission; I don't want to compromise what the kids should be learning just so that I can get past a committee, so that's a barrier for me. There are really tough issues, and it's like "What do I cut out?" None of it should be cut out." (Interview 110, female sex health educator and trainer, implementing the program for 3.5 years)

In addition to expressing concerns about the program content when presenting in the school setting, the participants also discussed concerns about backlash from the administration towards the staff that invited them to speak to the students. The perception was that the restrictions imposed by the school extended beyond the program information, but could also pose a threat to those employed internally within the school districts. This participant expressed concern about implementing their program in the schools and possible consequences of violating the established restrictions.

"So you know its hard to educate when you know that there is barriers and limits as to what you can say because the teachers will either get in trouble you don't want people to lose their job." (Interview 101, female program coordinator, implementing the program for 2 years)

Participants also expressed concern about the public school districts position of sexual health education, which they perceived to have an impact on specific program activities that were allowed on campus. One participant discussed not being invited back as a guest presenter because of program prevention activities that were not approved by the school. The participant stated:

"... its abstinence only education in the schools. So we are not allowed to go in there and test. One of my fellow peer educators got barred from a specific school because he did a condom demonstration to a person he was testing" (Interview 102, female peer educator, implementing the program for 2 years)

Another participant also expressed concerns about peer outreach workers in the prevention program violating a school district policy by distributing condoms on public school grounds.

"I know that I have recently heard that they are not allowed to pass out condoms on school campus. So for those ladies who are reaching out to other ladies in the community at schools, they are not supposed to be passing out condoms." (Interview 116, female program coordinator, implementing the program for 1 year)

All participants implementing programs, with the exception of one that discussed the schools policy on sexuality, perceived the school's policies to be abstinence only. For all of the comprehensive sexuality education programs, this presented a barrier for implementing their programs with fidelity. One of the community informants that worked on a school based STI/ HIV prevention program also reported the perception of abstinence only sexuality education as the policy within the school district. The informant observed this policy to be circumstantial depending on who was asking about the policy or who was seeking the answers. The informant said:

"Well I will say this. It was very clear to me the more I worked with the community and the more I worked within the district on that topic, the more I realized that no one really knew what the policy was as far as or what the position was as a school district. And (it) depended on who you asked and it depended on who asked the question if it was going to be the Tampa Tribune or the St Pete Times asking the question, the answer would be we are abstinent only.

If you were going to ask that question, if it was a supervisor or someone who had to deal with curriculum, they would say that we answer the questions the student asks because that's what we need to do. That would be leading into something that's more than only abstinence education." (Interview 104, female community informant, implemented a program for 11 years)

The majority of participants implementing programs (9 of the 14 participants) also discussed concern from parents of youth receiving the program. Parent misconceptions and lack of support for their curriculum was perceived as a barrier, but several programs were prepared to deal with parent concerns prior to implementing the curriculum with the youth. There were parent forums and opt-out permission forms in addition to emphasizing other components of the programs rather than focusing on the sex education mentioned. The programs made efforts to inform parents about the education they provided by sending home permission forms. They also provided parent information sessions. One participant discussed the way their organizations dealt with parent concerns in a effort to ease parent concerns about sexuality education.

"(Parents were concerned about what the students were learning) especially if we're going into a new school. And what we typically try to do from going into a new school, if we can you know, we offer a parent presentation to go in and speak to parents. ... I personally don't like to refer to ourselves as sexuality educators because like I said, we catch onto all of these different aspects of prevention.

I prefer calling ourselves more of relationship and character educators because I believe that if we build up character and we teach what positive relationships look like." (Interview 112, male program director, implementing the program for 8 months).

Another participant also discussed the success of a similar strategy:

"When we really started teaching HIV...We would invite the parents in the evening to come to the school and hear this program because it was for permission. And the first couple of times we had so many parents and we were so excited that we could teach parents this information. Every single one of the parents were comfortable with what we were presenting. They were so happy we were presenting it and they didn't have to, in a way." (Interview 106, female executive director, implementing the program for 16 years)

Another barrier identified by participants was lack of appropriate places for program activities and/or distribution of program materials. In addition to not being able to distribute condoms as described previously, participants discussed the place that program activities occurred as a barrier. For programs that provided testing services, specifically HIV pre and post test counseling, and programs that targeted populations of youth such as young men that have sex with men (YMSM), these programs identified a lack of safe spaces to perform program activities as a barrier. Participants were concerned about confidentiality for counseling, consent, testing and delivering results. For YMSM

prevention programs, the need for a safe space was described as important to meet a

variety of needs that extended beyond prevention activities such as a place to eat and

have social events.

Here one participant said:

"A place where you can make a meal, a place where we can say come on in and have a party. Kind of like a safe house, to meet their needs. And that we can provide testing, education, and also spin additional programs as well." (Interview 105, male program supervisor, implementing the program for 3 years)

Recruitment in some populations was difficult for two of the participants. For participants recruiting YMSM youth, they found it hard to find youth to attend the program by recruiting in person. Programs staff also discussed having a difficult time handing out flyers at youth events or talking to youth and inviting them to attend the program. The participants implementing these prevention programs turned to social media and the internet to recruit youth for their programs. Another participant also discussed not having the staff to accommodate, including youth who preferred to receive information in Spanish. For the participants that implemented programs in the public schools, competing with the academic class time was a constraint for their prevention efforts. Four programs (33%) discussed competing with classroom time as a barrier. Under classroom time restrictions, these participants found it difficult to implement the prevention program in its entirety. For example, one participant explained the program intervention was 5 hours and was usually administered in five one hour sessions. This was described as a concern for teachers because they did not want to lose time from academics.

Transportation for youth to access prevention services was also discussed by participants. Programs that were implemented in the community setting required youth participants to provide their own transportation to get to the program or central locations.

Some of these were, prevention offices providing HIV testing services and case management services for people living with HIV/AIDS, community recreation centers, and clinics. One participant said the following:

"Well first of all a lot of them aren't of age to have drivers license and some of them aren't in a financial situation to have a car and then the public transportation that's available to no one... like we do provide bus passes or we did but no one wanted them because would be an hour late or whatever" (Interview 102, female peer educator)

For programs that had more than one intervention session and/or provided testing services, communication with youth for follow-up sessions and services was identified as a barrier. The program staff experienced not having valid phone numbers for the youth or these youth would not have phone service. This posed a significant barrier for program implementation and follow-up for test results and linkage to treatment services when counseling and testing were provided.

Faith based institutions, specifically churches were cited as barriers by all the participants in terms of program implementation. Every participant that implemented a prevention program described a degree of reluctance from a church to provide their prevention program to youth within the church. Stigma from the church toward HIV was specifically discussed by one participant in detail.

This was also cited as an issue that made it difficult to engage the church although it was a place of importance for the program youth.

"Well a lot of our populations are involved in the church of course, but we can't go to the church since they believe in abstinence. So it's difficult to get in touch with those programs that talk about our program and our participants are actually there but we can't reach them because of family members and religion. And working at an HIV prevention agency, a lot of guys in our population can't come out because of the stigma of HIV and they feel that people who see them here think that they have HIV. So that's a barrier as well." (Interview 105, male program supervisor, implementing the program for 3 years)

A barrier that was exclusively identified by all of the abstinence only programs was lack of participation from churches and faith based organizations because they wanted a faith based abstinence program. Churches and faith based organizations such as private schools were resistant to the abstinence only curriculum because the curriculum did not include references to spiritual passages from the Bible or Koran. As one participant stated:

"...they only want abstinence education if it's faith based. Meaning they would want prayer before, after and during. They would definitely want you to use scripture and be labeled as a faith based program." (Interview 108, male program staff, implementing the program for 1.5 years)

Another participant also stated:

"The churches, the synagogues, and the mosques here in Hillsborough County, we don't give a faith based message. They are very hesitant to bring us in"

(Interview 112, male program director, implementing the program for 8 months)

The community perception of the organization was also discussed as a barrier. One organization in particular, also provided reproductive health services. Because these services included the option to terminate a pregnancy there was the perception that some youth groups would not want to be affiliated with the organization. According to one participant:

"Everyone's in fear of losing clients so they want to be on the safe side, so if that means not being affiliated with someone who's a little bit more risqué, and more taboo, then they'll just want to...won't even be associated with it." (Interview 107, female educator, implementing the program for 6 months)

The abstinence only programs described the community perception of their program as a barrier to implementing their curriculum as well. Some participants had received negative comments directly while others felt there was stigma towards the curricula and prevention methods used in the abstinence curricula. For example, one participant stated:

"Me personally, I haven't received any negativity about the program itself. I've heard some negativity. About what abstinence education in the past has been, I don't think it was complete." (Interview 108, male program staff, implementing the program for 1.5 years)

Another participant stated:

": Across the globe. Our programs are under a lot of scrutiny right now. People you know, especially when it comes to research there is research and not research that show that our programs work. The fact of the matter is that our programs have only been around for like ten years, really. The comprehensive approach has been around a lot longer. There is no research that shows that that's working either, because research would have shown that STD's were decreasing all along the way." (Interview 113, female project director, implementing the program for 1 year)

Another participant added:

"Simply the name abstinence only and because we have that title V funding it's just assumed we just say ok just don't do it, sex is dirty and bad and that's all we do and there's no real education going on" (Interview 103, female program director, implementing the program for 9 months)

All of the participants discussed resource allocation or funding for prevention programming as a barrier. There were two particular issues regarding funding that each participant discussed regardless of program focus or population of focus. The first was limited in agency resources to purchase prevention materials and then followed by national policies on funding prevention education. Some of the requests included, more funding for supplies and prevention materials and cell phones to communicate with youth. The broader issue of funding was discussed in terms of the policies for funding abstinence only or comprehensive prevention programs. All participants implementing programs mentioned grants as a means for prevention education.

About half of the comprehensive sex education programs (4 of the 7 programs) and all of the abstinence only education programs discussed federal grant funding as title V or abstinence only funding. This was identified as a barrier in several ways for the programs depending on when or where the curriculum was used. For the comprehensive sex education, federal funding for abstinence only education was a hindrance for funding comprehensive sex education. One participant stated:

"I would say one of the major barriers has been the money that's been channeled into abstinence only funding because schools who accept that funding of course are abstinence only people which take our time away from those students and that's a huge disservice to them not getting all of the information. Got to get comprehensive sex education. Major major barrier." (Interview 110, female sex educator and trainer, implementing the program for 3.5 years)

For the abstinence only programs, there was a concern about a shift towards comprehensive sex education and the loss of funding through federal grants. Another participant said:

"I guess a barrier for us is that we're completely funded with this grant. So obviously you would want complete you know, be sustainable about having to rely completely on the government. Although there's nothing wrong with grants and getting help. That puts us in a very particular place. If changes in the administration and if they decide to change things and pull the funding away, you know that's our program right there. So it's definitely a real concern for us."

(Interview 113, female project director, implementing the program for 1 year)

The participants were not sure about the status of the federal funding and there were explicit discussions about policy and politics about federal dollars to fund prevention programs. There was also discussion about state policies to enact a standard for sexuality education for adolescents.

Summary of Results

The results showed that participants implementing prevention programs experienced a variety of barriers. Some of the barriers were related to policies at the places where the programs were implemented, funding constraints internally and externally and perceptions about the program that was implemented. These barriers were mostly likely associated with the places where the prevention program was implemented. For instance, participants that went to schools faced barriers such as school policies. These policies often led to the participants altering their program activities. Competing with academic time was another issue when the programs were implemented in the schools. The perception of the program was also cited as a barrier when participants approached churches to educate youth. Some participants were also expected to alter their programs to include information that was faith based when presenting in a church. Other barriers related to where the program was implemented included: securing a safe space to administer confidential counseling, testing, and program activities for youth. Lastly, state and national funding policies were also mentioned as barriers for program implementation. All grant abstinence only grants funded participants discussed that their program funding was determined based on these policies, which was not stable depending on national politics. Additionally, the community perception about these funding policies for all abstinence only participants was perceived as negative.

CHAPTER 5: CONCLUSIONS

Discussion

Several barriers were described for implementing STI prevention programs in adolescents. Participants in this study, despite their curriculum (abstinence only or comprehensive) noted localized policies that impacted their implementation. Some of these policies may have a role in how STI prevention is administered on the local level, which in turn impacts the expected outcome of lower risk behaviors. For example, participants described barriers which led them to alter their programs in ways that eliminated key components such as condom demonstrations. The effect of these alterations is not known. Community environment and the physical space to administer program activities also served as barriers especially for those populations at highest risk for STI/HIV. These barriers suggest that primary prevention should also be implemented in conjunction with an evaluation of the community environment where the intervention is being implemented. For example an exploration of the community context should be considered by program administrators. Also, grantors should consider barriers and facilitators for previous programs that were implemented specifically focusing on the community context that contributed to the barriers and facilitators. Finally, national funding policies that dictate curricula were also discussed as barriers for implementation for participants.

In describing the perception of barriers for implementing programs, participants discussed key similarities that were identified by providers in other studies.

Similar to Scales and Kirby's study (1983) that identified provider's perception of barriers toward sex education, there was a discussion about opposition of the sex education program. In the Scales and Kirby (1983) study, participants ranked predetermined barriers in a survey as opposed to responding to interview questions. Fear of opposition to the sex education program was ranked as highly important among administrators (Scales and Kirby 1983). This fear, as discussed in the context of the Scales and Kirby's study was from community concerns about sex education and the community concerns about the influence on youth. The data from the current study are also consistent with this finding. Concern from school administrators regarding sex education occurring in the classroom was perceived by participants as a barrier in conveying a consistent message to the community about the type of program that was being taught. Participants attributed this to administrator's fear of back lash from the community toward sex education. Despite the length in time between the current study and previously implemented study by Scales and Kirby, the perception of this barrier is still relevant because sex education remains a taboo and controversial topic. Educators must work to improve the tension around and fear toward sex education. Sex education is most often discussed in terms of risk, disease acquisition and protection from diseases rather than in terms of wellness or sexual health. This means the prevention curricula, the training for sexual health, and the implementation activities much shift to include a health focused view of adolescents sex education in an effort to normalize sexual health.

Owczarzak and Dickson-Gomez (2011) recently examined provider perspectives on barriers and facilitators towards evidence- based HIV prevention programs.

Compared with results from Owczarzak and Dickson-Gomez's study, participants in the study also found it difficult to implement to programs with fidelity. Some of the barriers reported by Owczarzak and Gomez-Dickson included: difficulty in program participant recruitment, challenge in program participant retention, and the inability to implement program within the intended population (2011:173). Barriers of program participant recruitment and program participant retention were identified by providers in this research study as well. Owczarzak and Dickson-Gomez also described facilitators for implementation in their study. The facilitators that were identified included: "support of upper level management" and "flexibility within the organization to expand programs and rethink the agency's mission" (2011:175). Owczarzak and Dickson-Gomez recommended further exploration into the implementation process at the organizational level given their findings (2011: 178). For those participants implementing evidencebased programs, organizational capacity and community level barriers were issues that needed further exploration. For example, training on how to make changes to curriculum and adapt the programs for various populations could be useful for providers. Also, understanding both the barriers and facilitators for implementation are important for program implementation. In this research study, the perceived barriers were analyzed and described. All of the facilitators that were reported were not examined in the analysis.

An important facilitator identified for program functioning was funding. As discussed by participants, this was often a barrier in terms of not having enough supplies to implement the program. More importantly, the macro level policies that impact funding were discussed as barriers by almost all participants.

As noted in the literature review, the US has a long history of national funding for pregnancy and STI prevention that is primarily abstinence only. As a review, in 1981 there was the Adolescent Family Life Reform Act (AFLA) (Siecus, 2012). This was then followed by two streams of funding, title V in 1996 which outlined the eight point guidelines emphasizing abstinence until marriage (Siecus 2012). More recently, there was the Community Based Abstinence Education (CBAE) in 2000 (Siecus 2012). All of the participants were aware of the funding streams because they were receiving these funds to implement their program or their program was not able to apply for funds because of the criteria for abstinence only. These perceptions were particularly heightened because the interview period took place during the fall of 2008 through the spring of 2009. This was during and immediately after the 2008 presidential elections. Because of the changes in administration, there were discussions from participants about the possibility of loosing abstinence only funding if the newly elected president, Barack Obama repealed the abstinence only funding that was enacted and upheld by previous administrations.

Since 2008, there has been change in the funding streams. The Office of Adolescent Health (OAH) was created, which "supports research and demonstration programs to develop, replicate, refine and test additional models and strategies for preventing pregnancy" (US Department of Health and Human Services, Office of Adolescent Health2012a: 1). Through the OAH and CDC partnerships, funding for based teen pregnancy demonstration programs are available for community based organizations (US Department of Health and Human Services, Office of Adolescent Health2012a).

This funding stream will also be accompanied by an evaluation and a report on lesson learned from each of the grantees (US Department of Health and Human Services, Office of Adolescent Health 2012a). Additionally, the OAH is supporting evidence based programs through a targeted approach which is described as "community-wide initiatives in reducing rates of teen pregnancy and births in communities with the highest rates, with focusing on reaching African American and Latino/ Hispanic youth aged 15-19" (US Department of Health and Human Services, Office of Adolescent Health 2012a:1).

Even with the new funding opportunities available at the national level, local level program coordinators must take into account the context in which these programs are implemented. Community perception can have an impact on where the program is implemented and how well the program is received by the community. Additionally, the national funding also posed another issue which is the perception of the programs' effectiveness. During the interview period there were evidence based prevention programs being implemented to decrease risk in adolescence which were not on the abstinence only funding approved programs list. This was problematic because it fueled the debate over sex education. Based on the perceptions discussed in this study there needs to be a comprehensive approach to evaluating the implementation of primary prevention education curriculum for adolescents. Currently, the national administration is seeking new ways to address strategies for teen pregnancy through implementation and evaluation. To date, organizations in Florida have received funding for comprehensive and abstinence only curriculum through the OAH Initiatives (US Department of Health and Human Services, Office of Adolescent Health 2012c).

Given the fact that this funding ensures evaluation plan, this is hopeful for local community organizations implementing teen pregnancy prevention.

Participants also identified churches as a barrier for implementation. All of the participants implementing abstinence only programs discussed the reluctance of churches to allow sex education presentations without reference to spiritual passages to support the curriculum. This is an issue that needs to be explored further. Although all of the abstinence only program participants perceived this barrier, this research did not include a sample of church leaders. Therefore, further discussion with churches would be necessary to understand to scope of this barrier. It is not clearly understood if all churches in the Tampa Bay area were reluctant to provide sex education to their youth or if this was an issue with some of the churches that were approached by the programs.

Conclusions

Overall, this research project sought to identify the programs that existed for primary prevention of STIs in adolescent populations in the Tampa Bay area. Through purposeful sampling, fourteen participants representing twelve programs that implemented primary prevention and three community informants agreed to participant in the semi structured interviews. The program information described in the interviews included the populations served by programs and barriers that made it difficult to administer the program. Participants also identified local programmatic barriers that made it difficult to implement their program with fidelity. The schools and churches were locations that presented the most challenges for programs. Despite these challenges, schools and churches were places at where many of the programs made modifications in order to provide their programs.

Some of the issues that presented challenges in the schools were related to school guidelines such as public school district's restrictions in material distribution, for example condoms were not allowed on school campuses. While other barriers were physical barriers such as securing spaces to provide program activities such as counseling and testing. In the churches, there was a request for faith based messages that included scripture references, which could not be accommodated because of curriculum and grant funding constraints. Both schools and churches clearly wanted prevention messages, but there were limitations placed on STI prevention programs when educating youth in these settings. When trying to access youth in these settings, participants often felt at odds with having to deny services because they could not modify their curriculum. At other times they would modify their programs to fit the setting, but with ambivalence.

Based on responses from this study, resources are clearly needed to provide the prevention messages and materials necessary for primary STI prevention in adolescents. There are funding constraints internally and externally that made it difficult for programs to implement their programs. More funding for implementation is needed and should be provided for evidence based programs. There was a sense of the concern about the national funding streams for regarding sex education because of the support for several curricula that were not supported by evidence based. The debate for which approach, (comprehensive or abstinence only) is used was an issue that impacted several program's ability to offer services in some settings. All of the abstinence only programs felt there were negative feelings in the community towards their program because of their approach.

Clearly, concerns about national level policy and local perception of the program were important for programs and despite the research data showing that there are effective programs for reducing risks in adolescents. Regardless of program approach, the participants valued direction from national policy and local policy on implementation their program. In some cases, despite the evidence based models for primary prevention, the local policy and community context overrode the ability to implement the program with fidelity and there were real and perceived barriers for programs. For some programs emphasizing self efficacy and skill based learning, components for prevention skills had to be removed. For example, comprehensive education programs that included learning condom use skills were prohibited from implementing this part of their program on school campuses.

Limitations and Recommendations

Since the time of these interviews, policies that directly impact primary STI prevention in adolescents have been revised. Changes have even impacted the availability of services compared with those that were available during the inception of this project. A study to examine the primary STI prevention efforts for adolescents in the Tampa Bay Area (given the changes in policy) and the impact of these programs on STI rates and teen pregnancy rates is also recommended for the future.

Of the twelve programs represented in this study, the majority served youth of diverse populations. Two programs targeted minority youth populations. Based on the data for reportable adolescent STIs, there is a need for prevention efforts with young women, racial and ethnic minorities and young YMSM of color.

For example, a recent report from the CDC YRBS (2012) on trends in HIV related risk behaviors, among high school students in the US, from the years 1991-2011 noted a decrease in condom use in Black/African American students. This should also be a concern for local youth and providers in the Tampa Bay area, as well. More research for prevention efforts for that reduce the disparities between minority adolescents and their counterparts is needed. This recognition is shown at the national level through its efforts in the OAH and the call to action for effective strategies that target these youth (US Department of Health and Human Services, Office of Adolescent Health 2012b). Despite this national recognition and action for minority youth, there still needs to be awareness for prevention efforts in youth that are MSM or LGBT. Prevention providers that served YMSM described barriers that were specific to their programs such as stigma and lack of safe spaces. Understanding how the providers overcame these barriers to implement sex education is important. This issue should also be explored further.

There are several limitations in this study. The first is that the study explored the perceptions of providers and did not measure barriers. This study is also not generalizable to all programs implementing prevention programs. Despite this, there were important barriers identified by participants that can be explored for implementing future programs with youth. The next step would be to validate the actual barriers by evaluating the programs. This should include in-depth interviews with program staff, program administration, youth participants, and staff at community locations such as school officials, community centers and churches.

Another limitation of this study is that it did not include any evaluation models as a framework for this study. One framework that would be useful in determining implementation of STI prevention in the local context is RE-AIM. The RE-AIM framework is described by Glasgow and colleagues as a "model which emphasizes the reach and representativeness of both participants and settings" (1999:1322). The authors also explain that the framework considers "the public health impact as a function of 5 factors: reach, efficacy, adoption, implementation, and maintenance. (Glasgow et al. 1999:1323) Glasgow and colleagues discuss this model as a comprehensive approach to evaluation (1999:1325). In considering more than factors related to implementation, this framework takes into account several factors for program impact. This study would have benefited from using the factors of the RE-AIM framework in the examination of barriers for implementation.

Public health research continues to move towards "implementation science" and operational research for interventions (Schackman 2010: 1 and Venigas, Kao and Rosales 2009). As defined by the National Institutes of Health, "implementation science is the study of methods to promote the integration of research findings and evidence into healthcare policy and practice" (2012:1). Although, this study was not an evaluation of the STI prevention programs or the methods used in implementing the programs, another limitation is that further investigation into the implementation of the evidence based programs in the community was not addressed. Although several barriers for the evidence based programs were identified there needs to be more research on the implementation of these interventions within the Tampa Bay area.

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APPENDICES

Appendix A: IRB Approval



DIVISION OF RESEARCH INTEGRITY AND COMPLIANCE

Institutional Review Boards, FWA No. 00001669 12901 Bruce B. Downs Blvd., MDC035 • Tampa, FL 33612-4799 (813) 974-5638 • FAX (813) 974-5618

October 8, 2008

Rachel Stewart-Campbell, BA Anthropology 11852 Skylake Place Tampa, FL 33617

RE: Expedited Approval for Initial Review

IRB#: 107174 G

Title: Perceived Barriers for Implementing Primary Sexually Transmitted Infection Prevention

Programs for Adolescents in the Tampa Bay Area Study Approval Period: <u>10/01/2008</u> to <u>08/14/2009</u>

Dear Ms. Stewart-Campbell:

On October 1, 2008, Institutional Review Board (IRB) reviewed and APPROVED the above protocol for the **period indicated above**. It was the determination of the IRB that your study qualified for expedited review based on the federal expedited category number six (6) and seven (7).

Also approved is with the Informed Consent form.

Please note, if applicable, the enclosed informed consent/assent documents are valid during the period indicated by the official, IRB-Approval stamp located on page one of the form. Valid consent must be documented on a copy of the most recently IRB-approved consent form. Make copies from the enclosed original.

Please reference the above IRB protocol number in all correspondence regarding this protocol with the IRB or the Division of Research Integrity and Compliance. In addition, we have enclosed an Institutional Review Board (IRB) Quick Reference Guide providing guidelines and resources to assist you in meeting your responsibilities in the conduction of human participant research. Please read this guide carefully. It is your responsibility to conduct this study in accordance with IRB policies and procedures and as approved by the IRB.

We appreciate your dedication to the ethical conduct of human subject research at the University of South Florida and your continued commitment to human research protections. If you have any questions regarding this matter, please call 813-974-9343.

Sincerely,

Paul G. Stiles, J.D., Ph.D., Chairperson USF Institutional Review Board

Enclosures: (If applicable) IRB-Approved, Stamped Informed Consent/Assent Documents(s) $\underline{IRB\ Quick\ Reference\ Guide}$

Cc: Anna Davis/cd, USF IRB Professional Staff

David Himmelgreen, PhD

SB-IRB-Approved-EXPEDITED-0601

Appendix B: Interview Guide

Informed Consent

Yes□ No□

Hillsborough County Primary STI Prevention Program Provider

1. How did you get involved with prevention efforts?

Probes:

How long have you been on your position with the program? What is your experience in Hillsborough County?

2. What have your experience been implementing STI prevention programs?

Probes:

How long have you been involved with prevention efforts?

3. Are you familiar with or have used any of the current programs that are proven to be effective in HIV/STI? Provide a list of CDC programs.

Probes:

Where were you involved with these programs? Did you use them locally? What was that experience like?

4. How did this program come to exist?

Probes:

When and how did it start?

What kind of community response did you initially receive?

What curriculum is being used and why? How did you choose this curriculum? What goals do you have in using this curriculum?

How did you decide to focus on adolescents?

How do you recruit participants?

What were the concerns from parents/ community members?

Who attends the program?

Who administers usually the program?

5. What were some of the difficulties in starting the program?

Probes:

How did the community react to the start of your program? What about local and/or national policies that impacted your program? Tell me about overcoming those difficulties?

Based on what you know did they also affect other programs in the area?

6. Describe the issues that have made it difficult to continue to offer your program?

Probes:

Tell me about the ones that you think may be specific to Hillsborough County?

7. Describe some of the barriers for implementing a STI prevention program in Hillsborough County?

Probes:

What about policies, funding, participation issues, or collaboration with other programs.

8. As you think about the implementing a program, what is necessary to make it a success?

Probes:

What would you consider success?

What can you identify as the goals in implementing the STI prevention (increase in knowledge, behavior change)

9. Are there any success stories or personal experiences that stick out in your mind?

Probes:

How does this impact your current work?

- 10. In an ideal community organization if you could implement any program
 - which would it be and
 - what would you need to make that particular program successful?
- 11. Are there any other issues related to implementing your program that you would like to discuss?

Appendix B: Internship Experience

My place of internship was Connect to Protect® Tampa Bay (C2P), a coalition created with the focus on HIV prevention in African American adolescent females ages 12to24. The coalition was developed as part of a national research project that seeks to understand behavioral aspects of HIV among adolescents and link researchers with community members in an effort to reduce the spread of HIV. C2P® Tampa Bay centers its efforts on structural changes through specific objectives as the key process for HIV prevention. Structural change is defined by C2P as new or modified programs, policies, and practices that are logically linkable to HIV prevention and are sustainable when the key actors are no longer involved. The coalition has identified a community in the central Tampa area of Hillsborough County as the focus area. Many of the structural changes focus on Central Tampa, but some have emphasis on stretching throughout the entire county. My role at C2P as a student intern involved organizing events, preparing for coalition meetings, preparing materials for programs, assisting with grant research, and creating resource guides for coalition members. Throughout the internship process my role as a student assistant and graduate student researcher was also to support the research activities that took place at Connect to Protect® Tampa Bay, in addition to conducting this independent project that will assist in understanding the matter of implementing a primary prevention program in Hillsborough County.

As a result of this research project, the C2P® Tampa Bay Coalition will be able to utilize the findings to organize efforts for more STI prevention programs locally.

During the time I was an intern, the coalition focused on several structural change objectives. One of which was aimed at changing the Hillsborough County School District's policy on sex education to include medically accurate and age appropriate STI prevention education that included barriers methods (such as condom use and contraception in higher grade levels) for students in grades 5 through 12. This objective was developed in response to a timely local occurrence that took place within the county schools. This major occurrence was the loss of funding to support the HIV and STI program that the school district used to implement many of the prevention programs in the middle and high schools. This funding was provided by the CDC DASH (Division of Adolescent School Health) program, and was not renewed for Hillsborough County in for the 2008to2009 school years. News of the end of this funding stream led the coalition members to question the quality and the availability of the existing programs within the schools. There also seemed to be a national urgency regarding the issue of STIs in girls. In early 2008 a CDC press release with the title "Nationally Representative CDC study finds 1 in 4 Teenage Girls has a Sexually Transmitted Disease" was widely circulated among coalition partners (CDC 2009b: 1). This seemed to elicit a sense of greater importance in the work that the coalition was doing. It also confirmed for coalition members that something needed to be done to improve prevention efforts. In order to move the efforts forward there was also collaboration between the C2P coalition and the Healthy Teen Campaign.

The Healthy Teen Campaign is a Florida coalition organized to advocate for comprehensive sex education in public schools (The Healthy Teens Campaign 2012)

During the time I worked on my data collection the coalition actively worked on the objective regarding STI prevention in the schools and continues to work on this issue as I report the findings. My work with the C2P coalition quickly turned into coordinating coalition activities such as organizing meetings, recruiting new members, and providing technical assistance needs. This was added to my work with the coalition on my independent research project. I attended several meetings in Hillsborough County where medical and community based professionals were present to discuss the issue of STI prevention in adolescents. Some of the meetings were even organized around the coalitions work on STI prevention in schools. Therefore I had direct knowledge and direct involvement in the activities that were taking place in Hillsborough County regarding STI education in the school. During data collection I was very careful not to contact participants as a coalition member because I thought it would affect my interaction with the research participants. Despite this realization, I was always very clear to all participants about my involvement with the C2P coalition when the subject came up and my role as a graduate student researcher. In some instances my affiliation with the C2P coalition allowed me to easily gain access to participants through community meetings. In several instances I received a potential participant's contact information in community meetings, but would follow up with participants in separate appointments. This was done in an effort to make sure recruitment was private, ethical and non coercive.

I followed the guidelines of the USF Institutional Review Board and made sure I was complying with human research subject's requirements for ethical treatment of subjects and research data. I provided everyone with a copy of the informed consent form and a short description of the study prior to meeting with them to ensure that they had ample time to review the study. It was also clear that the interviews were confidential and that the research was part of the requirements for my graduate program.