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ADOLESCENT PARTICIPATION IN PREGNANCY PREVENTION INTERVENTIONS

A Project

Presented to the

Faculty of

California State University,

San Bernardino

In Partial Fulfillment

of the Requirements for the Degree

Master of Social Work

by

Brooke Marie Prince-Slocum

June 2005

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Approved by:

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6/13/05

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ABSTRACT

The rate of teen pregnancy, although on the decline, still remains to be one of the highest among industrialized countries. As a result much emphasis is placed on finding effective pregnancy prevention interventions. A study of thirty-three adolescent females using a questionnaire was conducted to identify what types of interventions they had attended and what percentage had become pregnant. Findings indicated that those who attended more comprehensive interventions and abstinence based interventions were less likely to have been pregnant. The study also illustrated that timing of the attendance was important in that respondents who attended the intervention before becoming sexually active were less likely to become pregnant.

ACKNOWLEDGMENTS

First and foremost I would like to thank Pastor Kalke at Central City Lutheran Mission and Vice Principal Sandra Rodriguez at San Bernardino High School for their support in conducting this research. I would also like to thank Alex Avila from Central City Lutheran Mission and Michelle Cheeley from San Bernardino High School for their assistance with participant recruitment. I would especially like to thank Dr. Chang for her continuous help and advisement during this long process. I would also like to thank Dr. McCaslin for her assistance with the IRB process and helpful tips throughout the progression of this project. My gratitude also goes out to Dr. Davis and Dr. Liles for their teaching methods that made these last quarters a little more fun and a little less stressful.

DEDICATION

I would like to dedicate this project to my family who helped me stay sane through this long process of graduate school. To my husband Travis, who is probably happier than I am to be done with this, thank you. To my mom and Stephen for always being there when I needed a sounding board, thank you. To my dad and Judi for providing comic relief when the stress was high, thank you. My thanks go out to friends, old and new, who have helped or at least tolerated me throughout the past three years.

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CHAPTER ONE

INTRODUCTION

This chapter discusses the issue of teen pregnancy, the implications of teen pregnancy for those affected and society in general. Various types of interventions used to prevent teen pregnancy are described. A discussion of the purpose of the study as well as its significance for social work practice is also included.

Problem Statement

The issue of teen pregnancy is one that has been a concern for many years. It has been on the agendas of many politicians, on the minds of many social workers and in the realities of many adolescents and their families.

Although the rate of teen pregnancy is at an all time low, more than one million teens continue to get pregnant each year in the United States (AGI, 1999). This is the highest rate among industrialized countries (AGI, 1999). Locally, the birth rate to teen mothers' age 15-17 years old in San Bernardino County was 24.2 per 1000 in 2002 (Public Health Institute, 2003). The national rate was 14.3 per 1000 for the same year. San Bernardino has decreased the number of live births to teen mothers from 57.6 per 1000 in 1994 (Public Health Institute, 2003). However, this statistic

is for live births, not pregnancies in general. There is no way to truly know the rates of teen pregnancy that do not lead to childbirth.

With this rate comes a high cost of 6.9 billion dollars annually in lost tax revenues and spending on public aid, health care and other costs (Kirby as cited by Feldman, 1997). The price rises to anywhere from 9 billion to 29 billion annually when teen pregnancy leads to teen childbearing (Center for Population Options, 1992). With this cost it is no wonder that the government places such a high priority on understanding and attempting to prevent the problem. In his 1995 State of the Union Address, President Clinton announced a national campaign to prevent teen pregnancy (Feldman, 1997). Although Clintons' campaign was privately funded, Bush's request in 2003 for Congress to increase spending on prevention programs by 30% cost 135 million dollars (Starkman & Rajani, 2002).

Aside from the financial cost that accompanies teen pregnancy, there is another cost that some may argue is more important than money. It is the effect of teen pregnancy on those who encounter it, and anyone in the life of that person. The emotional toll that this takes on a young person who is not yet able to cope with the real

world, and who is now faced with a life-altering situation, is immeasurable.

Regardless of whether the pregnancy results in a live birth, the influence on the life and future of the teen is still great. An abortion is an action they will remember for the rest of their lives. A miscarriage or adoption is a loss they will feel for the rest of their lives. The psychological ramification of teen pregnancy in itself is enough reason for research on determining effective pregnancy prevention programs.

If the pregnancy results in teen parenthood, what then happens to this child and parent who are not equipped with the tools to be in those roles? This child is more likely to live in poverty, suffer from emotional abuse, neglect and be maladjusted. The cost of these children growing up to be disaffected adults would be far more detrimental to society than the financial cost of effective prevention programs that could nip this problem in the bud.

Interventions that are used in preventing teen pregnancy are numerous and can be thought of as falling under the philosophy of being either educational or abstinence based. Comprehensive Sexual Education includes information about reproductive health, contraception, and

relationships that accompany intimacy. These programs stress the importance of responsible behavior, which is why both abstinence and contraceptive use are discussed. Abstinence-based Education teaches that abstaining from sexual intercourse until marriage or older adulthood is the only choice youth have. Most discuss negative consequences that can result from having sexual intercourse and only discuss the failure rates of contraceptives (Donovan, 1998). Abstinence is the only form of prevention from disease and pregnancy taught in these programs.

Types of programs that include education are comprehensive sexual education programs, multidimensional programs, contraceptive distribution services and School Based Health Clinics (SBHC). Interventions that focus solely on preventing sexual intercourse with minimal to no focus on education are abstinence only programs and abstinence-plus approaches. These interventions will be discussed more in depth in Chapter Two.

Purpose of the Study

The purpose of the study is to identify what types of interventions adolescent females in San Bernardino have participated in. In doing so, one can see what percentage

of adolescents had no intervention participation at all, what percentage participated in comprehensive education based programs, and what percentage participated in abstinence based programs. By having a sample that includes both teens with and without a history of pregnancy it may be noted if any particular type of program or intervention played a role in pregnancy prevention.

The population of whom this research is focusing consists of both pregnant/parenting adolescent females and adolescent females with no history of pregnancy.

Participants' age ranges from fourteen to seventeen years old. The research consists of a survey asking demographic questions, questions about their relationships with parents and peers, their dating, sexual activity and pregnancy history along with what types of interventions the respondent has participated in, if any.

This is a quantitative research study. The data will be collected in through a questionnaire. The focus of the research is on the relationship between interventions respondents participated in and pregnancy history. There will be no attention paid to attitudes about the program or feelings about the issue. The research will take place in the assessment stage of the generalist model.

Significance of the Project for Social Work

This study is significant to social work for the main reason of education on the current statistics of teen pregnancy in this area. This data is needed to get accurate insight into how many teens lack any intervention prior to becoming pregnant. It is also necessary to see if a particular type of intervention has significantly more participants who become pregnant after completing the program. If a particular intervention is more prevalent in respondents who are not and have not been pregnant, that is also important to know. The knowledge gained from this research could spur the reevaluation of particular interventions that are currently in place in San Bernardino and show the need for education in areas where none is currently present.

Social work and social workers are involved in various aspects of teen pregnancy and pregnancy prevention. They run the programs that teach and educate, they work in the schools from which a majority of the interventions emanate, they work in the clinics and agencies where pregnant teens and teen mothers seek assistance and they write the policies that provide the funding for the programs. They also do the research that stimulates change.

Adolescent participation in pregnancy prevention interventions is the focus of this research. The hypothesis is that there will be a lack of participation in comprehensive interventions among participants who are pregnant or are already parents. It is also hypothesized that attendance in the intervention after already sexual active will be a factor in the history of pregnancy.

CHAPTER TWO

LITERATURE REVIEW

Introduction

This chapter discusses literature on teen pregnancy and the various types of interventions that were discussed in Chapter One. Comprehensive sex education, multidimensional approaches, contraception distribution programs and School Based Health Clinics, as well as abstinence only and abstinence-plus approaches, are all discussed at length in this chapter.

Teen Pregnancy

The social and economic environment today is different than it was twenty to thirty years ago, as is the issue of teen pregnancy. Looking at teen pregnancy today, versus in the 1970s, is like comparing apples and oranges. The rate of teen pregnancy was higher in the past, but it also occurred among couples that were married (Caldas, 1994, Males, 1993). In 1995, 35% of teen mothers were married; this is down from 52% in 1980 and 70% in 1970 (Shapiro & Wright, 1995. Caldas, 1994).

Caldas (1994) states that the economical realities of the 1970s and 1980s ended the era of early marriage and childbirth. The decreasing birthrate and increasing age of first marriage, since 1970, are indicative of the fact that women now need to work outside the home in order to provide for themselves and their families. This is what makes the issue of teen pregnancy today, different than that of thirty years ago. This change in patterns now makes teen parenthood a deviation, where it was once the norm.

Marital status is not the only demographic characteristic of teen pregnancy to have changed over the years through a shift in norms. More and more the impregnation of young women by older men is being viewed as an issue as well. According to the Alan Guttmacher Institute, 39% of 15-year-old mothers, 55% of 17-year-old mothers and 78% of 19-year-old mothers say that the fathers of their babies are over 20 years old. This becomes an issue, not only when trying to teach sexual education and pregnancy prevention (because one of the participants is not in the classroom), but also when the father does not support the child and public assistance is needed (Shapiro & Wright, 1994).

Overall, the rate of teen pregnancy is at an all time low of 14.3 births per 1,000 women aged 15-19 (Public Health Institute, 2003). This is down from 1990 when the rate peaked at 117 births per 1,000 women aged 15-19. This

does not mean that there is not a problem, because almost 1 million teenage women continue to get pregnant each year. This is twice as high as in England and Canada and nine times as high as in the Netherlands or Japan (AGI, 1999).

There is much controversy over the implementation of comprehensive sexual education programs in schools and communities. This often stems from the fear that if you talk to kids about sex, then you increase the likelihood that they will partake in sexual intercourse (Scott, 1995. Kirby, 2002). There have been mixed findings on this belief. Marsiglio and Mott (1986) found no connection between sex education and initial sexual intercourse among teens 17 to 18 years old. However, among younger teens, 15 to 16 years old, sex education and sexual intercourse were positively related. On the contrary, Furstenburg, Moore and Peterson (1986) found that 15 and 16 year olds who had been exposed to sex education were less likely to be sexually active than those who had not participated. In his evaluations, Kirby (2002) concludes that sexuality and HIV curricula do not increase sexual intercourse, either by hastening the onset of intercourse, increasing the frequency of intercourse or increasing the number of sexual partners.

Whether or not sex education induces sexual activity is still being debated. What needs to be addressed is if sex education increases contraceptive use and decreases pregnancy in teens that are sexually active. Marsiglio and Mott (1986) found that use of contraceptives was more likely if adolescents had participated in sex education than if not. Other researchers have noted this same positive relationship (Kirby et al., 1994)

It is difficult to evaluate the effectiveness of any approach, comprehensive sex education programs included, at preventing teen pregnancy due to the fact that many studies focus on attitudinal changes, not behavioral changes (Scott, 1995. Kirby, 2002). Another problem with many studies is the lack of large samples, long-term follow up, and random assignment (Kirby, 1997). Kirby (2002) identified three studies that had all the properties needed to effectively evaluate a program. Coyle et al., (1999), Jemmott et al., (1998), and St. Lawrence et al. (1995) were all studies that clearly indicate that particular school-based and community-based comprehensive sex education programs can in fact delay sex, decrease the

frequency of intercourse, increase the frequency of condom or contraceptive use or decrease unprotected sex.

Mitchell-DiCenso et al. (1997) evaluated the effectiveness of a school-based comprehensive sex education program versus conventional sex education curriculum in decreasing rates of sexual intercourse, increasing birth control use and decreasing rates of pregnancy. The McMaster Teen Program (MTP) was the tool used to differentiate comprehensive education from conventional education. It is based on the cognitive-behavioral model and its objectives were to provide adolescents with accurate information about reproduction and development, to offer strategies for developing responsible relationships, to assist with communication about their thoughts and feelings, to help them learn problem solving skills in decision making related to their sexual activity and to enable the students to practice the skills they had learned.

The main differences between the MTP and the conventional approach were that the MTP was coeducational and the conventional program was segregated by gender, the MTP was held in small groups while the conventional was held in large classes, the MTP allowed for the students to learn and practice problem solving and decision making

skills around sexual activity while the conventional program gave facts about reproduction, and the tutors for the MTP were given preparation to ensure their comfort with the material while the teachers in the conventional program were given no extra preparation and were expected to teach the material regardless of their comfort level. There were posttest follow-ups annually for four years following the initial participation in the programs.

There was no statistical difference between the two groups for time to first intercourse for males and females and time to first pregnancy for females. Both male and female participants in the experimental (MTP) and control groups reported an increase in contraceptive use at first posttest, and by the fifth posttest 50% of sexually active males and 70% of sexually active females of both groups reported always using birth control. There was no statistical evidence that one education program was more effective than the other.

Interventions: School Based Health Clinics and Contraception Distribution Programs

School based health clinics (SBHC) and condom distribution programs have been at the center of a debate as to whether their presence may actually encourage sexual intercourse (Scott, 1995). This has been unfounded and

their presence has been noted to increase contraceptive use by those students who are sexually active (Kirby, 1996; Scott, 1995; Sidebottom et al. 2003).

Sidebottom, Binbaum and Nafstad (2003) looked at the change from voucher distribution to direct distribution of contraceptives in five school based health clinics. They found that under the voucher system only 41% of students who requested contraceptives actually received them. This dramatically increased to 99% after the switch to direct distribution. Condom reception went from 25-50% under the voucher system to 100% under the direct distribution system. There was no change in demand for contraceptives with the implementation of the direct distribution system. There was no evaluation of whether or not this change had an effect on pregnancy rates.

Kirby and Brown (1996) agree with the notion that school condom availability will increase condom use in sexually active teens. This will only occur however, with a change in students' perceptions about their peers' view of condom use and removing barriers to receiving condoms. One way to reduce that barrier is through direct distribution of condoms as previously mentioned. In their study Kirby and Brown (1996) found that only .3% of school districts across the nation have condom programs. Most

that do offer condom programs include them as part of a more comprehensive program.

Winter and Breckenmaker (1991) found that clinics in which more emphasis was put on the client and not the reason they were seeking treatment were more effective at increasing contraceptive use. The clinics noted provided more information, more counseling, delayed the medical examination until the second appointment and gave more attention to partner and parent involvement.

Although it is not clear whether school based health clinics and contraception distribution programs prevent teen pregnancy, it is clear that they do increase contraceptive use. These programs need more evaluation and greater attention paid to what they are accomplishing.

Interventions: Multidimensional Programs

Programs that combine volunteer work with

classroom-based curriculum have been noted to be effective

at reducing adolescent problem behaviors (Allen et al.

1997; Smith, 1994; Scott, 1995; Kirby, 2002). They have

been called service-based approaches, multidimensional

approaches and a variety of other titles but they all use

a combination of in-class activity and volunteer work.

Allen et al. (1997) evaluated the nationally replicated volunteer service program Teen Outreach. It was designed to prevent two specific problem behaviors that occur in adolescents, teen pregnancy and school failure. It consists of supervised community volunteer service, classroom-based discussions of service experiences, and classroom-based discussions and activities related to key social-developmental tasks of adolescence.

The community service activity was selected by the participant and was supervised by trained staff and adult volunteers. The discussions of service experiences focused on helping students prepare for their service activities by increasing self-confidence, social skills, assertiveness, and self-discipline. The developmentally focused classroom discussions consisted of small groups doing activities and discussing issues relevant to adolescents such as understanding yourself and your values, life skills, dealing with family stress, human growth and development, and issues dealing with the social and emotional transition from adolescence to adulthood.

Although the program placed little direct focus on the two problem behaviors, it was successful in reducing rates of teen pregnancy, course failure, and school suspension. The results represent a broad sampling of the programs' impact as they were taken from 25 sites nationally over a period of five years. By addressing broad developmental tasks of adolescence, not only do programs increase the participants competence in decision making, interacting with peers and adults, and identifying and understanding their emotions, but are also appealing to conservative communities. This is particularly true of communities who would not otherwise embrace a program focused on sexual behavior.

Smith (1994) evaluated the Teen Incentive Program

(TIP) that was developed to help freshman high school students in New York City enhance self-perception and abilities to exercise greater control in their lives.

There were three phases to the intervention. During phase one the students met once weekly for eight weeks. Topics such as uncovering untapped talents for building self-esteem and assertiveness, effective communication skills, parent/adolescent relationships, and teen sexuality were covered in the weekly workshops. Phase two consisted of a six-week career mentorship component. In phase three the participants returned to the small group format where they practiced their recently learned skills through role-playing, skits and writing. Through posttests it was noted participants in the treatment program

significantly decreased their sexual activity and those who continued to be sexually active increased their contraceptive use.

Interventions: Abstinence Based Education

Despite their common emphases on abstaining from

intercourse, abstinence based approaches vary widely

(Kirby, 2002). Some promote postponing sex until a later

time, while others vehemently oppose sex prior to

marriage. Some are religiously based and others are more

secular. All stress abstinence as the only means to

prevent teen pregnancy and do not cover topics such as

abortion and contraception (Scott, 1995). Advocates of the

abstinence-only approach believe that by discussing both

abstinence and contraceptives you are sending a mixed

message that confuses the teen participants.

White and White (1991) evaluated the findings of twenty-four Adolescent Family: Life programs (AFL). The goals of AFL programs were to decrease unmarried pregnancies by preventing or at least postponing adolescent sexual activity. Of the twenty-four programs, only four had behaviorally-based evaluations, as opposed to attitudinal-based evaluations. Of those four, only

three produced behavioral changes. It is unclear though, how long this behavior change lasts.

Carter-Jessop et al. (2000) evaluated a program that utilized the Family Accountability Communicating Teen Sexuality (FACTS) abstinence-only based curriculum. The program was based on a cognitive social learning framework and consisted of several classes in which the topics Self Worth, Values/Goals, Love vs. Infatuations, STD's, Risk Taking Behavior/ Managing Pressure, Sexuality and Fertility, Self Control, Sexual Decision-Making and Handling the Unexpected and Dating, Parties and Activities were discussed. For all six groups of students who completed the course, posttest data showed an increase in attitudes to be more positive about abstinence, four of which were statistically significant. Although there was an increase in positive attitudes about abstinence there is no proof that it prevented teen pregnancy in any of the participants after the completion of the program.

Monahan (2002) evaluated the federally funded

Adolescent Pregnancy Prevention program. The program was a
nine week, 18 hour course in which topics covered were
identifying situations and settings conducive to sexual
behavior, analyzing the consequence of sexual behavior,
learning assertiveness, understanding peer pressure, using

social support and enhancing self esteem. There was no discussion of contraceptives. At posttest there was a difference in attitudes with the treatment group having a greater belief that teen sex is not ok, sex before marriage is not ok and that teen pregnancy would change their lives. However, there was no statistically significant behavioral change between the two groups in regards to behaviors such as dating, making out and sexual touching and knowledge of sexuality.

Kirby (2002) states that of the current abstinence-only interventions, only three studies met the criteria of large enough sample size, targeted to youth 12-18, published after 1980, conducted in the U.S. or Canada and that the study measured impact on sexual behaviors, not attitudes, to be able to be reviewed.

Kirby, Korpi, Barth, & Cagampang (1997), St. Pierre, Mark, Kaltreider, & Aikin (1995), and Weed, Olson, DeGaston, & Prigmore (1992) are studies on abstinence-only curricula that found no significant effect of the intervention on participants' behavior.

Griffin (1995) discussed an abstinence-plus approach that is still being evaluated, but is already taking heat from abstinence-only advocates. The Skills and Knowledge for Aids and Pregnancy Prevention (SNAPP) program was

developed by Childrens Hospital Los Angeles. This approach counsels abstinence but also teaches protection through games, skits, education about high and low risk situations, assertiveness training, persuading a partner to use a condom and where to go in case of pregnancy or sexual assault. This program is taught by peer educators who themselves are young adults. SNAPP brings a real life quality to the classroom when a teenage mother and 23 year old infected with the AIDS virus discuss their stories with the class. It is unclear yet how effective this approach is as evaluations are still being conducted.

Khouzam (1995) and Feldman (1997) both look at the role of government and politics in the issue of teen pregnancy interventions. Khouzam rejects the strategies that Surgeon General Dr. Joyce Elders announced in her 1993 proposal to prevent unplanned teen pregnancy. The need for sexual abstinence to be presented as the only effective method of primary pregnancy prevention is discussed, although no specific programs were presented as examples of effective behavior changes. Feldman notes the recent funding shift from comprehensive sex education to abstinence-only interventions. With Congress launching a \$50 million-per-year grant program for states to fund programs that solely focus on sexual abstinence, advocates

for comprehensive sex education are in an uproar that so much money would be given to an unproven approach.

Although there is much pressure to make abstinence the focus of sex education in schools, there is not much evidence that it is an effective approach to prevent teen pregnancy. These approaches often focus on attitudinal change, not behavioral change. Therefore there is not yet enough evidence to prove or disprove its worth as an intervention.

Theories Guiding Conceptualization

Many of the studies, both abstinence-only and education based have been guided by the cognitive behavioral approach. This is due to the nature of the issue at hand. Teen pregnancy is a result of actions that can be changed through either abstaining from intercourse or the use of contraceptives. The cognitive behavioral approach is a theory that specifically focuses on changing problem behaviors through cognitive functioning and is a perfect fit for this issue.

Related to cognitive behavioral approach is the theory that guides this study, social learning theory.

Social learning theory is based on the notion people learn from their environment, either positive or negative

behaviors. The theory is that without proper interventions the participants of this study will have had no other means to learn about pregnancy prevention than through their surroundings.

Summary

The literature discussed research done in recent years on teen pregnancy and various types of interventions currently being used. Although some studies report positive findings, it is difficult to state that one type of approach is more effective than others. There may be some sex education programs that are very successful and some that are not. This can also be said of the various types of approaches. Until there is more research done it is difficult to state what type, if any, should be universally applied.

CHAPTER THREE

METHODS

Introduction

Chapter Three documents the steps used in developing the project. Specifically, the purpose, research method and design of the study will be discussed, as will the sampling frame, what specific data will be collected, and the instruments used to collect that data. The process by which the data will be collected and how confidentiality of the respondents will be protected is also covered in this chapter.

Study Design

The purpose of this study was to explore how many of the respondents had participated in any pregnancy prevention programs and determine if there was any statistical significance between those participants who have been pregnant and those who have not. Quantitative methods of data collection were used to collect and analyze data. The study design used a self administered questionnaire to collect the data. The limitations of the study were that due to sample size and demographics it may not be representative of the larger society. Is there a difference in the type of pregnancy prevention

interventions pregnant and non pregnant teens have participated in was the research question that guided this study.

Sampling

The sample from which the research data was collected consisted of thirty two adolescent females. The sample consisted of both pregnant/parenting teens and teens that had never been pregnant. Participation was solicited from a teen parenting class of one local high school and from various after school programs at Central City Lutheran Mission (CCLM).

Participants from the after school programs that referred friends who were not themselves members in the programs were grouped with the school they attended. They were not grouped with CCLM programs as to not dilute any impact CCLM attendance may have had on participants' pregnancy status.

All participants were from the ages of fourteen years to seventeen years old. Participants varied in racial and cultural make-up. All participants live within several miles of one another and have relatively equal socioeconomic backgrounds. The reason for having a pregnant and nonpregnant sample was to determine if there

was any relationship between participation in interventions and pregnancy between the two groups.

Data Collection and Instruments

The data collection was of the participant's age, race, family make up, living arrangements, parental relationship, dating history, current relationship, history of sexual activity, if they are currently or have previously been pregnant, what type of pregnancy prevention program or sex education they participated in, and what school they attended. Pregnancy was the dependent variable. It was measured by asking participants if they were currently or had ever been pregnant. The level of measurement for this variable was nominal.

The independent variables were age, race, family make up, living arrangements, relationship with parents, dating history, current relationships, participation in pregnancy prevention programs and school of attendance. Age was measured by asking the respondent to write how old they were. The level of measurement was interval. Race was measured by asking the participants to check a box of the race that they identified with: African American, Hispanic, Caucasian, Asian, Middle Eastern and other, where they were able to write in a response. They were

able to mark more than one box if they needed to. The level of measurement was nominal.

The variable family make up was measured by checking a box next to if their parents were married, divorced, never married, widowed or they didn't know. The level of measurement for this variable was nominal. The variable living arrangements was measured by checking a box next to who they live with; mother, father, both parents, other family members, friends, group home/ foster home, or other and filling in the response. The level of measurement for this variable was nominal.

The variable relationship with parents was measured by checking a box next to excellent, good, bad, or none to describe how they perceive their relationship with their parents. The level of measurement was ordinal. The variable dating was measured by asking the participant to mark yes or no to the question do you date. The level of measurement was nominal. The variable dating history was measured by asking the respondent to write at what age they began dating in years form. The level of measurement for this variable was interval. The variable current relationship was measured by checking yes or no to the question do you currently have a boyfriend. The level of measurement for this variable was nominal.

The variable school attending was measured by checking a box next to San Bernardino High School, other and writing in the name or none. The level of measurement for this variable was nominal. The variable sexually active was measure by asking the respondents to check yes or to the question are you, or have you been, sexually active. The level of measurement was nominal. The variable pregnancy was measured by asking the respondent to check yes or no to the question are you currently or have you ever been pregnant. The level of measurement for this variable was nominal.

Gender was not asked as all participants were female and it is a constant. The variable anatomy was measure by asking the respondents to check if they had participated in a program that focused solely on anatomy. The level of measurement was nominal. The variable comprehensive was measured by asking the respondent to check if they had participated in a program that discussed prevention, such as abstinence and birth control, as well as anatomy and decision making. The level of measurement was nominal. The variable abstinence was measured by asking respondents to check if they had participated in a program that focused only on abstinence.

The questionnaire used to gather the data was created for this research project by the researcher. It was created due to the nature of the study focusing specifically on interventions and pregnancy. No tools were found that would be relevant to such a narrowly focused study. It was created by looking at the data that was needed and developing questions that would accurately answer those questions. It was pretested by six adolescents that fit the sample frame. Their feedback on the form and its understandability was used to make necessary revisions.

The strengths of this instrument are that it is short with few questions; the questions are straightforward, specific and easy to understand. The limitations of this instrument are that it does not include other information about the respondent that may influence if they are or have ever been pregnant. Information such as involvement in extra curricular activities, religious involvement, and other factors that may affect the respondent are not noted with this instrument.

Procedures

Participation was solicited by asking for volunteers at the parenting class of San Bernardino High School and

at various after school programs offered by Central City Lutheran Mission (CCLM). An announcement was made and consent forms were passed to the students. The parents were made aware in the parental consent that there was a copy of the survey on file in both the school and church offices if they chose to read it before deciding if they wanted their child participating. Those students who brought back a completed parent release form and signed a teen assent were then able to participate in the study if they chose to. At San Bernardino High School the survey was given in their classroom were they felt comfortable, at CCLM the survey was administered in a private office at the H St. clinic. The questionnaire was self administered. The researcher answered questions the respondents had. The participants were made aware that their confidentiality was guarded and that they may stop the survey at any time or not answer any question they were uncomfortable with. The average time it took to fill out the questionnaire was approximately five minutes.

Protection of Human Subjects

Due to the use of human subjects in this research study it is important to protect the participants' confidentiality. This was done by limiting the identifying

information gathered from the respondent. No names or birthdates were recorded on the survey. After the information was gathered there was a limited number of people who saw the questionnaires: the researcher and the faculty advisor. After the data was entered into the computer the surveys were destroyed. Due to the study involving minors, it adhered to the California Education Code section 51530.

Data Analysis

The relationship between participation in interventions and pregnancy, or history of pregnancy, was examined along causal lines. That is, lack of comprehensive intervention will be associated with pregnancy or history of pregnancy. Univariate analyses measured frequency distributions to determine how many people fell into each category that was measured. Bivariate analyses such as Chi-Square tests examined the relationship between variables.

Summary

An overview and discussion of the methods and purpose of study were presented in Chapter Three. A discussion of the study design, sampling, data collection, instruments, and the procedures were also presented in this chapter.

Moreover, Chapter Three presented a discussion regarding the protection of human subjects as well as a discussion of the data analysis.

CHAPTER FOUR

RESULTS

Introduction

Included in Chapter Four is a presentation of the results. A description of the sample is provided, including the frequencies of each variable. The Chi-Square Tests examined the relationships between variables. Last, the Chapter concludes with a summary.

Presentation of the Findings

The sample consisted of thirty two female respondents who ranged in age from thirteen to seventeen. The mean age of the respondent was 15.4 years; 29.0% were sixteen years old, 25.8% were fourteen years old, 22.6% were seventeen years old, 19.4% were fifteen years old, and 3.2% were thirteen years old. The participants were made up of a variety of ethnic backgrounds; 31.3% were Hispanic, 28.1% were African American (N = 9), 21.9% were Biracial, and 18.8% were Caucasian. Table 1 shows the frequencies for variables age and ethnicity of participants.

Table 1. Frequency Table for Age and Ethnicity

Variable	Frequency (n)	Percentage (%)
Age $(N = 32)$ Mean = 15.4		
13	1	3.2
14	8	25.8
15	6	19.4
16	9	29.0
17	7	22.6
Ethnicity		-
African American	9	28.1
Caucasian	6	18.8
Hispanic	10	31.3
Biracial	7	21.9

of the respondents, 40.6% stated their parents were never married, 21.9% stated their parents were married, 18.8% stated their parents were divorced, 15.6% stated their parent was widowed, and 3.1% stated they did not know the marital status of their parents. When discussing whom they lived with, 43.8% stated they lived with their mother, 21.9% stated they lived with both parents, 12.5% stated they lived with their father, 9.4% stated they lived in a foster/group home, 6.3% stated they lived with their husband, 3.1% stated they lived with other family members, and 3.1% stated they lived with a friend. Table 2 shows the frequencies for variables Parents and Live With.

Table 2. Frequency Table for Parents and Live With

Variable	Frequency (n)	Percentage (%)
Parents		
Married	7	21.9
Divorced	6	18.8
Never Married	13	40.6
Widowed	5	15.6
Don't Know	1	3.1
Live With		
Both Parents	7	21.9
Mom	14	43.8
Dad	4	12.5
Other Family	1	3.1
Foster/Group Home	3	9.4
Husband	2	6,3
Friend	1	3.1

When asked of their relationship with their mother, 59.4% described their relationship as good, 18.8% of participants described their relationship as excellent, 15.6% stated they had no relationship, and 6.3% described their relationship as bad. In terms of their relationship with their father, 43.8% described their relationship as good, 34.4% stated they had no relationship with their father, 12.5% described their relationship as excellent, and 9.4% described their relationship as bad. Table 3 is a frequency table for variables Mother and Father.

Table 3. Frequency Table for Mother and Father

Variable	Frequency (n)	Percentage (%)
Mother		
Excellent	, 6	18.8
Good	19	59.4
Bad	2	6.3
None	5	15.6
Father		
Excellent	4	12.5
Good ·	14	43.8
Bad	3	9.4
None	11	34.4

When asked whether or not they date, 87.5% stated, "Yes, they do date" (N = 28) and 12.5% stated, "No, they do not date" (N = 4). Regarding the age at which they began dating, 48.3% stated they started dating at thirteen years old, 17.2% stated they started dating at twelve years old, 17.2% stated they started dating at fourteen years old, 13.8% stated they starting dating at fifteen years old, and 3.1% stated they started dating at sixteen years old. The mean age at which participants began dating was 13.4. When discussing if they currently had a boyfriend, 62.5% stated, "Yes, they did have a boyfriend" (N = 20) and 37.5% stated, "No, they did not have a boyfriend" (N = 12).

Regarding sexual activity, 71.9% of the participants stated, "Yes, they had been sexually active" (N = 23) while 28.1% stated, "No, they had not been sexually active" (N = 9). Regarding history of pregnancy, 53.1% stated, "Yes, they were or had been pregnant," while 46.9% stated, "No, they were not and had never been pregnant." Table 4 shows the frequencies for variables Date, Date Age, Boyfriend, Sexually Active and Pregnant.

Table 4. Frequency Table for Date, Date Age, Boyfriend, Sexually Active and Pregnant

Variable	Frequency (n)	Percentage (%)
Date		
Yes	28	87.5
No	$\frac{4}{2}$	12.5
Date Age		-
12	5	17.2
13	15	48.3
14	5	17.2
15	4	13.8
16	1	3.4
Boyfriend		
Yes	20	62.5
No	12	37.5
Sexually Active		
Yes	23	71.9
No	9	28.1
Pregnant		
Yes	17	53.1
No	15	46.9

Regarding participation in sex education concentrating on anatomy, 56.3% stated they had attended a class focusing on anatomy while 43.8% stated they had not attended any class focusing on anatomy. When asked of participation in comprehensive sex education that discussed a birth control and abstinence, 50% stated they had attended a comprehensive sex education class and 50%

stated they had not attended a comprehensive sex education class. When asked of participation in sex education that discussed the decision making process utilizing role plays, 93.8% stated they had not attended a class that focused on decision making (N = 30) while 6.3% stated they had attended a class focused on decision making (N = 2). Regarding the timing of their participation in the sex education class, 50% stated they attended a class before they became sexually active while 50% stated they attended the class after they had already become sexually active. Nearly two thirds of the participants (65.6%) stated they attended San Bernardino High School, 21.9% stated they attended Middle School, 12.5% stated they attended another high school. Table 5 shows the frequencies for variables Anatomy, Comprehensive, Decision, Abstinence, When and School.

Table 5. Frequency Table for Anatomy, Comprehensive, Decision, Abstinence, When and School

	(n)	Percentage (%)
Anatomy		
Yes	18	56.3
No	14	43.8
Comprehensive		
Yes	16	50.0
No	16	50.0
Decision		
Yes	2	6.3
No	30	93.8
Abstinence		
Yes	4	12.5
No	28	87.5
When		,
Before Sexually Active	16	50.0
After Sexually Active	16	50.0
School		
San Bernardino H.S.	21	65.6
Other High School	4	12.5
Middle School	7	21.9

The Chi-Square test was used to examine if any significant relationship existed between the participants' attendance in pregnancy prevention intervention and history of pregnancy. The Chi-Square test for variables history of pregnancy and comprehensive pregnancy education, yielded this result ($\chi^2 = 6.149$, df = 1, p < .05). This test reveals that there is a significant

relationship between the participants' attendance in comprehensive pregnancy prevention education and pregnancy. Those participants who attended comprehensive sex education were less likely to have a history of pregnancy. Those participants who did not attend comprehensive sex education were more likely to have a history of pregnancy. This supports the hypothesis that more comprehensive education may be a significant factor in reducing pregnancy. Table 6 shows the crosstabulation for variables comprehensive and pregnancy.

Table 6. Pregnant and Comprehensive Crosstabulation

		Comprehensive		
		Yes	No	Total
Pregnant	Yes	5	12	17
	No	11	4	15
	Total	16	16	32

The Chi-Square test for variables history of pregnancy and anatomy revealed no significant relationship between attendance in anatomy focused sex education and history of pregnancy. Participants who attended anatomy focused education were not any more or less likely to have a history of pregnancy than those who did not attend anatomy focused sex education. This supports the hypothesis that less comprehensive education will not

affect the rates of teen pregnancy. Table 7 shows the crosstabulation of variables Pregnant and Anatomy.

Table 7. Pregnant and Anatomy Crosstabulation

			Anatomy	
		Yes	No	Total
Pregnant	Yes	8	9	17
	No	10	. 5	15
	Total	18	14	32

The Chi-Square test for variables history of pregnancy and decision revealed no significant relationship between attendance in pregnancy prevention education emphasizing decision making and history of pregnancy. Participants who attended decision making education were not any more or less likely to have a history of pregnancy than those participants who did not attend. This supports the hypothesis that attendance in less comprehensive programs will not affect the history pregnancy. Table 8 shows the crosstabulation of variables Pregnant and Decision.

Table 8. Pregnant and Decision Crosstabulation

			Decision	
		Yes	No	Total
Pregnant	Yes	0	17	17
	No	2	13	15
	Total	2	30	32

The Chi-Square test for variables history of pregnancy and abstinence education yielded this result $(\chi^2=5.181,\ df=1,\ p<.05)$. This test reveals that there is a significant relationship between the attendance in abstinence only education and history of pregnancy. Participants who attended abstinence only education were less likely to have a history of pregnancy than participants who did not attend. This does not support the hypothesis that states the less comprehensive and education based the interventions is less likely to prevent pregnancy. Table 9 shows the crosstabulation of variables Pregnant and Abstinence.

Table 9. Pregnant and Abstinence Crosstabulation

		Abstinence		
		Yes	No	Total
Pregnant	Yes		17	17
	No	4	11	15
	Total	4	28	32

The Chi-Square test for variables history of pregnancy and time of education yielded this result $(\chi^2=10.165,\ df=1,\ p<.05)$. This test reveals that there is a significant relationship between whether the participant attended the pregnancy prevention intervention before or after becoming sexually active and the history of pregnancy. Participants who attended any intervention before becoming sexually active were dramatically less likely to become pregnant. Participants who attended any pregnancy prevention intervention after already being sexually active were more likely to have a history of pregnancy. This supports the hypothesis that early attendance in interventions will reduce history of pregnancy. Table 10 shows the crosstabulation of variables Pregnant and When.

Table 10. Pregnant and When Crosstabulation

			When	
		Before Sex Active	After Sex Active	Total
Pregnant	Yes	4	13	17
	No	12	3	15
	Total	16	16	32

Summary

Chapter Four reviewed the results of the project. It provided a description of the sample, including variable

frequencies. The Chi-Square test was used to analyze the relationships between variables. The relationships were noted to be either significant or not and then a description of the results. There was also a discussion on if these findings supported or conflicted with the hypothesis.

CHAPTER FIVE

DISCUSSION

Introduction

Included in Chapter Five is a discussion based on the findings presented in Chapter Four. Recommendations extracted from the project for social work practice, policy and research and limitations of the study are presented. Last, the Chapter closes with a conclusion.

Discussion

This study looked at adolescent female participation in various teen pregnancy prevention interventions. This was an all female multicultural sample. The respondents primarily lived with their mothers in a single parent home. Most had no contact with one of their parents, often due to death. An overwhelming amount of respondents not only date, but currently have a boyfriend. Approximately three quarters of the sample had been sexually active with over half having a history of pregnancy. Almost all the participants had attended a pregnancy prevention intervention in one form or another.

Data analysis was done using the Chi-Square test. Several significant relationships were noted to exist between variables. In regards to the focus of the

research, the most significant relationships to pregnancy history were attendance in comprehensive sex education and whether or not the attendance occurred prior to or subsequently after the participant became sexually active. The relationship between attendance in abstinence based education and pregnancy history was also noted to be significant.

These findings are consistent with the literature (Kirby 2002; Jemmot 1998; and St.Lawrence, 1995). These studies all found a link between comprehensive interventions and lower pregnancy rates. In their numerous studies they were also able to note differences between more comprehensive education and physiologically based education, as this study also did. Smith (1994) noted the importance of early attendance in pregnancy prevention interventions on low pregnancy rates. This is particularly important in that this study noted half the respondents had already become sexually active by the time they attended the pregnancy prevention intervention. How are teens to practice safe sex when they haven't been talked to in time? White and White (1991), Monahan (2002) and Lieberman (2000) discuss abstinence only education as an important factor in reducing pregnancy rates. Although

this was not something I expected, it was shown to be significant in this study as well.

The most interesting unpredicted point brought out by the study was the significant relationship between pregnancy history and the loss of a parent through death. I imagine the loss of a parent at such a young and impressionable age would have tremendous effect on adolescent female, including the substitution of parental love with possibly unhealthy peer relationships. This is one factor that should be researched more in the future.

Limitations

The following limitations were noted to be important to the research. The small sample size compromised the generalizability of the data. By only having thirty two respondents you cannot expand on the larger population. The non random nature of the sample is also a limitation in that it may have led to sampling bias. The respondents were all recruited from the same area and to a certain degree be expected to have similar education and program participation. Other limitations were the inability to use multiple high schools, as originally intended, to recruit participants from and the use of only one classroom to recruit from at San Bernardino High School.

Recommendations for Social Work Practice, Policy and Research

Recommendations for social work practice gained from the research focus primarily on increasing the education of social workers in their ability to work with teens and changing the actual education teens are receiving on sex education. Having an understanding of what some factors in teen pregnancy are not only increases the awareness of the social worker, but also better prepares social workers to help teens increase their own self awareness. With the understanding that some interventions are significantly more effective and the need for the most effective interventions is desperately needed in schools to further reduce the rate of pregnancy social workers are adequately equipped to start pushing for the practice of these effective methods in their fields.

Early education is an important tool in affecting the history of pregnancy among teens. The earlier the intervention the more likely it will be effective, however the current political environment is one that is concerned that talking about sex will leave participants wanting to partake in it. Kirby (2002) denies this assumption and argues against it. This is where policy changes and a shift in the political environment are needed for some of

these recommendations to come to fruition. Included in this change is expanding education to consist of more comprehensive curriculum and occur earlier to optimize the success rate of the intervention.

It is important to keep researching the interventions looked at in this study, as well as new ones that come along, to be able to be able to provide the most effective education possible. Research recommendations also include focusing on identifying predictive factors to teen pregnancy, like the aforementioned loss of a parent, and possibly creating specific interventions that could accompany support and education groups for the affected population.

Conclusions

Conclusions drawn from the study are that those who attended more comprehensive interventions and abstinence based interventions were less likely to have been pregnant. It is also noted that timing of the attendance was important in that respondents who attended the intervention before becoming sexually active were less likely to become pregnant. These are important for social workers, educators and those in the helping fields to keep

in mind as they enter into practice with adolescent females who are all at risk of becoming pregnant.

APPENDIX A

QUESTIONNAIRE

Exposure to Pregnancy Prevention Interventions Survey

Age (example 14 years old)
Race (Mark the race you identify with, you may mark two if necessary) African American
Asian
Caucasian
Hispanic
Middle Eastern
Other
Are your parents married divorced never married widowed don't know
Do you live with mom and dad mom dad other family member foster home/ group home other
How would you describe your relationship with your mother? excellent good bad none
How would you describe your relationship with your father? excellent good bad none
Do you date? yes no
How old were you when you started dating (example 15)
Do you currently have a boyfriend? yes no
Are you, or have you been, sexually active? yes no
Are you currently or have ever been pregnant? yesno
Have you ever participated in any of the following pregnancy prevention programs? (Place a mark next to the type of class you have attended and mark if you took the class before you started having sex or after you started having sex, if you have never had sex mark before)
Classroom sex education that focused solely on anatomy;before after
Classroom sex education that discussed prevention such as abstinence and birth control as well as anatomy; before after
Programs that included decision making and role playing; before after

Programs that focused only on abstinence; before after	
Programs that used volunteer work as well as in class discussion; after Other	_ before None
What school do you attend	
San Bernardino High School	
Other	
None	

APPENDIX B PARENTAL CONSENT

Parental Consent

Your child, or minor in your care, has been given the opportunity to participate in a research study. This study is designed to evaluate the different types of pregnancy prevention programs and sex education that teens in the San Bernardino area have participated in and to gather basic information about the respondent. This study is being conducted by Brooke Slocum, a student at California State University, San Bernardino, under the supervision of Dr. Janet Chang, Professor of Social Work, California State University, San Bernardino. This is a Masters level thesis and is independent of any school district or high school, although permission has been given by the school to recruit participants. Participation, or lack of participation, will not affect your student in any way, positively or negatively. Participation is completely voluntary and may be stopped at any time by the student. This study adheres to California Education Code Section 51513 and has been approved by the Institutional Review Board, California State University, San Bernardino.

The study consists of a survey regarding what types of sex education programs your child has participated in, age, race, family make up, living arrangements, school of attendance, dating history, if they have been sexually active, and if they are currently or have ever been pregnant. The survey should take five minutes to complete. Participants in the study will receive a five-dollar certificate to Bakers. Participation in the study along with their responses to the questionnaire shall be held in the strictest of confidence by the researchers. The students name will not appear with their responses. All data will be reported in group form only. You may receive the results of this study upon completion in June 2005 where they took the survey. A copy of the survey will be in the school or program office if you would like to review it before giving permission for your child to participate. If you have any questions or concerns about this study, please feel free to contact Dr. Janet Chang at (909) 880-5184.

Childs Name:	Today's date:
Parents Name:	
Parents Signature:	

APPENDIX C

TEEN ASSENT

Teen Assent

The study in which you are being asked to participate in is designed evaluate the different types of pregnancy prevention and sex education programs that teens in the San Bernardino area have attended and to gather information about you, the participant. This study is being carried out by Brooke Slocum, a student at California State University San Bernardino, under the supervision of Dr. Janet Chang, Professor of Social Work, California State University, San Bernardino. This research project is totally independent from your school and you will not be affected positively or negatively whether or not you participate.

The study asks questions about what type of classes or programs you have attended that talked about sex education and pregnancy prevention. It also asks your age, race, family make up, school attending, dating history, if you are sexually active and if you have ever been pregnant. It should take about five minutes to fill out. Participants in this study will receive a five-dollar gift certificate to Bakers. If you decide to participate, your answers will be kept confidential. This means that no one will know what you wrote. Your name will not be on the survey. All the information gathered will be reported in group form only. You can find out the results of this study when it is finished in June 2005 at the place where you took the survey.

Your participation in the study is totally voluntary. You can stop whenever you want and don't have to answer any questions you don't want to. When you are done with the study you will get a debriefing statement, which describes the study. If you have any questions or concerns, please contact Dr. Janet Chang at (909) 880-5184.

By placing a check mark in the box below, I admit that I have been informed of, and that I understand, the nature and purpose of this study, and I freely consent to participate.

Place a check mark here stating	g you are 17 years old or younger	
Name	Date	
Place a check mark here stating	g you are either married or emancip	oated
Name	Date	

APPENDIX D DEBRIEFING STATEMENT

Debriefing Statement

Brooke Slocum conducted the study you have just completed. It was designed to evaluate the types of pregnancy prevention programs teens in the San Bernardino area have attended and to gather basic information about you. Thank you for your participation in this study. If you have any questions about the study, please feel free to contact Professor Janet Chang at (909) 880-5184. If you would like to obtain a copy of the group results of this study, please contact the school you attended while doing the survey or Central City Lutheran Mission at the end of Spring Quarter of 2005.

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