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## The Effects of Role-Play and Simulation as Pregnancy Prevention Strategies on Knowledge and Attitude of African-American Adolescents in an Urban Community

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**The Effects of Role-Play and Simulation as Pregnancy  
Prevention Strategies on Knowledge and Attitude of  
African-American Adolescents in an Urban Community**

by

Laura B. Moody

**A THESIS**

Submitted to  
Grand Valley State University  
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**THE EFFECTS OF  
ROLE-PLAY AND SIMULATION  
AS PREGNANCY PREVENTION STRATEGIES  
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AFRICAN-AMERICAN ADOLESCENTS  
IN AN URBAN COMMUNITY**

## **ABSTRACT**

### **THE EFFECTS OF ROLE-PLAY AND SIMULATION AS PREGNACY PREVENTION STRATEGIES ON KNOWLEDGE AND ATTITUDE OF AFRICAN-AMERICAN ADOLESCENTS IN AN URBAN COMMUNITY**

**BY**

**LAURA B. MOODY**

This quasi-experiment study tested the effectiveness of a simulation program on African American adolescent females' attitude toward having a baby and their knowledge of risk factors associated with pre-marital sex. The experimental group (n=15) participated in Baby Think It Over (BTIO), a program using infant simulators (computerized dolls) and a didactic program - Saving Ourselves (SOS) and the Next Generation. The control group (n=15) was selected from a Black church.

The experimental group didn't significantly increase their attitude or knowledge scores and was not significantly more knowledgeable than the control group on post-testing. They did have significantly more realistic post-test attitudes toward teen pregnancy than the control group ( $t = 2.02, p = .025$ ).

Experimental group journal entries reflected clear indication that having a baby was more trouble than anticipated. While the design and sample were limitations, use of simulators proved a useful teaching strategy in the African American community.

## DEDICATION

*I don't feel no ways tired,  
I've come too far from where I started from,  
Nobody told me that the road would be easy,  
I don't believe He brought me this far to leave me*

Curtis Burrell

This thesis is dedicated to my loving and supportive husband Nathaniel; my children: Nathaniel III, Yvette, Kendrick and Theresa; my mother and family who have given me encouragement to keep on. Your prayers have forever seen me through. **To God Be The Glory** for the things He is doing in my life.

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## TABLE OF CONTENT

List of Tables.....	vi
List of Figures.....	vii
List of Appendices.....	viii

### CHAPTER

1	INTRODUCTION.....	1
	Problem Statement.....	2
	Aim/Purpose.....	3
2	REVIEW OF LITERATURE.....	5
	Theoretical Framework.....	8
	Promising Pregnancy Prevention Programs.....	10
	Research Question.....	13
	Definitions.....	14
	Hypotheses.....	15
3	METHODS.....	16
	Design.....	16
	Population and Sample.....	20
	Instruments.....	21
	Human Rights.....	22
4	RESULTS/ DATA ANALYSIS.....	24
	Introduction.....	24
	Techniques.....	24
	Characteristics of Subjects.....	25
	Findings of the Study: Descriptive Data.....	25
	Findings of the Study Hypotheses/Research Questions.....	26
	Other Findings of Interest.....	30
5	DISCUSSION AND IMPLICATIONS.....	31
	Limitations and Implications.....	35
	Suggestions for Further Research/Modification.....	37
	Summary.....	39

APPENDICES.....	40
REFERENCES.....	51



## LIST OF TABLES

1	A Comparison of Age and Family Income By Group.....	20
2	Comparison of Mean Scores For Experimental and Control Groups.....	26
3	Comparison of Pre-Test and Post- Test Experimental Group Attitudes.....	27
4	Pre and Post-Test Comparison of the Experimental Group Knowledge.....	27
5	Comparison of Pre-Test and Post-Test For the Control Group Attitudes....	28
6	Pre and Post-Test Comparison of the Control Group Knowledge.....	28
7	Comparison of Experimental and Control Group Post-Test Attitudes.....	29
8	Comparison of Experimental And Control Group Post-Test Knowledge.....	29

## **LIST OF FIGURES**

Figure 1 Project Activity and Timeline.....	19
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## LIST OF APPENDICES

A.	Baby Think It Over Parent Consent Form.....	40
B.	Baby Think It Over & SOS Student Profile: Part I and II.....	41
C.	Baby Think It Over Pre and Post-Test.....	43
D.	S.O.S. (Saving Our Selves) and the Next Generation Evaluation Pre-Test.....	45
E.	S.O.S. (Saving Our Selves) and the Next Generation Evaluation Post-Test....	47
F.	S.O.S. Covenant of Purity.....	49
G.	Control Group Parent Consent Form.....	50
H.	List of References.....	51

## **CHAPTER 1**

### **INTRODUCTION**

There is general agreement among health professionals that teen pregnancy is a major health problem in the United States. The country has the highest rate of teen pregnancy among the industrialized nations of the world (Allen Guttenmacher Institute [AGI], 1997). Recent reports indicate that every year almost 500,000 teenagers give birth (Ventura, Curtin, & Matthews, 1997).

Teen pregnancy is a major problem, not only for the teens, but for the babies they deliver. Health professionals, public school educators, and non-profit organizations have recognized that there is a need for teen pregnancy prevention programs. Numerous national, state, and local groups and organizations are engaged in efforts to alleviate the problem before it reaches epidemic proportions. A primary question that constantly arises is: What are successful strategies that can stem the tide of teen pregnancy? Most would believe that education is the most appropriate response to this question.

Focusing on education as a primary deterrent to teen pregnancy, however, raises a number of questions regarding the nature and content of educational prevention programs and their effectiveness with targeted populations. Specifically, it raises questions regarding the effectiveness of pregnancy prevention programs within populations that vary in age and ethnicity and suggests the need to address the socio-cultural aspects of learning. In

other words, it is critical to ask what constitutes a pregnancy prevention model that is effective with diverse populations?

### **Problem Statement**

During the 1990s, the U.S. experienced an overall decline in the number of teen pregnancies as compared to the rate in the 1980s. However, during the period of 1986-1991 the pregnancy rate for teenagers 15 - 19 increased by 9% ( AGI, 1997). Generally speaking, the most adversely affected populations appear to be those from impoverished environments. Such pregnancies are seven-fold more prevalent among the poor versus the non poor, and this prevalence ratio has been consistently observed across ethnic groups (Strachan & Corey, 1997).

Most U.S. economic indicators reveal that African Americans still remain in large numbers at the bottom of the economic ladder. While some decline has been experienced over the past decade in their pregnancy rate, persistent discrimination in housing patterns in the United States place African American teens at greater risk for growing up and living in impoverished environments and thus at greater risk for pregnancy (AGI, 1997).

Because most African Americans still live in or near ghettos in America, teens belonging to this particular ethnic group are more likely to be exposed to or in the company of females who have children at an early age. They are more likely to develop neutral attitudes toward teen-pregnancy and/or consider this behavior culturally acceptable, simply due to the frequency with which it occurs. They are more likely in social settings to be exposed to misinformation. Because of low levels of education among the

adults in the environment, teens may have acquired little knowledge, and may hold pre-conceived notions about becoming pregnant at an early age.

If education is a key, then more intervention programs are needed in African American communities. Specifically needed are more education interventions whose program formats match the learning styles of the students with whom they are being used. As educators and health professionals become increasingly aware of the need to match teaching styles with learning styles and behavior, many have recognized that African Americans learn well in environments in which they are highly engaged. Simulation is one technique commonly used in active learning situations (Gollnich & Chinn, 1994) and hypothesized to be effective with African American teens.

### **Aims/Purpose**

The purpose of this study was to test the effectiveness of a program incorporating simulation as an educational strategy on the attitudes of African American adolescent females toward having a baby. The study used the *Baby Think It Over* (1997) program, which simulates having to care for a baby on a daily (24 hour) basis, as the primary intervention strategy. Specifically this study compared the attitudes toward pregnancy of teens who participated in the *Baby Think it Over* program, with a similar group of students who did not participate in the program. In addition to participation in the *Baby Think It Over* program, the targeted teens engaged in a workshop aimed at increasing their knowledge of sexually transmitted diseases and non-safe sexual practices as a means of influencing attitudes toward pre-marital sex . The curriculum for the workshops was taken from the *S.O.S. (Saving Our Selves) and the Next Generation* (1997) program. This

program was developed and piloted by a local group of educators through a local health planning grant from Healthy Kent 2000. Its primary assumption was that increased knowledge changes attitudes and thus subsequent behaviors.

## CHAPTER 2

### REVIEW OF LITERATURE AND THEORETICAL FRAMEWORK

Since 1968, the Allen Guttenmacher Institute (AGI) has been a major force in shaping world wide acknowledgement of the importance of what is known today as “sexual and reproductive health” and “sexual and reproductive rights”. According to the institute’s 1998 Annual Report entitled *Into a New World: Young Women’s Sexual and Reproductive Lives*, the explosive rates of populations in many countries - including the United States- and the implications of this phenomena for the future of the planet has created renewed interest in this topic. Research supported jointly by Public Health Service (PHS) Agencies and the Departments of Education, Justice and Transportation has primarily focused on youth populations, especially those considered high risk. The results of their joint support of research conducted in 1993 by contract with S. W. Morris was reported in *Designing Health Promotion Approaches to High-Risk Adolescents Through Formative Research with Youth and Parents*. A section of the report entitled “Change” concluded that although a fair amount of information about health appears to be reaching this population, what seems to be lacking is both the motivation to act on that information and the skills and resources to make change [Public Health (PH) Report, 1993].

The PH Report further acknowledged that adolescence is a time when young people - no longer children, not yet adults - experience new ideas, new relationships and new activities. For some youth, the inherent difficulties of this transitional age, combined



with high-risk environments, lead to experimentation and adoption of risky health behaviors with life-long consequences. Research shows that, typically low income families experience a disproportionate incidence of unplanned and unwanted births, with their attendant adverse social and economic consequences (AGI, 1997).

AGI documented and publicized a 16% drop between 1987-94 in the proportion of pregnancies that were unintended among U.S. women. Massive welfare legislation passed by the U.S Congress in 1996 became operational in 1997 and was directed primarily to address problems affecting low income families. The new provisions reversed longstanding social policies dealing with issues protecting children. They also dealt directly with enforcing certain moral standards regarding women's sexual and reproductive behavior. New federal programs encouraged states to teach that all sexual activity outside of marriage is inappropriate and that "abstinence" is the only acceptable way to prevent out-of-wedlock pregnancies. This message was not only directed to teenagers and women on welfare but at the general public as well (AGI, 1997).

AGI's research (1998) revealed that in five developed countries: United States, France, Germany, Great Britain, and Poland - by age twenty, 23 % of young women are sexually active. Further, of these young women who have had their first intercourse, 67% were sexually active before marriage and 10% within marriage. Seventeen percent of the young women who had become sexually active before age 20 had also given birth to a child before age 20. Most of the countries that are a part of AGI's research efforts recognize the necessity and value of education. The studies show that women who have even a primary education delay childbearing for about one and one-half years more

compared with those who have no schooling. Those with a secondary education postpone this event further (AGI, 1998). Thus, it is apparent that the more formally educated women are the less likely they are to engage in risky sexually behavior at an early age.

Alvin Poussiant, noted African American Psychologist, in an article published in the Harvard Medical Journal states:

I advocate that all high school students, male and female, be required to take a class in childbearing. . . . If we can offer classes in auto mechanics, home economics and civics, why not parenting? A lot of what happens to children that's bad derives from ignorance. ... (Parents) [African American] go by folklore, or by what they've heard, or by their instincts, all of which can be very wrong (Poussiant, 1994).

Poussiant's statements directly address the need for specific education to affect ignorance that often results from folklore that exists in African American communities. The fact that most African Americans still live in segregated communities makes education regarding childbearing a critical issue to address as a counter attack to myths that continue to flourish in these communities. Pre-conception health issues need to be a part of the educational equation for this population.

In discussions of cultural differences, AGI reports that cultures around the world have varying attitudes toward sexual activities among unmarried people. In some societies women are encouraged to begin their families as adolescents. Culture is defined by anthropologists as a way of perceiving, believing, evaluating, and behaving (Goodenough, 1987), or as "a shared organization of ideas that includes the intellectual, moral, and aesthetic standards prevalent in a community and the meanings of communicative actions" (Levine, 1984, p. 67). Gollnich and Chinn (1994) write that culture is learned and that learning starts at birth. Gollnich and Chinn define learning style as the ways in which individuals

learn. It appears then that cultural identity as well as cultural learning styles may play an important role in the design of effective pregnancy prevention programs. In other words what may be effective for one group may not be effective for another based on cultural styles.

### **Theoretical Framework**

According to Rameriz and Castaneda (1974) African Americans are among a number of cultural groups whom they characterize as primarily *field sensitive* learners. Among the characteristics of *field sensitive* learners are that they learn well when concepts are **presented in humanized or story format** and when concepts are **related to personal childhood interest and experiences**. The field sensitive and the field independent learners whom Castaneda and Rameriz describe are thought to be synonymous with Cohen's (1969) description of the relational and analytical learner, or the right brain and left brain learner described by Kunjufu (1989).

As field sensitive learners, African American learners generally prefer to learn content through self-expression in visual, dramatic, and musical arts (Hale-Benson, 1986). African American students value oral/aural communication (Hale-Benson, Golbert, Gay, 1985). Their relational styles favor the arts. These learners benefit from creative and active environments that promote higher-order thinking skills and foster open-ended divergent thinking (Kirkland-Holmes & Federlein, 1990). For example verifying the mastery of concepts by incorporating them into a story or drama benefit these learners.

Jawanza Kunjufu (1989), in his view of cultural differences, observed that African American children in their learning process tend to be motivated by the practical not the

theoretical. If, in fact, one agrees that “knowledge is power”, then the more educational opportunities African American children are afforded which incorporate their predominate learning styles, the greater the probability that they will be able to overcome negative factors in their lives. Therefore, teaching/learning strategies that are culturally congruent, become increasingly important in the development of education intervention programs.

Opportunities for learning need not always be in the formal school setting. As community-based organizations increasingly enter into the pregnancy prevention arena, they must plan programs with as much care as educators in our educational institutions. Their plans for learning opportunities for African American youth, to be effective, must include cooperative learning, role-playing, drama, poetry (rap), movement, and creative writing as well as music and art. The teacher (health professional) who truly understands culture and learning styles and who believes that all students can learn, one way or another, can offer opportunities for success to all students (Guild, 1994).

Involving African American students in real life situations, either a shadowing or a simulated experience, would apparently be an effective learning strategy. The use of role-play, and real-life situations have proven to work generally with this population and should maximize the opportunity for learning critical lessons for future decision making regarding sexual behavior and the resulting obligations that come with pregnancy and childbearing. In keeping with Kunjufu’s (1984) research, this type of learning experience should provide practical application, which matches the preferred style of most field sensitive learners, rather than a theoretical one which is the preferred style of the field independent learner. Further, using a shadowing, simulated or more life-like experience that is ethnic-specific in its design will be an added plus for addressing the issues of

identity and relevance. Therefore, use of realistic dolls to simulate what it would be like to have an infant would be expected to influence attitudes toward sexual activity and teenage parenthood.

### **Promising Pregnancy Prevention Programs**

In his 1995 “State of the Union” speech, President Clinton challenged parents and leaders across the nation to join together in a national campaign to make a difference (AGI, 1998). A group of prominent Americans responded to prevent teen pregnancy (PTP Fact Sheet, 1998). Numerous programs have developed since Clinton’s request, and already existing programs have been improved. Among those that show promise are STARS - **S**tudents **T**oday **A**ren’t **R**eady for **S**ex and BTIO - **B**aby **T**hink **I**t **O**ver. About the STARS program, Oregonian reporter Chris Kenning (October, 1998) writes, “a 4 year effort to change attitudes about teen sex found that a majority of 767 middle school-age teens . . . decided to abstain from sex until older”.

The first study of BTIO, published in the June 1997 issue of Child and Adolescent Social Work Journal, investigated the effect of the program on attitudes and beliefs about parenting. “Teens participating in the program have much more realistic notions about the responsibilities and demands involved in child-bearing”, the study found (Media Archive, 1998). This study of 48 high school students clearly demonstrated the impact of BTIO on adolescents’ attitudes and beliefs about future parenting experiences (Strachan & Gorey, 1997). A random sampling of the student participants - 58% of whom were minority - were assigned an infant simulator to experience parenting for three days. After

the intervention, the participants had much more realistic notions about the responsibilities and demands of childbearing. Ninety percent scored two to four times higher on a measure of realistic parenting expectations than the average adolescent in the comparison group. One student's response on the PAS, a ten-item measure, according to Strachan and Gorey, sums up the prevention impact: "I think it would prevent a lot of teens from having kids too early; it should be included in all sex education classes".

A second study was presented by Dr. Carlyn Wood at the 1998 National Conference on Education, American Association of School Administrators (March, 1998). This study examined adolescent pregnancy in a New Mexico school district. Three intervention strategies were used to encourage the delay of parenthood among eighth grade students identified as being at-risk. The three interventions included (a) a shadowing experience with a teen parent for a day, (b) bi-weekly counseling with a parent and counselor, and (c) participating in the Baby Think It Over (BTIO) for one week. Eleven volunteers took part in the study. At its conclusion they were interviewed to ascertain if the experiences were effective in fostering an attitude which might delay pregnancy. They were interviewed again nine months later. In both cases 10 of the 11 indicated that BTIO had affected their decision to delay parenthood until at least after high school. One felt the BTIO would not affect her decision.

According to its *Final Report (1997)*, an education intervention in Grand Rapids, MI, *S.O.S. (Saving Our Selves) and the Next Generation* that was piloted under a grant from Healthy Kent 2000, resulted in 56% of the participants signing a "Covenant of Purity". The signing of the covenant constituted a commitment not to engage in sex prior to marriage. All of the participants, male and female, were African American.

*S.O.S. and the Next Generation* was introduced in July of 1997. The pregnancy prevention project was piloted by a graduate sorority chapter whose long term goal is to decrease the mortality and morbidity rates and teen pregnancy rate of African Americans in the county where the chapter is chartered. The targeted audience was youth in grades 6-12. For the three months of the project an estimated 134 youths participated in 5 one-day retreats and a three hour culminating event.

The short term goal of *S.O.S.* (Alpha Kappa Alpha, 1997) was to increase knowledge and awareness of preconception issues - sexually transmitted diseases, having sex too early, teen pregnancy and lack of prenatal care after getting pregnant- all which have an impact on African Americans' infant morbidity and mortality rates. The ultimate goal was to discourage sexual activity and advocate abstention.

The project leaders developed a curriculum and used instructional strategies that have demonstrated success with minority students in a number of teaching situations. Such strategies include cooperative learning, role-play and simulation, and games. This project also endeavored to attend to cultural congruency by deliberately using instructors who employed behavior, language, and teaching styles that are closely aligned with African American cultural style, rather than the U.S. mainstream Eurocentric cultural style and model of teaching (AKA, 1997).

In fact all three of the above mentioned programs - *BTIO*, *STARS*, and *S.O.S.*- in their design are structured in a manner that appears to be compatible with the learning styles that are characteristically found among urban, inner-city African American subjects. The use of simulation, role-playing, and/or drama are primary instructional strategies used

in these programs. In the case of the *S.O.S.* program, the curriculum content relates specifically to the population involved in the program, in that much of it is ethnic-specific (Afrocentric), and of personal interest to African Americans. The teaching strategies used in the *S.O.S.* program rely heavily on story drama to teach specific information that participants need to know, especially related to sexually transmitted diseases.

*The BTIO* program, on the other hand, employs simulation and role-play. The infant simulators - dolls - were ethnic-specific. They were programmed to cry due to neglected or abused, or to cry in general every 15 minutes to half hour, providing the mother (study participants) with a lifelike experience.

Of the students who participated in this study, all were African American. Therefore, the use of African American version of the dolls for the simulation, and the *S.O.S.* curriculum were a good match for the instructional strategies.

### **Research Question**

It was the purpose of this study to examine the effect of a culturally-specific program on the attitudes of African American teens toward teen pregnancy. The selection of BTIO with ethnic-specific dolls, and the *S.O.S.* program were made with this purpose in mind, and because the instructional strategies employed in both programs were compatible with the perceived predominate learning style of the population. The use of the two programs allowed the investigator to combined didactic information about pregnancy and sex with an experience simulating the 48 hour care of an infant. The questions which this study addressed were:



1. What differences are there in student attitudes toward and knowledge about the impact of teen pregnancy before and after participation in a teen pregnancy prevention program?
2. Is there a significant difference in the attitudes of African American adolescents who participate in a teen pregnancy program as compared to students who did not participate in the program regarding health issues associated with sexual activity and pregnancy?
3. Is there a significant difference in the knowledge-base of students who participated in a teen pregnancy prevention program as compared to students who did not participate in the program regarding sexual activity, mortality and morbidity rates, pre-natal care, preconception health issues, and perception about having children?

### **Definitions**

The following are the definitions of some important terms as used in this study:

*Pregnancy Prevention Program* - a program with activities and curriculum that are designed to discourage adolescents from participation in sexual activities that lead to pregnancy. Such programs may stress abstinence or protected sexual practices as preventive methods.

*Baby Think It Over (BTIO)* - A pregnancy prevention program that uses computerized dolls to simulate actual care of a baby for at least 24 hours. The program is intended to provide a simulated hands-on experience which will hopefully discourage teens from rushing into parenthood.

*S.O.S. (Saving Our Selves) and the Next Generation* - A program designed to prevent teen pregnancy and the transmittance of sexual diseases. The long term goal of this program is to reduce mortality and morbidity among African Americans by encouraging teens to practice safe sex or abstinence.

## **Hypotheses**

This study was based upon the following hypotheses:

- H<sub>1</sub> Students participating in the BTIO/SOS program will have more realistic attitudes about the impact of teen pregnancy at the conclusion of the program.
- H<sub>2</sub> Students participating in the BTIO/SOS program will significantly increase their knowledge about health issues related to teen sexual activity and pregnancy.
- H<sub>3</sub> Post test scores on the BTIO test for students participating in the BTIO/SOS program will reflect more realistic attitudes about the impact of teen pregnancy than those of students who have not participated.
- H<sub>4</sub> Students participating in the BTIO/SOS program will score higher on the knowledge test at the conclusion of the program than the control group.

## CHAPTER 3

### METHODS

#### Design

This study used a pre-test and post-test, non-equivalent control group **quasi experimental** research design. The **quasi experiment** is characterized by the absence of random assignment of subjects to the experimental and/or control group. In this study there was a control group of teens similar to the experimental group, but no random assignments to groups.

The pre-test and post-test, non-equivalent control group design was used to examine the impact of a specially designed educational intervention program on attitudes toward pregnancy. The intervention curriculum included (a) *Baby Think It Over*™, a nationally known pregnancy prevention simulation program; and (b) *S.O.S. (Saving Our Selves) and the Next Generation*, a locally-designed adolescent pregnancy prevention curriculum.

The experimental group (Alpha) participated in the *Baby Think It Over* and *S.O.S.* programs over a six week period. The control (Omega) group students, of course, were not exposed to the *Baby Think It Over* nor *the S.O.S.* program.

Prior to the implementation of the intervention in which only the Alpha group participated, both groups - Alpha and Omega - were given a pretest using two instruments:

*BTIO* Pre-Test and *S.O.S.* Pre-test. At the conclusion of the six-week period, both groups were given the post tests.

Following the intervention, the Alpha students were interviewed regarding their feelings about their experience and asked if the intervention made any difference in their attitudes about having children in their teen years. Students who were not in the program were interviewed to ascertain their attitudes toward delaying having children until after their teen years or until they get married.

The *S.O.S.* curriculum which was used in this study was specifically designed for and piloted with African American adolescents. A primary teaching and learning technique used in this program is the Edu-dramas, a technique for imparting knowledge and teaching information in a highly dramatic skit/story-telling manner. A secondary teaching and learning technique used is lecture/demonstrations wherein the instructor tells and shows (with descriptive examples, literature, or video/slides) the participant what is to be learned.

*Baby Think It Over*™ was designed for use with adolescents without regard to ethnicity, except for the ethnic appearance of the computerized dolls, infant simulators. In this study African American dolls were used because all participants were of this ethnicity. The concept of the *BTIO* is to simulate what it is like to be totally responsible and care for a baby. The program is designed to encourage teens to “think it over” before they decide to have sex and risk having a baby. The participants in the intervention were given a computerized doll (simulator) to take home for 48 hours. The computerized dolls were programmed to cry at different intervals. The participants had no idea when this would happen. Prior to receiving the simulator, each participant had to

acquire a car seat, stroller, blankets and other items that a baby would need. Resources for borrowing the needed items were provided by the study coordinator and discussed in the pre-participation orientation.

The doll had to be kept with the participant at all times, regardless of whether she was at home, the store, a friend's house, basketball game, or just hanging out. During the time when the doll was in the participant's care, each was asked to visit a store and simulate purchasing the necessary items for her baby - including clothing, formula, food, and other necessities for caring for a baby.

The selection of these two interventions was made because both programs include teaching and learning strategies that are highly interactive and participatory. Role-playing and/or simulation are the major instructional strategies or tools for teaching and learning. The teaching/learning strategies used in both programs are thought to be highly compatible with **field sensitive** learners, a predominant learning style preference of African Americans, according to studies done by noted researchers Rameriz and Castenada (1974). Recognizing, however, that some subjects in this study may be **field independent** learners, the S.O.S. lecture/demonstrations provided the opportunity for a greater teaching/learning style match with all students. Also, to this end *Baby Think It Over* was used because it was thought to appeal to both the **field sensitive** and the **field independent** learners. Figure 1 outlines the timeline for this study, including the recruitment, orientation and intervention activity periods.

<b>Activity</b>	<b>Timeline</b>
1. Identify and recruit the study population. Obtain parent consent to participate.	
Experimental Group - 10 to 15 adolescent females ages 11 to 15 years old who are members of the Alpha After-School Program. These students will participate in the education intervention programs.	Session 1* Wk. 1
Control Group - 10 to 15 adolescent females, ages 11-15 from Omega Inner City Church. These students will not participate in the education intervention programs.	Session 2 Wk. 1
<i>[Sessions 1 and 2 occurred within a week of each other]</i>	
2. Conduct introduction and orientation session with Alpha Group. Distribute pre-test to Omega group and permission slips to all participants in the study. Begin <i>S.O.S.</i> lessons.	Session 3 Wk. 2
3. Collect parent consent form to care for dolls. Provide orientation to <i>BTIO</i> program. Send home dolls w/students.	Session 4 Wk. 3
4. Collect dolls and journals from students.	Session 5 Wk. 4
5. Debrief the experience with <i>BTIO</i> . Continue <i>S.O.S.</i> lessons.	Session 6 Wk. 5
6. Continue <i>S.O.S.</i> lessons infused with discussion about <i>BTIO</i>	Session 7 Wk. 6
7. Debrief the study with the experimental group. Give post-test to both the experimental and control groups, conduct informal interviews and terminate study.	Session 8 Wk. 7
<i>[ * The term session, used in this chart, indicates a meeting with students.]</i>	

**Figure 1 - Project activity and timeline.**

## **Population and Sample**

The population selected for this study, as has been previously indicated, was African American females. Those in the experimental group all lived in the inner city or participated in an after school program in this area. Most, but not all attend church. All participants were 11-15 years old. The participants in the control group were similar to the experimental group in age, gender, and ethnicity. They were dissimilar in that none attended the after-school program, but all attended a predominately Black church. This population was selected because studies indicate that African Americans are most at risk of having a baby in their teen years (AGI, 1997). This population was further selected because it is among the group at greater risk of infant mortality and morbidity, according to the 1995 Healthy Kent 2000 Report.

Table 1 profiles the population sample that participated in the study including their ages, and family income information.

**Table 1**

### **A Comparison Of Age and Family Income by Group**

<b>Variables</b>	<b>Grp. ID</b>	<b>Profile Demographics</b>				
<b>Age:</b>	<b>E</b>	<b>1</b> 11 Years	<b>3</b> 12 Years	<b>4</b> 13 Years	<b>7</b> 14 Years	<b>0</b> 15 Years
	<b>C</b>	<b>0</b> 11 Years	<b>4</b> 12 Years	<b>2</b> 13 Years	<b>4</b> 14 Years	<b>5</b> 15Years
<b>Income:</b>	<b>E</b>	<b>0</b> Under \$17,000	<b>10</b> \$17-25,000	<b>5</b> \$26-35,000	<b>0</b> Over \$35,000	
	<b>C</b>	<b>0</b> Under \$17,000	<b>3</b> \$17-25,000	<b>12</b> \$26-35,000	<b>0</b> Over \$35,000	

**Code:**           **E = Experimental Group**  
                      **C = Control Group**

## **Instruments**

The two part, pre- and post-tests included an adaptation of the test taken from *Baby Think It Over* Student Handbook (4th Edition) (1997) and the *S.O.S. and the Next Generation* (1st Edition) (1997). *BTIO* was copyrighted in 1996 by BTIO, Inc. A letter of permission to use all printed materials, including the test was granted for this study. A letter of permission to use the computerized *BTIO* dolls was granted to the local agency who supplied the dolls for this study. The investigator was sent all printed material associated with the program which is tantamount to permission to use. Permission in writing from Theta Chi Omega Chapter of Alpha Kappa Alpha Sorority, Inc. was granted to replicate the *S.O.S.* program and to use all written materials.

The **BTIO Test** consists of 4 questions that are a combination of one and two answer choices and 7 questions with responses rated on a Likert five point scale (see Appendix B). The questions were designed to provide both demographic and attitudinal answers. Only 8 of the questions were used to develop the total score for attitudes about the impact of teen pregnancy. Directions for taking the test were given verbally.

The **S.O.S. Pre- and Post-Test** (see Appendix D) consisted of 12 multiple choice questions designed to evaluate the student's knowledge of preconception health issues, infant mortality and morbidity, and safe sex practices. The tests were scored on the total weighted responses. Eight questions were worth 8 points each while 4 questions considered more important were worth 9 points each. Of the 4 questions given the highest (9) points, the correct response attested to participants knowledge of risks associated with engaging in sexual activity and its relationship to infant mortality and/or morbidity.



Coefficient alpha ratings for internal consistency were evaluated separately for both sets of 8 and 4 questions on the *BTIO* test and the 12 questions on the *S.O.S.* test.

The items on the **Student Profile** and the **Family Profile** used for this study consisted of an adaptation of the *BTIO* forms. These were designed to provide more demographic information on the subjects participating in the study, including such things as age, gender, race/ethnicity, and family income. This data were necessary to describe the sample for comparison with other studies. An additional form, **The Covenant of Purity** (see Appendix F) from the *S.O.S.* program was also used in this study. Students were given the opportunity to sign the form and promise to abstain from sexual activity prior to marriage. The signing of this form was voluntary and was an additional indicator of attitudinal change.

### **Human Rights**

The experimental (Alpha) participants were recruited from those participating in an urban after school program which caters to inner-city African American youth. Fifteen students volunteered after participating in an orientation session where the study parameters and design were explained. Participants for the control (Omega) group were recruited from an inner-city, predominantly African American church. Like the Alpha group, they volunteered after the recruitment orientation students during which the parameters and design of the study were explained.

The “Baby Think It Over Parent Consent” (revised) was used with the participants from the Alpha Group (see Appendix A). As with many programs, risk exists for both parents and students participating in the same study. A particular feature on the

BTIO Parent Consent Form is the question of responsibility for the doll which the students were issued. The parent was asked to sign a form indicating responsibility in the event of destruction or loss of the doll. The cost for replacement for a doll is \$250. A different consent form which made no reference to *BTIO* or *S.O.S.* was obtained from the participants in the Omega Group. See Appendix G for a copy of the consent form used in this study.

To protect the confidentiality of participants in this study, students who agreed to participate were assigned a survey code. All documents, including, the consent forms, pre/post test, profile forms, and interview notes were kept locked in a confidential file by the investigator until the study was completed. No individual was identified in this study by name. At the completion of the study and data analysis, all forms and student logs were identifiable only by survey code.

All participants were required to obtain consent from their parents to participate in the study and complete a student and family profile form (see Appendix B ). The consent form for the Alpha group was taken from **The Baby Think It Over Handbook**, version 4 (1997). A handbook was provided to parents, that adequately explained the program in which their child was engaged. The consent form for the Omega group simply asked parents to consent to allow their child to complete the form and take a pre- and post test.

All tests and forms completed by participants for this study were keep in strict confidence by the coordinator. Participants were assigned numbers as a substitute for names, to insure that individual answers were not identifiable with the participants.

## CHAPTER 4

### RESULTS/DATA ANALYSIS

#### **Introduction**

This study determined the effectiveness of a program incorporating simulation as an educational strategy on the attitudes of African American adolescent females toward having a baby. Two groups of African American females students constituting an experimental and control group were selected to participate in the study.

#### **Techniques**

This study utilized a pre-test post-test, non-equivalent control quasi experimental design to test the study's four hypotheses. In this regard, the students in the experimental group participated in a simulation exercise where they had to take an "interactive" computerized doll home for the weekend. Participants in both the experimental and control groups were administered the *Baby Think It Over* and *Saving Ourselves (SOS) and the Next Generation* instruments.

The study determined whether participants in the experimental group were more reticent about having a baby than students in the control group. Further, this determined whether the experimental group had increased their knowledge about health issues related to teen sexual activity and pregnancy more than their corresponding control

counterparts. This study addressed four hypotheses on all test applications. The .05 alpha level was used for determining statistical significance.

### **Characteristics of Subjects**

Of the students who completed the pre-test and post-test instruments, previously described, 15 participated in the experimental group and 15 participated in the control group for a total of 30 for both groups. The participants ranged in age from 11 to 15 years (m = 13 yrs). Of the total sample 1 (3.3%) was 11 years old; 10 (33.3%) were 12 years old; 4 (13.3%) were 13 years old; 7 (23.3 %) were 14 years old; and 8 (26.7%) were 15 years old. Of the experimental group families 10 (66.66%) had an income level of \$17-25,000, while 5 ( 33.33%) had an income level of \$26-35,000. Three (25%) of the 15 students in the experimental group indicated that they and their mom attend church. Fifteen (100%) of the control group participants indicated that they and their moms attend church. All (100%) of the participants in both groups were from single (female) heads of household.

### **Findings of the Study: Descriptive Data**

Two groups were used for comparison for this study and to determine the effectiveness of treatment. The experimental group who received treatment was compared to the control group who received no treatment on both attitudes and knowledge. Possible scores on the attitudes test ranged from 0 to 40. Possible scores on the knowledge test ranged from 0 to 100. Table 2 compares the mean scores for the two groups with regard to both their attitudinal and knowledge scores. The knowledge score means indicated a

tendency for the groups to achieve 50 - 66% correct answers.

**Table 2**

**Comparison of Mean Scores for Experimental and Control Groups**

Test	Experimental Group		Control Group	
	mean	range	mean	range
<b>Pre-test:</b>				
Attitude	30.27	(22-37)	27.26	(16-38)
Knowledge	50.98	(0-76)	37.60	(17-84)
<b>Post-test:</b>				
Attitudes	30.87	(22-38)	26.87	(16-38)
Knowledge	56.93	(25-100)	66.13	(32-100)

Descriptive data for the groups revealed that on the pre-test measure of attitudes, the mean for the experimental group attitudes was 30.27 compared to 27.26 for the control group. Additionally, a comparison of the pre-test scores for knowledge between groups showed means of 50.93 for the experimental versus 37.60 for the control. Therefore, on both pre-tests, the mean scores for the experimental group were higher than the control group. Post-test data for the two groups indicated little change in the post test means for the attitudinal scores of the experimental group. While the mean knowledge score increased slightly for the experimental group, there was a large increase in the knowledge mean score for the control group.

**Findings of the Study: Hypothesis/Research Questions**

This study addressed four hypotheses. In this regard, the four hypotheses are presented with an accompanied test for determining statistical significance.

H<sub>1</sub> Students participating in the BTIO/SOS program will have more realistic attitudes about the impact of teen pregnancy at the conclusion of the program.

Attitudes were measured by responses to the BTIO test. Pre- and post-test scores were compared using the paired t-test. The data found in Table 3 provides sufficient information to reject this hypothesis.

**Table 3**

**Comparison of Pre-Test and Post-Test Experimental Group Attitudes**

Test	Mean	SD	Paired t	df	p
Pre-test (n=15)	30.27	6.053	6.104	14	.709
Post-test (n=15)	30.87	5.449			

Since the observed probability of .709 did not exceed the established .05 alpha level of significance, this hypothesis was not accepted. In other words, there was no significant difference between the pre and post-test scores of students who participated in the BTIO/SOS program.

H<sub>2</sub> Students participating in the BTIO/SOS program will significantly increase their knowledge about health issues related to teen pregnancy.

Table 4 presents the results of the paired t-test analysis.

**Table 4**

**Pre- and Post-Test Comparisons of the Experimental Group Knowledge**

Test	Mean	SD	paired t	df	p
Pre-test (n=15)	50.87	19.13	21.08	14	.284
Post-test (n=15)	56.93	19.80			

Since the observed probability of .284 did not exceed the established .05 alpha level of significance, the hypothesis was not accepted. In other words, there was no statistical difference between the pre and post-test scores regarding their knowledge for the students who participated in the BTIO program.

**Table 5**

**Comparisons of Pre-Test and Post-Test Control Group Attitudes**

Test	Mean	SD	Paired t	df	p
Pre-test (n=15)	27.26	7.34	4.91	14	.757
Post-test (n=15)	26.87	5.42			

The observed probability of .757 did not exceed the established .05 alpha level of significance. In other words, there was no significant difference between the pre and post-test attitudes of students in the control group.

**Table 6**

**Pre- and Post-Test Comparisons of the Control Group Knowledge**

Test	Mean	SD	paired t	df	p
Pre-test (n=15)	37.60	11.87	24.07	14	.000
Post-test (n=15)	66.13	23.36			

In comparing the control group pre and post-test knowledge scores, the observed probability of less than .001 exceeded the established .05 alpha level of significance. Therefore, there was a significant difference between the pre and post-test attitudes of students in the control group.

H<sub>3</sub> Post test scores on the BTIO test for students participating in the BTIO\S.O.S. programs will reflect more realistic attitudes about the impact of teen pregnancy than those students who did not participate in the program.

**Table 7**

**Comparison of Experimental and Control Group Post-Test Attitudes**

Group	Mean	SD	t-test*	df	p
Experimental (n=15)	30.87	5.45	-2.02	28	.025
Control (n=15)	26.87	5.42			

\* Pooled formula for one tailed t-test

Since one of the assumptions for a valid t-test is homogeneity of variance, the Lavene Test for homogeneity of variance was used. The F value was not significant, so the pooled formula was used for the t-test. The t-value was significant indicating that participants in the experimental group exhibited significantly more realistic attitudes about teen pregnancy than their corresponding counterparts.

H<sub>4</sub> Students participating in the BTIO\SOS program will score higher on the knowledge test at the conclusion of the program than the control group.

Here again Lavene's Test was used to determine whether the variance between the two populations were homogenous. Variances were equal so the pooled formula for the t-test was used.

**Table 8**

**Comparison of Experimental and Control Group Post-Test Knowledge Scores**

Group	Mean	SD	t-test*	df	p
Experimental (n=15)	56.93	19.81	1.16	28	.127
Control (n=15)	66.13	23.36			

\* Pooled formula for one tailed t-test

The data in Table 8 indicate that there was no significance difference between the knowledge of the experimental and control groups at the conclusion of this study.



### **Other Findings of Interest**

While there was no significant difference in the post scores between the experimental and control groups on the S.O.S. knowledge test, it was of interest to note that the control group students had an increase from pre-test to post test. A descriptive comparison of the profile data revealed that the family income of the control group was greater on average than the experimental group. Data also indicated that more -100% vs 25% - of the control participant families attend church.

## CHAPTER 5

### DISCUSSION AND IMPLICATIONS

As a group at higher risk than most for teen pregnancy, African American youth need to be knowledgeable about the responsibilities resulting from getting pregnant and other health risks, associated with sexual activity. In this study it was assumed that greater knowledge of preconception health issues and the risk/responsibilities associated with teen pregnancy would create more realistic attitudes toward getting pregnant as a teen.

The hypothesis that students participating in the BTIO intervention would have more realistic attitudes about the impact of teen pregnancy at the conclusion of the program was rejected, because there was no significant improvement in post-test (30.87) over pre-test (30.27) mean scores. However, a comparison of the post-test scores for the experimental (30.89) and control (26.87) groups, showed that the experimental group has significantly more realistic attitudes about teen pregnancy than the control group at the conclusion of this study. Several factors influenced the test scores.

During discussions held at the orientation session, immediately after taking the pre-test and the first session of intervention, the experimental students exhibited “know-it-all” attitudes. Though some students were more cynical than others, the data suggest that attitudes were similar across the board. It was difficult at the onset to convince the subjects that dealing with topics they had heard about prior to participating in the program was worthwhile learning more about. While there was great participation in

the learning activities because of the teaching/learning style, there was not a general feeling on the part of participants that much would be learned during the program. However, they enjoyed the socialization. An early report of the collective scores of their pre-test became the deciding factor in their being more serious about participation in the study. It was at this stage, the “know-it-all” attitudes disappeared and more serious engagement began. During the discussions at the beginning of the study, several unrealistic attitudes were expressed (i.e., “if I had a baby, I would have someone to love and be with”, “that’ll be my baby and I’ll take care of it myself”, “I don’t need nobody but me”). These collective statements are an indication that within this group, feelings of loneliness, the need to love and be loved, as well as, fear of rejection were important emotions and attitudes that needed to be dealt with.

Recognizing that the attitudes and emotions expressed by these teens are the kind that contribute to decisions to engage in sexual activities, the investigator, who also served as the instructor, placed great emphasis on alternative thinking. The encouragement to think differently, plus reinforcement of knowledge of the risk of sexually transmitted diseases that was provided in the *S.O.S.* curriculum, along with the experimental strategies, apparently did not produce a significant increase in realistic attitudes about having a baby as measured by the attitude test. Lack of change in attitude scores may have been due to no real change occurring. Another explanation might be that the attitude test is not sufficiently sensitive to detect more subtle changes.

According to the logs of students in the experimental group, post *BTIO* informal interviews, and the *BTIO* post-test comments, a decisive factor in creating more realis-

tic attitudes was the intervention with the dolls. Comments such as those listed are clear indicators of a change in attitudes.

- “I wanted to throw the baby away”
- “I keep wishing it would shut up”
- “My mother threatened to put me and it out”
- “I thought my mom would keep it while I went out, but she wouldn’t”
- “Babies are too expensive. Their stuff just costs too much”
- “At night I put my doll in the closet so I could not hear it, but only because I knew it was not real.. I don’t ever want to have a real kid”
- “Anybody who still wants to have a baby after this, is CRAZY !!!”

In addition to the student comments above, one participant called to ask the investigator to “come and get the doll”. A telephone conference with the subject and parent resulted in the subject keeping the doll for the duration of the experiment. A parent commented at the return of the dolls, “If I ever thought I was going to have another baby, this (the experience) reminded me that I don’t ever want to go there (have another baby) again. This mother’s youngest child is 6 years old. Several other mothers expressed their agreement with her statement.

Although, the difference in experimental group’s pre and post-test scores was not significant, there was a slight increase in their knowledge scores. The greatest surprise of the study, however, was the large gain in the mean score of the control group on the knowledge post-test (66.1 compared to pre-test mean of 37.6). Because these students were not exposed to the intervention, their increase was unexpected. A possible explanation was revealed in conversations with these students. During post interviews with the control group students from the inner city church, it was revealed that some had participated in a similar program. They also indicated that after the pre-test they had engaged

in conversations with their peers at church about the test and about what they knew. This incident shows that students learn from each other.

AGI (1998) research indicated that family income is a good indicator of educational level. Higher education may mean that knowledge (i.e., knowing the answers) is valued. It is, therefore, possible that the pre-test peaked the curiosity of the control students and they then sought sources for increasing their own knowledge, making preparation for the post-test. During the post-test interview this was found to be true when some control group students indicated that the pre-test made them curious and they sought information from their moms and other peers.

A second review of the data indicated that more -100% vs 25% - of the control participant families attend church. Therefore, they may have been inspired by religious convictions to seek more information about pre-marital sex and sexually transmitted diseases. Both of the aforementioned occurrences - educational level and church attendance - obviously were related to the post-test scores for the control group.

Programs intended for various populations need to consider the cultural learning styles of the population for which the learning opportunity is intended. Varying the teaching styles and the nature of instructional strategies for cultural congruency is critical to effectiveness.

The effectiveness of the teaching strategies should be evaluated on two levels: (a) the ability to keep the subjects engaged and interested in the learning opportunity, and (b) the ability to convince subjects that the time spent in the learning situation was worthy of their best effort. The edu-drama used in the S.O.S. program was an effective teaching strategy, according to student logs and informal comments. The

edu-drama technique was used in the S.O.S. program to create awareness of preconception health issues and to encourage abstinence from sex. The use of drama is perceived as an effective teaching/learning tool because it is an interactive and engaging strategy (AKA, 1997). As a test of comprehension, participants in the S.O.S. program were required to create their own edu-dramas. These were evaluated for quantity and quality of content that addressed one or more preconception health issue. The edu-dramas created by the experimental group were evaluated on a scale of 1 (poor) - 5 (excellent) for content inclusion. The average score for the experimental group was 3.9 an indication of “good comprehension and inclusion of preconception health content.”

The clear involvement of parents in the decision making process to allow their children to engage in the program is a must. Students at the adolescent age are known for their lack of commitment to follow through when things get rough. Several of the experimental group would have dropped out had it not been for the influence of their parents. The fact that several parents insisted that their students stay with the BTIO experience is a good indicator that parental involvement is needed.

### **Limitations and Implications**

Perhaps the greatest limitation of this study was the small sample population (n = 30) for both the control (n =15) and experimental (n =15) groups. While there was full participation (100%) on both the pre and post-tests from each group, a larger sample may have demonstrated different statistics. Slight, non-chance differences are more likely to be de-tected with larger samples. Also, the small numbers (15 control and 15

experimental) posed a potential threat to the ability of investigator to carry out the study. Had several students decided to drop out the comparison data would have been threatened.

The fact that convenience sampling was used limits the possibility of generalizing the results beyond this study group, thus limiting its usefulness. Still another limitation was the use of a non-equivalent control group. The lack of random assignment to the groups - control and experimental - makes it more difficult to evaluate the effects of the treatment.

While it was not assumed that the control group students would be talking to each other about the test, this did occur. The short time span between the pre and post-test and the fact that the control group members were selected from the same church obviously had an adverse effect on the study results. For example, the participants had time to collaborate on the answers. Admittedly they did so. Therefore, a broader inclusion of individuals from other churches would have minimized the potential for sharing answers or discussing the test.

Additionally members of the control group, due to knowledge deficit syndrome, were perhaps spurred to seek information because they were uncomfortable not knowing the answers. This may have resulted in the large increases in knowledge that showed up in their post- test knowledge scores.

The fact that the control group consisted of a convenience sample in that all members and their families attend church was definitely a limitation. It is possible that the inclusion of a broader sample of teens - church goers and non church goers - may have resulted in having some students with more negative attitudes at the onset. The fact that all of the

control group subjects were from the same church and held substantially positive attitudes at the beginning was a definite limitation.

The first study on the effectiveness of BTIO was published in 1997. Not until an interest was expressed in using the materials for this study was a reliability test performed on the instruments. Although it was promised, a reliability test for the S.O.S. Pre/Post-test was not forthcoming. The sorority is a volunteer non-profit organization with limited resources. Funding for the tests was not available in this year's budget. However, this has been established as a priority for the next cycle of students who will participate in their program. The tests will be completed for future studies. The lack of testing - validity and reliability - of the instruments, therefore constituted a major limitation for this study.

### **Suggestions for Further Research/Modification**

As others seek to implement pregnancy prevention models with African American teens, they should keep in mind the cultural compatibility of learning/teaching styles. While not all the hypotheses of this study were supported, several important lessons were learned. In future studies the number of students involved should be larger and the population pool for the control group broadened. Parent observations were rich in this study. Therefore, future efforts should solicit their responses in a more formal manner as it relates to their observations of their children's experiences with the infant simulators (dolls). More formal observations could offer a different perspective on the attitudes of the subjects. Since pregnancy prevention is the ultimate goal of the study, soliciting parent observation in a more formal manner would present the opportunity to them to become



aware of and seek ways in which they could be instrumental in effecting their children's attitudes about having a baby.

Another possibility for future research is to separate the interventions to have four groups:

1. didactic only
2. dolls only
3. didactic and dolls
4. control

These variations would help determine whether a particular strategy or combination is more effective. A much larger sample would be needed for this kind of group stratification.

The recruitment of male participation would also offer the opportunity to have a greater impact on teen pregnancy, since they constitute the other half of the equation for a pregnancy to occur. Males also have a great effect on female teen decisions to have sex and ultimately risk pregnancy. Efforts to change teenage male attitudes are as much as needed as efforts to changes female attitudes.

Measuring the outcomes over a longer period of time will offer the opportunity to better test the hypothesis proposed herein. The suggestion to increase the number of students and broaden the pool for the control group in future studies, will likely increase the potential for significant differences between the study groups. So will random selection. Both of these ideas were hypothesized in this study. In addition, a larger period of time between pre and post tests would be a better indicator that knowledge acquired through instruction of the experimental group is retained over a longer period of time, rather than merely remembered for the moment. All of the above suggestions will strengthen future studies.

## **Summary**

In conclusion, only one of the hypotheses for this study was supported. However, the overall significance of this study is that it addressed the need to document in a more systematic fashion, the results of two programs which propose to affect attitude and knowledge related to teen pregnancy. Both of the programs - BTIO and S.O.S. - used in this study are fairly new and well intended programs. BTIO was created in 1993, while S.O.S. was initiated in 1997. Each of these programs in order to stand the test of time for effectiveness, needs better and more objective evaluation and documentation.. This study initiated and contributed to that process.

## APPENDICES

## APPENDIX A

## BABY THINK IT OVER TM PARENT CONSENT FORM

Your son or daughter has volunteered for a parenting simulation with *Baby Think It Over* TM, a computerized doll. The simulation will be supervised by Laura B. Moody, R.N., B.S.N., a graduate nurse student. The doll cries at random intervals and requires round-the-clock care on the part of its teen "parent".

This simulation will be a challenge for your young adult. It will teach him or her more about the responsibilities of parenthood than any amount of lecturing could. Many teens who use the doll say afterward that it motivated them to wait to have children.

Because the simulation is demanding, you should know how it will affect you and your child. Your teen will be "on call" by his or her "baby" 24 hours a day, for two (2) days. The teen must stop whatever she/he is doing, with no warning, whenever the "baby" needs attention. The device used for caring for the doll will be strapped to your teen's wrist with a tamperproof bracelet. Please be sure your teen does not operate any power tools, etc., while wearing this device. If very tired, he or she should not drive a car. The doll will cry frequently, (but briefly, if its "parent" is attentive). It will wake your teenager at night, and possibly other family members. If extra equipment has been provided, the teen must take it along wherever he or she goes (equipment may include stroller, diaper bag, car seat and clothing).

If you agree that your son or daughter may participate, your input as a parent will be of great value. Caring for the doll is your teen's responsibility, but your child needs your encouragement and support. Many parents have found that the experience opens new lines of communications with their teenagers.

1. I, \_\_\_\_\_, parent of \_\_\_\_\_, agree to let my child participate in a parenting simulation using *Baby Think It Over* TM for two(2) days.

2. \_\_\_\_\_ I acknowledge that this program is designed to enhance my child's education and that its ultimate purpose is to deter the decision to engage in activities and behavior that may lead to early father/mother hood.

3. \_\_\_\_\_ I understand that the doll and auxiliary equipment is on loan to my child and that as a family we are expected to take excellent care of all materials and equipment.

4. I agree to accept financial responsibility and to reimburse Laura B. Moody in the amount of \$250.00 if the doll is lost, damaged, or destroyed.

*If you have questions about this form, please feel free to call Laura Moody at 243-0253. Questions about your child's rights should be directed to Professor Paul Huizenga, Chair of Human Subjects Committee, Grand Valley State University at (616) 895-2472.*

Your Signature \_\_\_\_\_ Date: \_\_\_\_\_

## APPENDIX B

**BTIO AND SOS STUDY  
PARTICIPANT PROFILE**

**PART I**

Student Profile

*Fill in the blank*

1. Name \_\_\_\_\_ 2. Phone \_\_\_\_\_

3. Address \_\_\_\_\_

4. City \_\_\_\_\_ 4.1 State \_\_\_\_ 4.2 Zip \_\_\_\_\_ 4.3 County \_\_\_\_\_

5. Date of Birth \_\_\_\_\_

*Please Check the Item that appropriately fits your description.*

**6. Gender**

6.1 \_\_\_ Male 6.2 \_\_\_ Female

**7. Ethnicity/Race** 7.1 \_\_\_ White 7.2 \_\_\_ Black 7.3 \_\_\_ Hispanic

7.4 \_\_\_ American Indian 7.5 \_\_\_ Asian 7.6 \_\_\_ Other

**8. Age** 8.1 \_\_\_ 11 years 8.2 \_\_\_ 12 years 8.3 \_\_\_ 13 years 8.4 \_\_\_ 14 years

8.5 \_\_\_ 15 years 8.6 \_\_\_ older

**PART II**

Parent/Guardian and Family Profile

*Fill in the blanks*

1. Name \_\_\_\_\_ 2. Phone \_\_\_\_\_

3. Address \_\_\_\_\_ 3.1 City \_\_\_\_\_ 3.2 State \_\_\_\_ 3.3 Zip \_\_\_\_\_

*Please Check the Item that appropriately fits your description.*

4. live with my \_\_\_\_\_ 4.1 mother 4.2 \_\_\_ father 4.3 \_\_\_ both parents

4.4 \_\_\_ guardian

5. Marital Status of Parent/Guardian (please check the appropriate answer)

5.1 \_\_\_\_\_ Married

5.2 \_\_\_\_\_ Divorced

5.3 \_\_\_\_\_ Single

5.4 \_\_\_\_\_ Widowed

6. Our Family Income Is: ( please check the appropriate response)

6.1 \_\_\_\_\_ \$17,000 or under    6.2 \_\_\_\_\_ \$18,000 to \$ 25, 000

6.3 \_\_\_\_\_ \$26,000 to \$35,000    6.4 \_\_\_\_\_ \$35, 000 to \$50, 000

6.5 \_\_\_\_\_ Over \$50,000

7. Church Affiliation (please check the appropriate response)

7.1 \_\_\_\_\_ My family and I attend church

7.2 \_\_\_\_\_ My family and I do not attend church



## APPENDIX C

## BABY THINK IT OVER™ PRE-TEST

*Please write your answer in the blank.*

1. What is your age now? \_\_\_\_\_ Years
2. Do you plan to have children? 2.1 \_\_\_\_\_ Yes 2.2 \_\_\_\_\_ No
3. If yes, how many? \_\_\_\_\_
4. If yes, at what age would you like to have your first child? \_\_\_\_\_ Years

*Please check what you think is the best response to the following question.*

5. How important is it to have a spouse or partner before having children?
  - 5.1. \_\_\_\_\_ Not important
  - 5.2. \_\_\_\_\_ Slightly important
  - 5.3. \_\_\_\_\_ Moderately important
  - 5.4. \_\_\_\_\_ Very important
  - 5.5. \_\_\_\_\_ Essential

Comments: \_\_\_\_\_  
\_\_\_\_\_

6. How important is it for a baby to grow up with both a mother and a father?
  - 6.1. \_\_\_\_\_ Not important
  - 6.2. \_\_\_\_\_ Slightly important
  - 6.3. \_\_\_\_\_ Moderately important
  - 6.4. \_\_\_\_\_ Very important
  - 6.5. \_\_\_\_\_ Essential

Comments: \_\_\_\_\_  
\_\_\_\_\_

7. How do you think having a baby usually effects a couple's relationship?
  - 7.1 \_\_\_\_\_ Improves the relationship a lot
  - 7.2 \_\_\_\_\_ Improves the relationship a little
  - 7.3 \_\_\_\_\_ Has no effect
  - 7.4 \_\_\_\_\_ Makes the relationship harder
  - 7.5 \_\_\_\_\_ Destroys the relationship

Comments: \_\_\_\_\_  
\_\_\_\_\_

8. How do you think having a baby usually effects a person's/couple's social life?

- 8.1  Improves social life a lot
- 8.2  Improves social life a little
- 8.3  Has no effect
- 8.4  Limits social life a little
- 8.5  Almost destroys social life

Comments: \_\_\_\_\_  
\_\_\_\_\_

9. How do you think having a baby as a teenager will effect family relations?

- 9.1  Family relations will be improved a lot
- 9.2  Family relations will be improved a little
- 9.3  Family relations will not be effected
- 9.4  Family relations will be more negative
- 9.5  Positive family relations will be destroyed

Comments: \_\_\_\_\_  
\_\_\_\_\_

10. How do you think having a baby effects a person economic status or income?

- 10.1  Income will be improved a lot
- 10.2  Income will be improved a little
- 10.3  Income will not be effected
- 10.4  Income will slightly deteriorate
- 10.5  Income will be greatly effected

11. I think having sex during the teen years is

- 11.1  Not desirable
- 11.2  Slightly desired
- 11.3  Moderately desired
- 11.4  Very desired
- 11.5  Essential

Comments: \_\_\_\_\_  
\_\_\_\_\_

## APPENDIX D

# S.O.S. (Saving Our Selves) AND THE NEXT GENERATION

## EVALUATION PRE-TEST

This pre-test is designed to test your familiarity with select terms/ideas associated with the health issues that will be discussed during this study. Please answer the following by circling the best word or phrase to complete the statements below:

1. Preconception health issues are problems that occur prior to having \_\_\_\_\_.  
*1. an abortion, 2. sex, 3. a baby, 4. a disease, or 5. a menstrual period*
2. Of the following, \_\_\_\_\_ is not a sexually transmitted disease (STD).  
*1. HIV/AIDS, 2. Syphilis, 3. Herpes, 4. Mononucleosis, or 5. Hepatitis B*
3. STDs were once called \_\_\_\_\_.  
*1. Sex Sickness, 2. Vaginal Disorders, 3. Venereal Diseases, 4. Sexual Disorders, or 5. Sex Organ Diseases.*
4. STDs can be transmitted through vaginal, anal or \_\_\_\_\_ sex.  
*1. pretend, 2. oral, 3. dry, 4. finger, or 5. fake*
5. The incidence of sexually transmitted diseases has \_\_\_\_\_ among African-American youth over the past 10 years.  
*1. Increased slightly, 2. increased dramatically, 3. remained the same  
4. declined slightly, 5. declined dramatically*
6. The surest way of not becoming pregnant is to \_\_\_\_\_.  
*1. wear a condom, 2. use birth control pills, 3. abstain, 4. subsist, or  
5. resist ejaculation*

7. The average mortality rate for women (including teens) who have babies in Kent County is \_\_\_\_ per thousand live births.

- 1. 8, 2. 6.5, 3. 10, 4. 9.6, or 5. 5*

8. Among African American that rate is \_\_\_\_\_.

- 1. double, 2. one and a half times more, 3. triple, 4. less, or 5. slightly more*

9. Pre-natal care involves health care for females \_\_\_\_\_.

- 1. after a baby is born, 2. after conception and before a baby is born,*

*3. after the menstrual cycle starts, 4. before a pregnancy, or*

- 5. when they reach the age of puberty*

10. Mortality rate refers to the frequency at which babies

- 1. get sick, 2. die, 3. recover, 4. are born deformed or 5. are born with a disease*

11. \_\_\_\_\_ rate refers to the frequency at which babies are born with deformities, disabilities, and various impairments.

- 1. morbidity, 2. maturity, 3. deliberation, 4. delivery, or 5. morbunidity*

12. Some factors which contribute to greater frequency of mortality and morbidity among teen mothers are \_\_\_\_\_.

- 1. Lack of pre-natal care, 2. STD infection during or prior to pregnancy,*

*3. poor diet, 4. low weight at birth, 5. all of the above*

Score

Pre-Test (No. correct) \_\_\_\_\_

Post-Test (No. correct) \_\_\_\_\_

## APPENDIX E

# S.O.S. (Saving Our Selves) AND THE NEXT GENERATION

## EVALUATION POST-TEST

This post-test is designed to test your familiarity with select terms/ideas associated with the health issues that will be discussed during this study. Please answer the following by circling the best word or phrase to complete the statements below:

1. Preconception health issues are problems that occur prior to having \_\_\_\_\_.  
*1. an abortion, 2. sex, 3. a baby, 4. a disease, or 5. a menstrual period*
2. Of the following, \_\_\_\_\_ is not a sexually transmitted disease (STD).  
*1. HIV/AIDS, 2. Syphilis, 3. Herpes, 4. Mononucleosis, or 5. Hepatitis B*
3. STDs were once called \_\_\_\_\_.  
*1. Sex Sickness, 2. Vaginal Disorders, 3. Venereal Diseases, 4. Sexual Disorders, or 5. Sex Organ Diseases.*
4. STDs can be transmitted through vaginal, anal or \_\_\_\_\_ sex.  
*1. pretend, 2. oral, 3. dry, 4. finger, or 5. fake*
5. The incidence of sexually transmitted diseases has \_\_\_\_\_ among African-American youth over the past 10 years.  
*1. Increased slightly, 2. increased dramatically, 3. remained the same  
4. declined slightly, 5. declined dramatically*
6. The surest way of not becoming pregnant is to \_\_\_\_\_.  
*1. wear a condom, 2. use birth control pills, 3. abstain, 4. subsist, or  
5. resist ejaculation*



7. The average mortality rate for women (including teens) who have babies in Kent County is \_\_\_\_ per thousand live births.

- 1. 8, 2. 6.5, 3. 10, 4. 9.6, or 5. 5*

8. Among African American that rate is \_\_\_\_\_.

- 1. double, 2. one and a half times more, 3. triple, 4. less, or 5. slightly more*

9. Pre-natal care involves health care for females \_\_\_\_\_.

- 1. after a baby is born, 2. after conception and before a baby is born,*

- 3. after the menstrual cycle starts, 4. before a pregnancy, or*

- 5. when they reach the age of puberty*

10. Mortality rate refers to the frequency at which babies

- 1. get sick, 2. die, 3. recover, 4. are born deformed or 5. are born with a disease*

11. \_\_\_\_\_ rate refers to the frequency at which babies are born with deformities, disabilities, and various impairments.

- 1. morbidity, 2. maturity, 3. deliberation, 4. delivery, or 5. morbunidity*

12. Some factors which contribute to greater frequency of mortality and morbidity among teen mothers are \_\_\_\_\_.

- 1. Lack of pre-natal care, 2. STD infection during or prior to pregnancy,*

- 3. poor diet, 4. low weight at birth, 5. all of the above*

Score

Pre-Test (No. correct) \_\_\_\_\_

Post-Test (No. correct) \_\_\_\_\_

## APPENDIX F

# COVENANT OF PURITY

*It is God's will that you should be sanctified: that you should avoid sexual immorality; that each of you should learn to control your own body in a way that is holy and honorable.*

*1 Thessalonians 4:3-5*

## *MY COMMITMENT*

*It is with confidence in God's power to sustain me that I make this promise, to abstain from pre-marital sex. I make this promise to God, my family, myself and the children that I one day might have.*

*I promise to practice chastity until the day I give myself to my spouse as a wedding gift. It is also my intention that once I am married, I will remain faithful to my spouse until death divides us.*

*I know that God requires this of me, that He loves me, and that He will reward me for my faithfulness in this life, and in the next. I will continually pray for strength to endure.*

*Signed this \_\_\_ day of \_\_\_\_\_ in the 19\_\_ year of our Lord*

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*Signature*

---

*Witness*

*Sponsored by Theta Chi Omega Chapter of Alpha Kappa Alpha Sorority, Inc.  
Adapted from Coit Community Church, Grand Rapids, Michigan*

## APPENDIX G

**CONTROL GROUP  
PARENT CONSENT FORM**

Your child has agreed to participate in a study which will compare student attitudes toward pregnancy, sexual activity and knowledge of select preconception health issues. Your child will be part of a Control Group, which means she will only be ask to take two tests and complete a Participant (student and family) Profile.

If your child has your permission to participate in this program, please sign below. Have your child sign in the appropriate space and return the form to the church personnel from whom you received this form.

I, \_\_\_\_\_, will participate in this study.

Participant's Signature \_\_\_\_\_ Date \_\_\_\_\_

My child \_\_\_\_\_ has my permission to participate in this study.

Parent/Guardian Signature \_\_\_\_\_ Date \_\_\_\_\_

**NOTE 1: If your child does not want to or does not have your permission, do not return this form.**

**NOTE 2: As a control group participant your child's name can be placed on a contact list to participate should an experimental program be offered in the near future. Please initial here \_\_\_\_\_ if you'd like to be contacted.**

## APPENDIX H

## REFERENCES

## LIST OF REFERENCES

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