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# Effectiveness of the "Baby Think It Over" Program on Adolescents' Contraceptive and Child-Rearing Attitudes

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This research is a product of the graduate program in [School Psychology](#) at Eastern Illinois University. [Find out more](#) about the program.

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Effectiveness of the "Baby Think It Over" Program on  
Adolescents' Contraceptive and Child-Rearing Attitudes.

BY

Stephanie Ann Johnson

1974-

**THESIS**

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1999

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Effectiveness of the “Baby Think It Over” program on  
adolescents' contraceptive and child-rearing attitudes

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Running head: BABY THINK IT OVER

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Abstract

An increasing number of high schools in the United States have begun to use the "Baby Think It Over" doll as part of their curriculum in certain classes. This study examined the effectiveness of this doll on influencing 46 male and female adolescents' attitudes and behaviors regarding pregnancy, sexual activity, and contraceptives. Five specific subscales were developed to measure the teens' contraceptive attitudes and behaviors before and after using the doll regarding their feelings about becoming pregnant, understanding/comprehension of the responsibilities of child-rearing, appreciation of the impact of child-bearing on their lives/future, and attitudes toward premarital sex. Also, a qualitative analysis was conducted on a narrative question which allowed the students to comment on how the doll specifically influenced them. The adolescents' responses indicated that their attitudes on all of the identified subscales did not significantly change after using the doll. Students' responses on the narrative portion indicated that many found the doll to be inconvenient and a responsibility. The doll also appeared to be effective in maintaining and validating previous ideas they had about child-rearing. This study has important implications for practitioners who are attempting to develop effective sex education and child development/parenting curriculum. Limitations of the study and directions for future research are also discussed.

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The high rate of teenage pregnancy in the United States has been of major concern over the past decades. Research has focused on the behavior, attitudes, and knowledge of teenagers in effort to determine which sex education programs are most effective.

Although teenagers are receiving more information from sex education today, teen pregnancy is still a major concern. Many assume that pregnancy rates in the U.S. can be attributed to the fact that teens are engaging in more sexual activity. However, the rates of sexual activity among U.S. teens are not notably higher than the rates in most other countries in Western Europe, yet the incidence of adolescent pregnancy and childbearing in the U.S., especially among younger teens, exceeds the level of other industrial nations (Jones et al., 1985). Therefore, it seems that the more significant problem is that U.S. teenagers are slow to adopt the practice of using contraceptives consistently (Miller & Moore, 1990). It is important to determine why teenagers are not using contraceptives in order to understand what may contribute to a decrease in teen pregnancy rates. Although there have been some estimates that teen pregnancy has actually been on the decline, it continues to be a problem in our country, taking a toll not only on our education and welfare systems, but on teen parents and their children and families.

Teenage pregnancy can have various adverse consequences for the teenager, such as dropping out of school, poor social prospects, early marriage, mental health problems, and health and developmental disorders in both baby and mother (Stevens-Simon, Kelly, Singer, Cox, 1996). Not only is the prevention of teenage pregnancy important because of adverse consequences, but adolescents are generally not cognitively mature enough to be parents. For example, formal operational thinking abilities such as hypothesis testing,

planning, and abstract reasoning are in the process of development during middle adolescence (ages 15-18) and do not generally consolidate until later adolescence (ages 18-22) (Steinberg, 1996). Because many teenagers are not using formal operational thinking, they are not planning or considering the possibility of becoming pregnant and taking on the responsibility of becoming a parent. Similarly, few adolescent parents are adequately prepared to assume the economic, social, and psychological responsibility of child bearing and child care. Most are dependent, at least economically, on their parents until as late as ages 22-23. Because of these concerns with teenage pregnancy, the school environments in recent years have chosen to take on the responsibility of providing teenagers with sex education.

The most traditional sex education method used in classrooms is one of disseminating knowledge. Knowledge is given to students concerning abstinence, sexual anatomy and physiology, sexual development, fertilization, and birth control, all of which reflect biologically-based topics. It is less common that sex education programs include socio-sexual approaches. The literature on the impact of teaching knowledge of sexual development and birth control has been inconsistent. Studies have found that sex education in the schools was related to an increase in students' knowledge about sexuality (Kirby, 1984). Vissen & Van Blisen (1993) found that sex education also was related to effective contraceptive use. Teenagers who have received sex education used more effective contraceptive methods compared with those who had not. However, this study found that there was no relationship between sex education and regular and reliable contraceptive use during adolescence. Therefore, although educational programs on



sexuality and contraception have resulted in an increase in knowledge in some cases, knowledge alone does not seem to be a sufficient condition for attitudinal and behavioral change. This may be especially true for programs which are limited to biological knowledge.

A variety of studies have found no correlation between education and sex outcomes. A study by Parcel, Luttmann, and Flaherty-Zanis (1985) examined the relationships among knowledge about sexual anatomy and physiology, sexual behavior, sexual development, fertilization, and birth control on one hand and students' decision-making processes and attitudes about sexuality on the other hand. No significant correlations were found between the scores on the knowledge questions and attitudes. Kirby (1984) found that virtually no educational program had any effect on social decision-making behaviors, sexual decision making behavior, communication skills, assertiveness, or skills in contraception use. Again, this lack of findings may be attributable to the fact that most sex education programs emphasize biological knowledge only.

The persistently high pregnancy rate among American teenagers suggests that programs simply informing students about sexuality and contraceptives have not been effective in changing behavior. There is still a significant gap between reproductive knowledge, childrearing attitudes, and contraceptive behavior in this population (Stevens-Simon et al., 1996). Results of studies conducted over the last three decades suggest that the delay between initial sexual activity and the initiation of consistent use of reliable contraceptives is one of the most important obstacles to the prevention of adolescent

pregnancy and parenthood in this county (Zabin & Clark, 1981; Zabin & Stark, 1991). It may be that this delay exists in part because many of the pregnancies that are conceived during adolescence are neither entirely unplanned nor unwanted. Studies have suggested that early childbearing is gaining popularity in the country, in part because the relative costs perceived by teens to avoid a pregnancy (medical, economic, social, mechanical problems associated with obtaining and using contraceptives, and drawing attention from family and peers) exceed the costs of childbearing (possible limitations on educational and vocational opportunities and personal freedoms). Many teenagers do not conceive the costs because they lack the foresight and long-term planning in early and middle adolescence to adequately realize and weigh these costs. More than 1 in 3 teenage girls in this country have positive and/or ambivalent feeling about immediate childbearing which may interfere with effective contraceptive use (Stevens-Simon et al., 1996).

For example, a study by Stevens-Simon et al. (1996) questioned 13-18 year old pregnant adolescents regarding why they had not used a contraceptive consistently prior to conception. The most frequently cited reasons for not using contraceptives were "I don't mind getting pregnant" (20%) and "I wanted to get pregnant" (17.5%). Data such as this suggest that many of today's teens do not hold negative attitudes about having babies. Therefore it is not simply negative attitudes toward contraceptives that is the common reason for lack of use of contraceptives among pregnant adolescents (Stevens-Simon et al., 1996). These ambivalent feelings about postponing childbearing may be an even more significant deterrent to regular contraceptive use.

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These adolescents who do not seem to care if pregnancy occurs to them need the motivation to avoid childbearing as much as they need knowledge and access to contraceptive services. A study by Mark Clement Research, Inc. (1997) asked 720 girls age 12-19 what would prevent pregnancy among unwed teens. Ninety-six percent said that having self-respect, being informed about pregnancy, and using birth control are critical to preventing pregnancy. Ninety-six percent also said that the most influential deterrent was "being aware of the responsibility of caring for a child."

It is a great task to create a method that increases adolescents' awareness of the responsibilities of caring for a child. Some schools have used the "potato baby" method or the "egg baby" method, where by students pretend that the potato or egg are actual infants and the students assume responsibility for their care. While these early attempts have begun to teach the responsibility of having a child, the primary experience is just having an object that must be carried around at all times. They still do not teach teenagers the stark realities of caring for an infant. A more realistic method might be more effective. One recent development is the "Baby Think It Over" doll (Jurmain, 1999). This doll weighs seven to ten pounds and contains a computer chip which causes the doll to produce a piercing cry every two to four hours, twenty-four hours a day. The student must then insert a key into the back of the doll and hold it there for ten to thirty-five minutes. This is to simulate the feeding time of an actual child (see method section for a more detailed description of the doll). This doll is not only designed to teach adolescents the responsibility of having a child, but also that a baby takes a lot more than it gives. This doll is currently being used by a myriad of schools and it is becoming a popular

intervention. There is little outcome research on the effectiveness of this approach/intervention though. It is important to know its effects so that schools do not continue blindly to create sex education interventions that lack a data base.

### Description of Study

Because of what appears to be absent in past literature, the current study was designed to evaluate a new method for teaching adolescents about the responsibilities of caring for a child, and how this program affected their feelings, attitudes, and behaviors. The specific research questions that were addressed are: 1) How does the use of the doll affect adolescents' attitudes about becoming pregnant? 2) How are adolescents' contraceptive attitudes and behaviors changed because of the use of the doll? 3) Do adolescents' understanding/comprehension of the responsibility of child-rearing increase after using the doll? 4) Do adolescents understand the impact having a child will have on their current and/or future lives? 5) Do adolescents' attitudes toward premarital sex change after using the doll?

Schools have shown remarkable interest in this doll, despite no theoretical or empirical basis. Although based on the intentions of the doll's creator, it is expected that teens will develop stronger attitudes about not wanting to become pregnant, and that their contraceptive attitudes and behaviors will become more reliable and responsible. They are expected to experience an increased understanding/ comprehension of the responsibilities of both child-rearing and the impact that having a child will have on their lives/future.

Significance of the Study

Through this study, it was determined whether using the “Baby Think it Over” doll had an effect on adolescents’ attitudes and behaviors regarding pregnancy and contraceptives. The primary significance of the outcome lies in the fact that a dramatically increasing number of schools are purchasing this doll without theoretical basis or data to support the doll's effectiveness. The implications for designing effective sex education and teen pregnancy prevention and intervention programs are great.

## Methods

### Participants

Participants were 136 adolescents in the ninth through twelfth grades. However, only 46 of those teens (11 males and 35 females) were available to complete both a pre and post test survey because of unanticipated changes in curriculum. Therefore the following information is presented on only this smaller group. The large majority of students were in the eleventh (17.4%) and twelfth (71.4%) grades. The mean age of the adolescents was 17.2 years (range = 15-19 years) with the majority of the students being 17 or 18 (80.5%). The participants were drawn from three mid-western high schools which currently use the “Baby Think It Over” doll as part of a child development/parenting class. The majority of the adolescents were White (89.1%) while the remaining participants were Nonwhite/Hispanic. Two respondents chose not to indicate their race.

### Materials

The “Baby Think It Over” doll was used with all participants. This doll was realistic, life-sized, and computerized. The doll weighed six and a half to seven pounds and contained a computer chip which caused the doll to produce a piercing cry every two to four hours, twenty-four hours a day. The random, unpredictable crying intervals resembled actual infant crying patterns. The student inserted a key into the back of the doll and held it there for five to thirty-five minutes. The actual feeding time was unpredictable for each time. This was to simulate the feeding time of an actual child and t

he realistic and often unpredictable time demands. The computerized monitoring of the doll measured neglect, rough handling, and head support which reported how well the teen cared for it. The doll was created by Richard Jurmain, an out-of-work aerospace engineer, after observing his children carrying eggs and sacks of flour to simulate caring for babies. He felt that they were a lousy substitute and his wife challenged him to create something more realistic. The doll is produced by the "Baby Think It Over" company in Wisconsin and ranges from \$250 to \$290 per doll (Jurmain, 1999).

### Measures

Due to inadequate existing measures, all measures were created for the purpose of this research (see Appendix A). The demographics section included questions about age, sex, school grade, and race. A 35-item scale was designed to assess adolescents' attitudes and behaviors concerning sexual activity, contraceptives, pregnancy, child-rearing, and future goals. Specific subscales were developed to measure the following:

- 1) contraceptive attitudes and behaviors; 2) feelings about becoming pregnant;
- 3) understanding/comprehension of the responsibilities of child-rearing; 4) appreciation of the impact of child-bearing on their lives/future; and, 5) attitudes toward premarital sex.

These five subscales and the items which comprise them are identified in Appendix B. All 35 items were rated on a five-point scale ranging from "strongly disagree" to "strongly agree." For each subscale, certain items were reversed scored for consistent directionality. Responses were summed and higher total scores represent more liberal views on the sexual attitudes subscale and more desirable behavior on the other four subscales (e.g., greater intention to use birth control, less desire to become pregnant, greater

understanding of the responsibilities of child-rearing, and greater understanding of the impact of teenage child-bearing on their futures). Cronbach alphas for the subscales ranged from .44-.68.

The post-test also included two additional items. The first was the following question: "How has the 'Baby Think It Over' doll specifically affected your attitudes about becoming pregnant at this time in your life?" Respondents indicated their response by endorsing one of the following five answers regarding their perceptions of the doll's impact on them: "It made me totally afraid of having a child now," "I am a little more concerned about becoming pregnant as a teenager," "It did not affect me at all," "I am a little more confident about becoming pregnant as a teenager," and "It made me want to have a baby more than ever." The second additional post-test item was a narrative question which asked the students to explain in their own words how the "Baby Think It Over" doll specifically influenced their attitudes and feelings about becoming pregnant and using contraceptives. These additional items appear in Appendix A as the last page of the questionnaire. Categories were created and the participants' responses were grouped according to the content of each sentence written (see Table 6 in the Results section). Inter-rater reliability was .95 in the assignment of the responses to the categories.

### Procedure

Consent forms were distributed to all participants in order to receive parental permission. All participants completed the questionnaire before their class began to use the doll. The participants were given the chance to use the "Baby Think It Over" doll



over night. The same questionnaire was again given to participants after all the students had an opportunity to use the doll. All teachers were given the same procedure to follow during the study (See Appendix C).

## Results

To examine the degree of change between the pre and post doll measures, a comparison of means was done for each of the five subscales: contraceptive attitudes and behaviors (BC), feelings about becoming pregnant (FP2), understanding/comprehension of responsibilities of child-rearing (UR), appreciation of impact on their lives/future (IF), and attitudes toward premarital sex (SA). For each of the subscales a paired samples t-test was done to compare the means. A comparison of the experimental group's contraceptive attitudes and behaviors before and after using the doll yielded no significant difference ( $p=.087$ ) (see Table 1). The teenagers' feelings about becoming pregnant were not significantly different after using the doll ( $p=.383$ ) (see Table 2). The group's scores on understanding and comprehension of the responsibility of child-rearing were not significantly different after using the doll ( $p=.320$ ) (see Table 3). The teenagers' appreciation for the impact that having a child would have on their lives and future was also measured before and after their use of the doll and a significant difference was not found between these two measures ( $p=.346$ ) (see Table 4). Finally, a comparison of the experimental groups' attitudes about premarital sex before and after using the doll also yielded no significant difference ( $p=.315$ ) (see Table 5). A comparison of the means of the individual items appears in Table 6.

The researchers were originally interested in comparing a control group to the experimental group on the additional post-test items which targeted their perceptions of the doll's impact on themselves. Unfortunately, the control group ( $n=15$ ) was unavailable

during the post-test for reasons beyond the researchers' control. Therefore, pre-post test comparisons were only performed for the experimental group ( $n=46$ ). However, because there were no significant differences between the experimental groups' pre and post test measures, comparison to a control group would likely not have added significant information to the findings. On the impact item that was included on the post test, no age or gender differences were revealed after an analysis of variance was run ( $F=.941$ ,  $df=4$ ,  $p=.444$ ). 13% of the participants responded that after using the doll they were "totally afraid of having a child now." 39.1% felt that they were "a little more concerned about becoming pregnant as a teenager." "No effect at all," was noted by 37% of the teenagers. 6.5% felt "a little more confident about becoming pregnant as a teenager while 4.3% now felt that they wanted "to have a baby more than ever."

A qualitative analysis was conducted on the narrative question which asked the students how the doll specifically influenced their attitudes and feelings about becoming pregnant and using contraceptives. Of the 136 participants, 90 students chose to comment on this question. The number of teens included in this tally is greater than the 46 participants in the experimental group because all teens that used the doll were included in this part of the analysis even if they did not complete a pre-test. Those additional students were used so as many students as possible could be included and a completed pre-test had no bearing on this analysis. Overall, the most frequently endorsed category was related to the inconvenience, cost, and responsibility involved with caring for the doll ( $n=53$ ). A complete listing of the frequencies of each type of comment can be found in Table 7.

Table 1

### Mean Comparisons for Contraceptive Attitudes and Behaviors Between Pre and Post Tests

Variable	# of pairs	Corr	2-tail sig	Mean	SD	SE of Mean
BC POST	45	.802	.000	17.467	2.974	.443
BC PRE				17.932	2.528	.377

Paired Differences					
Mean	SD	SE of Mean	t-value	df	2-tail sig
-.4656	1.784	.266	- 1.75	44	.087
95% CI (-1.001, .070)					





Table 4

### Mean Comparisons of Appreciation for Impact on Their Lives and Future

<u>Variable</u>	# of pairs	Corr	2-tail sig	Mean	SD	SE of Mean
IF POST	45	.664	.000	29.018	4.240	.632
IF PRE				29.476	3.371	.503

<u>Mean</u>	<u>SD</u>	<u>SE of Mean</u>	t-value	df	2-tail sig
- .4578	3.221	.480	-.95	44	.346
95% CI (-1.426, .510)					

Table 5

### Mean Comparisons of Premarital Sex Attitudes

Variable	# of pairs	Corr	2-tail sig	Mean	SD	SE of Mean
SA POST	44	.818	.000	9.955	2.795	.421
SA PRE				9.705	2.548	.384

Paired Differences					
Mean	SD	SE of Mean	t-value	df	2-tail sig
.250	1.630	.246	1.02	43	.315
95% CI (-.246, .746)					



Table 6

Comparison of Means for Individual Items

<u>Item #</u>	<u>Pre-Test Mean</u>	<u>Post-Test Mean</u>	<u>Significance</u>
1	4.86	4.82	NS
2	4.54	4.59	NS
3R	4.57	4.52	NS
4	3.73	3.75	NS
5	4.56	4.34	NS
6	3.63	3.36	NS
7R	2.71	2.84	NS
8R	4.42	4.30	NS
9	4.32	4.46	NS
10	4.47	4.46	NS
11	3.53	3.44	NS
12R	4.15	4.34	NS
13	2.57	2.38	NS
14R	4.29	4.15	NS
15R	2.24	2.23	NS
16	2.68	2.62	NS
17R	4.34	4.41	NS
18R	2.69	2.51	NS
19	1.59	1.63	NS
20	2.53	2.60	NS
21	3.71	3.63	NS
22	3.10	3.45	NS
23	4.37	4.40	.04
24	4.65	4.63	NS
25R	2.90	3.09	NS
26R	3.36	3.35	NS
27R	3.76	3.72	NS
28	3.64	3.80	.05
29	4.19	4.23	NS
30	3.89	4.25	NS
31	3.85	4.15	NS
32	3.84	3.62	NS
33	4.03	3.98	NS
34	4.27	4.02	NS
35R	3.73	4.05	NS

Note: NS = not significant, R = reverse coded for consistent directionality

Table 7

Frequencies of Each of the Comments Made in the Narrative Responses

Category	Frequency of Response	Percent of Total Comments
1	53	39.0
3	1	.7
4	13	9.6
5	1	.7
6	27	19.9
7	24	17.6
8	4	2.9
10	22	16.2
11	4	2.9
96	21	15.4
99	3	2.2

note:  $n=90$ Categories of Narrative Question Responses

- Category 1: comments about the inconvenience, cost, and responsibility involved with babies.
- Category 3: comment that it made the teenager want to have a baby
- Category 4: no influence - not effective in changing my mind
- Category 5: made me feel more mature or confirmed that I am mature enough
- Category 6: supported or influenced desired behaviors (e.g., wanting to avoid getting pregnant early, using contraception, etc.)
- Category 7: the doll was not realistic
- Category 8: mechanical suggestion, e.g., hard to hold, didn't work right, etc.
- Category 10: no influence - I already used protection, didn't have sex, etc.
- Category 11: the doll was fun to have around, loved the experience, etc.
- Category 96: miscellaneous reaction to the doll
- Category 99: miscellaneous suggestions about using the doll.

## Discussion

The main goal of this study was to assess adolescents' attitudes and behaviors concerning sexual activity, contraceptives, pregnancy, child-rearing, and future goals, and specifically to determine how teens' attitudes and behaviors changed after using the "Baby Think It Over" doll. An analysis of the experimental group's responses indicated that their attitudes on all of the subscales did not significantly change after using the doll. The results of this study indicated that the doll had no effect on the teenagers' attitudes and behaviors on the various subscale measures. This suggests that the participants did not benefit from using the doll because their feelings did not significantly change after using the doll. These results were surprising because it was expected that the teens would develop stronger attitudes about not wanting to become pregnant and their contraceptive attitudes and behaviors would become more reliable and responsible. It was also predicted that they would increase their understanding/comprehension of the responsibilities of both child rearing and the impact that having a child would have on their future. However, their attitudes about these various issues remained the same. A difference may not have been found because the teens in the experimental group may already have had desirable attitudes before using the doll. Also, because they were an older group they may have also been educated previously about these issues and the doll alone did not make a difference.

In order to better understand teens' perceptions of how using the doll influenced them, a qualitative review was made of the narrative comments that the teens made. The most common kinds of comments reflected feelings about the inconvenience and

responsibility that was involved with caring for the doll. Other popular responses indicated that the doll did not have an influence on them or only supported existing feelings (e.g., didn't want to get pregnant anyway). It was less common to see comments about enjoying the experience or finding that the doll was fun to take care of. Only one adolescent indicated that the experience made her want to have a baby.

Generally, this analysis of the participants' narrative comments suggests that many of the teenagers did benefit from the experience. For example, the fact that so many students found the doll to be an inconvenience and responsibility indicates that they either developed or maintained realistic ideas about child-rearing. Many students commented that before using the doll, they already had an idea about the responsibilities involved in caring for a child and had decided they were not ready to be parents. The doll validated these feelings for them. Therefore, even though the doll was not effective in changing attitudes overall, it is useful because it may have maintained the ideas that some teens already had. It is important to remember these teens when evaluating a program. Too often we only focus on those adolescents who are identified as "at-risk for teen pregnancy." But we also need to support the adolescents who have good judgment so that they do not go awry and make poor choices. The doll appeared to provide this support to many of the adolescents in the experimental group. Only a slight few purely enjoyed the experience or felt that they were ready to have a child after using the doll.

A discussion of these findings is not complete without consideration of several limitations of this study, though. The most predominant limitation was the relatively small sample size. Also, the sample was mostly homogeneous with the majority of students

being white females. Therefore, this sample cannot be generalized to the population as a whole. Future researchers should consider using a larger sample size that is more diverse to obtain more accurate findings that can be generalized to the population. The amount of exposure the teens had to the doll is another limitation that may have affected the findings. The majority of the population only used the doll for a day. This may have not been a long enough period for the participants to accurately realize the responsibilities of a child. Because they only used it for a short period, the doll may have reinforced their beliefs that having a child to care for is not difficult and in a few cases can be fun. Increasing the exposure time to the doll may provide more significant results in future research studies.

There were also some general characteristics of the sample that may have affected the results and should be taken into consideration by future practitioners. The students in the experimental group were all enrolled in a child development class or parenting class. Because this class is usually an elective, the participants may have chosen to take this course because of an interest in child-rearing. The majority of the sample was also older students (junior and seniors). Therefore, they were probably more likely to have already had experience caring for younger family members or through babysitting. These experiences or interests in child-rearing may have caused the lack of results because the participants may have already been aware of the responsibilities of child-rearing. It would be interesting for future practitioners to analyze both the adolescents' prior experiences with child-rearing and their current desire to have children at that time in their lives. Many of the students in this population already knew before using the doll that they did not want a baby at this time. A more significant effect may be found with students who

feel they are mature and responsible enough to have a baby or have decided they would like to become pregnant, and a comparison of these two types of teenagers would improve our understanding of which variables predict the occurrence of teen pregnancy. Another variable that may effect the doll's effectiveness is what cognitive stage the participants are in. It would be interesting to determine if the doll does not work with students who are in formal operational thinking because the doll is concrete instead of abstract. The doll may have a more significant effect with students who are cognitively immature and require concrete stimuli. Related to this, it is important in any future study to secure a control group to compare the experimental group to. Finally, because only moderately strong internal consistency coefficients resulted, the questionnaire must be revised in order to strengthen the measurement utility of this instrument.

Overall, the results of this study revealed that adolescents' attitudes on all of the subscales did not significantly change after using the doll. Qualitative analysis indicated that the doll appeared to confirm ideas that the adolescents already had. This suggests that although the doll is not the most effective intervention to change adolescents' attitudes, it still may provide some valuable lessons. Various schools around the country who currently use this doll may benefit from knowledge that an experiential approach to teen pregnancy prevention can be beneficial. However, because of the significant cost of buying the dolls (most schools purchase quite a few so that more than one student can experience the doll at the same time) these lessons may not be cost effective. It is important for schools and practitioners to realize that the doll by itself may not be enough. The Baby Think It Over company includes only positive results on

their website, and although the doll is presented as effective, it is important to be cautious about what its specific effects are. Further research should not only consider the aforementioned limitations in this study, but it will be useful to continue to explore what the most beneficial role is for the Baby Think It Over doll in the school curriculum. This knowledge is necessary if practitioners in the school settings are to have an accurate expectation of the doll's utility.

## References

- Jones, E., Forrest, J., Goldman, N., Henshaw, S., Lincoln, R., Rosoff, J., Westoff, C., & Wulf, D. (1985). Teenage pregnancy in developed countries: Determinants and policy implications. Family Planning Perspective, 17(2), 53-63.
- Jurmain, M. (1999). The original computerized infant simulator, invented by a "rocket scientist." Information retrieved from the World Wide Web on July 7, 1999 (<http://www.btio.com/btiohist.html>).
- Kirby, D. (1984). Sexuality education: an evaluation of programs and their effects. Santa Cruz: Network Publications
- Mark Clement Research, Inc. (1997, February 2). What Teenage Girls Say About Pregnancy. Parade Magazine, 4-5.
- Miller, C. & Moore, K. (1990). Adolescent sexual behavior, pregnancy, parenting: Research through the 1980's. Journal of Marriage and Family, 52, 1025-1044.
- Parcel, G., Luttmann, D., Flaherty-Zanis, C. (1985). Development and evaluation of a sexuality education curriculum for young adolescents. Journal of Sex Education Therapy, 11, 38-45.
- Steinberg, L. (1996). Adolescence (4th ed). New York, NY: McGraw-Hill, Inc.
- Stevens-Simon, C., Kelly, L., Singer, D., & Cox, A. (1996). Why pregnancy adolescents say they did not use contraceptives prior to conception. Journal of Adolescent Health, 19, 48-53.
- Visser, A. & Van Bilsen, P. (1993). Effectiveness of sex education provided to adolescents. Patient Education and Counseling, 23, 147-160.



Zabin, L., & Clark, S. (1981). Why they delay: A study of teenage family planning clinic patients. Family Planning Perspectives, 13, 205-217.

Zabin, L., & Stark, H. (1991). Reasons for delay in contraceptive clinic utilization: Adolescent clinic and non-clinic populations compared. Journal of Adolescent Health, 12, 225-232.

Baby Think It Over 31

Appendix A

## Baby Think It Over 32

As stated in the consent form you signed, please be assured that all of your answers to everything in this questionnaire will be kept completely confidential. The specific details you will be asked are for research purposes only. When you turn in this questionnaire, it will go into an envelope with all of the others and you will never be able to be identified. So please answer these questions thoughtfully and honestly. Some of the questions may feel quite personal, but please be honest, try to answer everything, and remember that this is all completely anonymous. Thank you very much for helping me with my project; I am very grateful!

### BACKGROUND INFORMATION

1. Age: \_\_\_\_\_
  2. Birth date: \_\_\_\_/\_\_\_\_/\_\_\_\_
  3. Gender: \_\_\_\_male \_\_\_\_female
  4. School grade: \_\_\_\_9th \_\_\_\_10th \_\_\_\_11th \_\_\_\_12th
  5. Race/Ethnicity: \_\_\_\_African-American/Black  
                               \_\_\_\_Asian-American/Pacific Islander  
                               \_\_\_\_Native American
- \_\_\_\_White/Non-Hispanic  
 \_\_\_\_White/Hispanic  
 \_\_\_\_Other\_\_\_\_\_

Please use the following scale to answer the statements on how you think, feel, and/or behave

1 = strongly disagree with the statement
2 = disagree with the statement
3 = not sure
4 = agree with the statement
5 = strongly agree with the statement

	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
1. Finishing high school is important to me.	1	2	3	4	5
2. I believe that having a child would make it harder for me to graduate high school	1	2	3	4	5
3. I would like to become pregnant/ I would like my girlfriend to become pregnant	1	2	3	4	5
4. It would be awful if I (my girlfriend) got pregnant	1	2	3	4	5
5. I have learned how to use contraception to avoid pregnancy.	1	2	3	4	5
6. I believe that having sex before marriage is O.K.	1	2	3	4	5

## Baby Think It Over 33

	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
	1	2	3	4	5
7. If I were pregnant, I would get married.					
8. My life would not change if I became pregnant.	1	2	3	4	5
9. I am planning on furthering my education after high school.	1	2	3	4	5
10. I believe that having a child would make it harder for me to attend college.	1	2	3	4	5
11. I believe it is O.K. for unmarried teenagers to have sexual intercourse if they use birth control.	1	2	3	4	5
12. Condoms are a hassle to use and I would rather not use them.	1	2	3	4	5
13. If I were pregnant, I would be able to care for my child myself.	1	2	3	4	5
14. I think it would be fun to have a baby now.	1	2	3	4	5
15. It would be exciting to have a child now, but I definitely want to wait.	1	2	3	4	5
16. I believe that I am responsible enough to be a parent	1	2	3	4	5
17. I am financially secure enough to be a parent now.	1	2	3	4	5
18. I do not know enough about being a parent at this time.	1	2	3	4	5
19. I do not like children and do not ever plan to have them.	1	2	3	4	5
20. If I were to have a baby, then there would be someone who would love me.	1	2	3	4	5
21. I think it would be harder for me to find a future husband/wife if I had a baby.	1	2	3	4	5
22. With all the problems of possible pregnancy and the dangers of AIDS and other STD's, it just does not make sense for teenagers to have sex before they are married.	1	2	3	4	5

## Baby Think It Over 34

	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
23. It is very important to me to use contraceptives to protect myself from pregnancy.	1	2	3	4	5
24. It is very important to me to use contraceptives to protect myself from sexually transmitted diseases.	1	2	3	4	5
25. If I were to become pregnant, I would be able to provide my child with a stable and enriching environment.	1	2	3	4	5
26. I would still have a good marriage and family life if I had a child as a teenager.	1	2	3	4	5

Please answer the following questions if you are currently in a relationship.

27. I think that having a baby would bring my boyfriend/girlfriend and me closer.	1	2	3	4	5
28. I have discussed with my boyfriend/girlfriend what we would do if pregnancy occurs.	1	2	3	4	5
29. I find it easy to talk with my boyfriend/girlfriend about contraceptives.	1	2	3	4	5

Please answer the following questions if you are currently sexually active.

30. I always use some type of contraceptive when having sexual intercourse.	1	2	3	4	5
31. Becoming pregnant is a concern of mine.	1	2	3	4	5
32. Getting an STD is a concern of mine.	1	2	3	4	5

Please answer the following questions if you are not currently sexually active.

33. I have chosen not to be sexually active because I am concerned that I may become pregnant.	1	2	3	4	5
34. I have chosen not to be sexually active because I am concerned about sexually transmitted diseases.	1	2	3	4	5
35. The only reason I am not sexually active now is because I do not have a boyfriend/girlfriend.	1	2	3	4	5

I think that I would like to have my first child ~~when~~ I am \_\_\_\_\_ years old.

## Baby Think It Over 35

How has the "Baby Think It Over" doll specifically affected your attitudes about becoming pregnant at this time in your life? ( please check one)

- ☐ It has made me totally afraid of having a child now.
- ☐ I am a little more concerned about becoming pregnant as a teenager.
- ☐ It did not affect me at all.
- ☐ I am a little more confident about becoming pregnant as a teenager
- ☐ It made me want to have a baby more than ever.

Please use the following space (and the back , if needed) to explain in your own words how the "Baby Think It Over" specifically influenced your attitudes and feelings about becoming pregnant and using contraception.

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Baby Think It Over 36

Appendix B

### Items grouped into each subscale

#### Feelings About Becoming Pregnant

3. I would like to become pregnant (my girlfriend to become pregnant).
4. It would be awful if I (my girlfriend) got pregnant.

#### Contraceptive Attitudes and Behaviors

5. I have learned how to use contraceptives to avoid pregnancy.
12. Condoms are a hassle to use and I would rather not use them.
23. It is very important to me to use contraceptives to protect myself from pregnancy.
24. It is very important to me to use contraceptives to protect myself from STD's.

#### Understanding/Comprehension of Responsibility of Child-Rearing

14. I think it would be fun to have a baby now.
15. It would be exciting to have a child now but I definitely want to wait.
17. I am financially secure enough to be a parent now.
18. I do not know enough about being a parent at this time.
19. I do not like children and do not ever plan to have them.
25. If I were to become pregnant, I would be able to provide my child with a stable and enriching environment.

#### Appreciation for Impact on Their Lives/Future

1. Finishing high school is important to me.
2. I believe that having a child would make it harder for me to graduate high school.
8. My life would not change if I became pregnant.
9. I am planning on furthering my education after high school.
10. I believe that having a child would make it harder for me to attend college.
22. With all the problems of possible pregnancy and the dangers of AIDS and other STD's, it just does not make sense for teenagers to have sex before they are married.
26. I would still have a good marriage and family life if I had a child as a teenager.

#### Attitudes Toward Premarital Sex

3. I believe that having sex before marriage is O.K.
4. If I were pregnant, I would get married.
5. I believe it is O.K. for unmarried teenagers to have sexual intercourse if they use birth control.
6. If I were pregnant, I would be able to care for my child myself.



Baby Think It Over 38

## Appendix C

**Please follow the procedure below in distributing material. ( Pre-Test)**

1. Pass out consent forms to all students in your class. I have enclosed a letter to both the student and the parent with the form to hopefully answer any questions they may have. I would appreciate if you would encourage your students to be a part of the study and emphasis that everything is anonymous.
2. The day before introducing the doll to your class, take a few minutes to have the students fill out the questionnaire (only those who signed consent). I wrote in the letters that this would take less than 25 minutes. I think it should actually only take about 10 minutes. Then, read the following aloud to your class.

I need you to hand out the questionnaires in alphabetical order, or how you have names listed in your grade book, or any method which you can remember the order. This is to ensure that when you hand out the questionnaire the second time, the same number will go to the same person. This is so individual differences in attitudes can be assessed and not simply the group as a whole. Their name will still not be known.

- **Read aloud to class:**

I have handed out a survey that was designed by Stephanie Johnson, a school psychology student at Eastern Illinois University. Stephanie is in her final year of graduate school and is working on completing her thesis study which is examining adolescent's attitudes and behavior regarding various issues.

She asks you to please answer each question seriously and thoughtfully. She would also like to assure you that this is a completely anonymous questionnaire and your name will at no time be known. If you feel uncomfortable answering any of the question though, it is O.K. to skip those. Stephanie is very appreciative of your participation and thanks you for your help in her study.

Now, lets read together the top paragraph on you questionnaire

Dear Student:

As stated in the consent form you signed, please be assured that all of your answers to everything in this questionnaire will be kept completely confidential. The specific details you will be asked are for research purposes only. When you turn in this questionnaire, it will go into an envelope with all of the others and you will never be able to be identified. So please answer these questions thoughtfully and honestly. Some of the questions may feel quite personal, but please be honest, try to answer everything, and remember that this is all completely anonymous. Thank you very much for helping me with my project; I am grateful!

- **Place the envelope on the desk, table, or other appropriate area at the front of the room.**
- **Return the enclosed envelope to me with the finished questionnaires and consent forms.**

You may notice that in both the parent and student letters, I have titled my thesis topic differently. I have done this so students do not know that is the use of the doll is what I believe will cause a variation in their second answers. **Please do not let the students or parents know that I am looking at the effects of the "Baby Think it Over" program on their attitudes until after the second questionnaire has been filled out.**

**Please follow this procedure in distributing materials (Post-Test)**

1. After all students in your class have used the doll, take a few minutes to have the students fill out the questionnaire. Please hand out the questionnaires in the same order that you chose to do it the first time. This will ensure that students will be compared with the same information they had supplied before using the doll. You can remind students of when they filled out the questionnaire before. It is O.K. to explain that they are being asked to fill out the questionnaire again to see if any of their feelings have changed since then.
2. Have students return completed questionnaires to the supplied envelope and have them pick up a debriefing statement.
3. Return the enclosed envelope to me with the finished questionnaires.