

**THE VALIDITY OF USING A SIMULATED BABY
AS PART OF A SEX EDUCATION PROGRAMME**

V. Freir

Doctorate in Clinical Psychology

The University of Edinburgh

2001





CONTENTS

	Page
LIST OF FIGURES	v
LIST OF TABLES	vi
ACKNOWLEDGEMENTS	viii
DECLARATION	ix
ABSTRACT	x
CHAPTER 1 INTRODUCTION	1
1.1. The definition of teenage years	1
1.2. Social changes that have had an effect on the teenage years	4
1.3 Current theoretical thinking	6
1.3.1 <i>Ecological Theory of Human Development</i>	6
1.3.2 <i>Developmental Contextualism</i>	9
1.3.3 <i>The Focal Model</i>	11
1.3.5 <i>Adolescence as a time of “transitions”</i>	13
1.4 Cognitive development	14
1.5 Teenage sexuality	18
1.6 Pregnancy rates	23
1.7 Teenage parenthood	26
1.7.1 <i>Risk factors</i>	30
1.8 Sex education	34
1.9 Background to the present study	37
1.9.1 <i>New Community Schools</i>	38
1.9.2 <i>The role of Clinical Psychology</i>	40
1.9.3 <i>The Healthy Relationships course</i>	41
1.9.4 <i>Baby Think It Over (BTIO)</i>	42
1.10 Main aims and hypotheses of the present study	46
CHAPTER 2 METHOD	49
2.1 Design	49
2.1.1 <i>Approval for this study</i>	49
2.2 Participants	50
2.2.1 <i>Recruitment</i>	50
2.3 Assessment measures	52

	Page
2.3.1 <i>The Culture-Free Self-Esteem Inventories for Children, Second Edition (CFSEI-2 Form A)</i>	52
2.3.2 <i>Locus of Control Scale for Children (LCSC)</i>	53
2.3.3 <i>Sexual Health Questionnaire showing demographic information, sexual knowledge and sexual attitudes</i>	53
2.3.4 <i>The Baby Think It Over (BTIO)</i>	56
2.4 Procedure	58
2.5 Analysis of data	60
2.5.1 <i>Participant confidentiality</i>	60
2.5.2 <i>Data analysis</i>	61
CHAPTER 3 RESULTS	62
3.1 Data analysis	62
3.2 Demographic data from the experimental (BTIO) group and the control group	64
3.3 Perceived ability to look after a baby	65
3.3.1 <i>BTIO group</i>	65
3.3.2 <i>Control group</i>	65
3.4 Self-esteem	66
3.4.1 <i>BTIO group</i>	67
3.4.2 <i>Control group</i>	67
3.4.3 <i>General self-esteem for the BTIO group</i>	68
3.4.4 <i>General self-esteem for the control group</i>	69
3.4.5 <i>Social self-esteem for the BTIO group</i>	70
3.4.6 <i>Social self-esteem for the control group</i>	70
3.4.7 <i>Academic self-esteem for the BTIO group</i>	72
3.4.8 <i>Academic self-esteem for the control group</i>	72
3.4.9 <i>Parental self-esteem for the BTIO group</i>	73
3.4.10 <i>Parental self-esteem for the control group</i>	74
3.5 Locus of control	75
3.5.1 <i>Locus of control scores for the BTIO group</i>	75
3.5.2 <i>Locus of control scores for the control group</i>	75
3.6 Assessing amount of change	77
3.7 Descriptive data from the sexual health questionnaire	79
3.7.1 <i>Thoughts on the future</i>	79
3.7.2 <i>Alcohol</i>	81

	Page
3.7.3 <i>Discussing contraception</i>	81
3.7.4 <i>Condoms</i>	84
3.7.5 <i>Sex education</i>	86
3.7.6 <i>Attitudes to sex and the use of condoms</i>	87
3.7.7 <i>Responsibility for making sure contraception is used</i>	87
3.7.8 <i>Knowledge of contraception and sexual matters</i>	88
3.7.9 <i>Qualitative comments</i>	90
3.7.10 <i>Honesty and accuracy</i>	90
3.8 The Baby Think It Over Questionnaire	91
3.8.1 <i>Caring for the Baby Think It Over</i>	91
3.8.2 <i>Changing opinions</i>	92
3.8.3 <i>The Parents evaluation</i>	92
3.9 Structured interviews with participants	93
3.10 Interviews with teachers	94
3.11 Summary of findings	96
CHAPTER 4 DISCUSSION	100
4.1 Summary of this study	100
4.2 Perceived ability to look after a baby	101
4.3 Self-esteem	102
4.4 Locus of control	106
4.5 Descriptive data	108
4.5.1 <i>Drinking habits</i>	108
4.5.2 <i>Ability to use a condom properly</i>	111
4.5.3 <i>Sex education</i>	111
4.5.4 <i>Peer sexual relationships</i>	113
4.5.5 <i>Qualitative data from the sexual health questionnaire</i>	113
4.5.6 <i>Suggestions for making the BTIO experience more meaningful</i>	114
4.6 Teachers' interviews	114
4.7 Limitations of the study, and suggestions for further research	119
4.7.1 <i>Power</i>	119
4.7.2 <i>The sample</i>	120
4.7.3 <i>The Baby Think It Over</i>	124

	Page
4.8 Contribution of this study	126
REFERENCES	128
Appendix 1: Letter to parents and consent form for parents and pupils in the BTIO group	136
Appendix 2: Letter to parents and consent form for parents with children in the control group	139
Appendix 3: Culture-Free Self-Esteem Inventory – 2 nd Edition Form A	141
Appendix 4: Locus of Control Scale for Children	143
Appendix 5: Sexual health questionnaire showing demographics, sexual knowledge and sexual attitudes	146
Appendix 6: Follow-up sexual health questionnaire showing sexual knowledge and sexual attitudes	154
Appendix 7: Baby Think It Over Student Handbook	163
Appendix 8: Baby Think It Over student pack	171
Appendix 9: Tables showing the results of questions about sex education	179
Appendix 10: Tables showing the results of questions about attitudes towards sex and contraception	183
Appendix 11: Tables showing the results of questions about knowledge of sex and contraception	191
Appendix 12: Tables showing the results of questions about honesty and accuracy	196
Appendix 13: Responses to questions from the Baby Think It Over questionnaire: thoughts about caring for the BTIO	198
Appendix 14: Responses to questions from the Baby Think It Over questionnaire: whether opinions changed due to using the BTIO	201
Appendix 15: Responses to questions from the Baby Think It Over questionnaire: parents' thoughts	203
Appendix 16: Excerpts from interviews with pupils post BTIO	205
Appendix 17: Excerpts from interviews with pupils at follow-up	208

Appendix 18: Excerpts from interviews with teachers post BTIO	211
Appendix 19: Excerpts from interviews with teachers at follow-up	215

LIST OF FIGURES

	Page
Figure 1.1 The focal model showing the pattern of peaks and troughs, which represents a different challenge, issue or relationship	11
Figure 1.2 Teenage pregnancy rates, 1990 – 1998, by age group at conception	25
Figure 3.1 Showing the reported drinking habits of the BTIO group	82
Figure 3.2 Showing the reported drinking habits of the control group	82

LIST OF TABLES

	Page
Table 1.1 Teenage pregnancies by year and age of mother at conception:1990-1999	25
Table 3.1 Age ranges of groups	64
Table 3.2 Showing demographics of the groups	64
Table 3.3 Summary of the results for the rating of ability to look after a baby	66
Table 3.4 Summary of the results of the self-esteem scores	68
Table 3.5 Summary of the results of the general self-esteem scores	69
Table 3.6 Summary of the results of the social self-esteem scores	71
Table 3.7 Dunn's Multiple Comparisons Post Hoc Test on the BTIO group's social self-esteem scores	71
Table 3.8 Summary of the results of the academic self-esteem scores	73
Table 3.9 Dunn's Multiple Comparisons Post Hoc Test on the BTIO group's academic self-esteem scores	73
Table 3.10 Summary of the results of the parental self-esteem scores	74
Table 3.11 Summary of the results of the locus of control scores	76
Table 3.12 Dunn's Multiple Comparisons Post Hoc Test on the BTIO group's locus of control scores	76
Table 3.13 Summary of whether there are differences between groups in the amount of change from pre BTIO to post BTIO	78

	Page
Table 3.14 Summary of whether there are differences between groups in the amount of change from pre BTIO to follow-up	78
Table 3.15 Showing how many subjects in the BTIO group answered that were very likely or likely to be doing the following in 2 years time	80
Table 3.16 Showing how many subjects in the control group answered that were very likely or likely to be doing the following in 2 years time	80
Table 3.17 Showing how many from the BTIO group would feel happy discussing contraception with various people in their lives	83
Table 3.18 Showing how many from the control group would feel happy discussing contraception with various people in their lives	83
Table 3.19 Numbers of the BTIO group replying “unsure” or “difficult” when asked the question “How easy or difficult would it be for you to....”	85
Table 3.20 Numbers of the control group replying “unsure” or “difficult” when asked the question “How easy or difficult would it be for you to....”	85

ACKNOWLEDGEMENTS

The author would like to thank Ruth Thomson, Celina Kelley and Dave Peck for their supervision and support. She would also like to thank very much the pupils and teachers at Inverness Royal Academy who took part in this study, especially Ron MacKay and Callum Mackintosh, for their help in recruiting participants and administration of the Baby Think It Over; also Health Promotion Department, Highland Health Board, in particular Susan Birse, for loan of all equipment for this study. Thanks also go to Candace Currie, Roger Ingham and Daniel Wight for giving permission for use of all or parts of their questionnaires, and their encouragement and support. In addition, thanks go to Louise Blackmore, Kate Charlesworth, Nick Coote, Joyce Ferne, Gordon Hastie, Chrissy Munro, Vanessa Nias, Loren Scott-Lodge and Anne Woodhouse for their practical help and support. Finally the author would like to thank her partner, John Richmond, and her children, Finlay Freir and Dougal Freir, without whom there would never have been a beginning, let alone an end.

“This thesis has been composed by myself and the work contained herein is my own”

Signed:

V. Freir

ABSTRACT

Rates of teenage pregnancy in Scotland for those under the age of sixteen, have not fallen significantly over the past ten years. Teenage pregnancy is associated with depression, low self-esteem, poverty and low achievement at school. Research also suggests that it leads to poorer physical and mental health outcomes, not only for the teenage parent, but also for their offspring (Coley & Chase-Lansdale, 1998; Jessor, Turbins & Costa, 1998; Nitz, 1999; Trad, 1999). In order to address teenage pregnancy, sex education is taught in all secondary schools. Research suggests that teenagers want sex education, which includes effective methods of increasing self-esteem and confidence, as well as factual information (Burns, 1999; Coleman & Hendry, 1999; Meyrick & Harris, 1994). Recently, simulated babies have been produced, with the explicit idea of being used within the context of sex education classes. However, there is a paucity of research on this as an effective tool, and research that has been conducted has not been done within the context of sex education (Hart, Cochrane & Quinn, 2000; Kralewski & Stevens-Simon, 2000; Price, 2000; Strachan & Gorey, 1997).

This study aimed to examine whether a simulated baby was an effective tool in the context of a sex education class, for fourteen year old pupils, in a secondary school in Inverness, Scotland. An experimental group was compared with a control group

using a sexual health questionnaire, which was constructed for the purpose, the Culture-Free Self-Esteem Inventory – 2nd Edition (CFSEI-2, Form A), and the Locus of Control Scale for Children (LCSC). Interviews were also conducted. Data were collected at three data collection points: prior to the study taking place, after the study, and at a nine month follow-up. Quantitative data showed little statistical significance, however qualitative data showed interesting results. Results are presented and discussed, and conclusions are drawn.

Teenage pregnancy rates are of major concern to government, with rates of pregnancy for this age group in Scotland, being one of the highest in Western Europe (Scottish Executive, 2000). These rates have not fallen significantly over the past ten years (NHS Information & Statistics Division, 2001), and yet sex education is provided by all secondary schools in Scotland, to try and address this.

In order to understand current thinking on this problem, it is first important to understand the nature of being a teenager and how this has changed over the last half century. This introduction will address the current theoretical thinking on the teenage years, before discussing teenage sexuality, current pregnancy rates and the research which addresses this. Finally, this introduction will look at the present study and the contribution that it makes to sexual education, and end with a presentation of the hypotheses.

1.1. The definition of teenage years

The term “teenager” has been used synonymously with the term “adolescence”. However, the teenage years are defined by age rather than by social roles, and do not necessarily take in the scope of the whole of the adolescent period, therefore

the teenage years are part of adolescence, not adolescence in itself. When discussing teenage pregnancy for example, it has to be taken in the context of part of the adolescent period (Muuss, 1996). This introduction will now look at what the term “adolescence” means in order to understand how the teenage years fit into the picture.

In modern society, adolescence is generally understood as the transitional period between childhood and adulthood. Changes during this period are not purely in reproductive ability and the obvious physical changes that go with this, there are also cognitive changes, which allow for more complex thought which includes abstract reasoning ability (Kendall, 2000).

Adolescence is also seen as a time of changing social roles. It is during this period that the young person changes from one whose parents are responsible for them, to a state where they themselves become prepared to take on the responsibility of occupation, mature social roles and relationships (Muuss, 1996).

Adolescence is usually understood to begin at puberty, which is a biological marker for young people. Bodies change and mature. Puberty for girls is usually seen as the onset of menstruation, and for boys the growth of pubic hair, and both

sexes go through growth spurts at this time. Growth spurts are different for males and females, with the average age for this starting being around age twelve for males and ten for females. The end of the pubertal stage is also different for males and females, with the average age for males being around sixteen or seventeen, with females being two years earlier (Coleman & Hendry, 1999).

There is debate currently as to whether or not puberty is starting at a younger age. Research from the 1970's looked at this issue and found that, since 1850, there has been a marked downward trend in the onset of puberty, which is estimated at approximately four months per decade (Tanner, 1978). Currently, the debate is still not resolved, as research suggests that there has been little change in the rate of onset of puberty defined by the start of the menarche, in the late twentieth century (Coleman & Hendry, 1999).

Coleman & Hendry (1999) cite results from a study in North America which showed that, although the rates of actual onset of menstruation showed no difference, if other biological phenomena such as breast bud development are taken into account, then it substantiates the view that puberty is starting earlier than in the 1970's. Anecdotal evidence would also suggest that indeed puberty does start at a younger age.

The end of adolescence, however, is usually defined not by biological criteria, but by social criteria, such as leaving home, marriage, having one or several children, being able to be individually financially viable and fulfilling different social roles than that of the adolescent.

Thus we have a picture of the teenage years as being part of adolescence, which is defined by age criteria. Research suggests that adolescence has changed over the last half century, with the earlier onset of puberty, which means that sexuality in the teenage years is also going to be affected.

1.2. Social changes that have had an effect on the teenage years

Changes in society, specifically in the Western world, have had a marked effect on the teenage years. Many of the goals of growing up have shifted so that independence is not completed by the end of the teen years, but appears to carry on well into the twenties, and in some circumstances for even longer.

Markers such as gaining employment, becoming financially viable and leaving home are no longer an absolute for young people. They are encouraged by government to stay on in education, or join a government pre-employment scheme,

which tends to mean that young people are not financially able to set out on their own, but are tending to stay on with their parents (Coleman & Hendry, 1999).

Coleman & Hendry (1999) and Maynard (1995) also point out that the labour market has changed. Jobs have been created which allow more women to become employed, and they are actively encouraged to do this. This has meant that the job market itself has totally changed, and work is not a prerogative of men. This has had a knock-on effect in the amount of jobs available for school-leavers. Thus more teenagers are staying on in education, if not actually in schools, then going to college or into various Government run job seekers schemes.

The structure of the family has altered, with attitudes to marriage and childbearing having changed. In the late twentieth and into the twenty first century no longer is the single parent the pariah of society. Many children now come from single parent families, or families that choose to have their children out of wedlock, with marriage no longer being seen as the necessity to childbearing that it was in the middle of the twentieth century. This in turn will affect those children born into this type of family, which in turn will have influence on them as they turn into teenagers (Coleman, 1978; Corcoran, 1999; Maynard, 1995).

1.3. Current theoretical thinking

The attempt to apply a generalistic view of teenagers, is no longer in favour (for an overview of all theories of teenage years and adolescence see Muuss, 1996). Previous theoretical viewpoints did not take into account the changing nature of society, and the impact that it had on the teenage period, and there has been a radical shift, towards a greater understanding of the impact that context plays during this phase of life (Muuss, 1996). Therefore this introduction will concentrate on four current theoretical standpoints, which do take this into account: ecological theory, developmental contextualism, the focal model and adolescence as a time of transitions. The two former being lifespan theories, that concentrate on the teenage years as just another period of human development, with the latter two being theoretical views of adolescence, which encompass the teenage years.

1.3.1. Ecological Theory of Human Development

Bronfenbrenner (1979) was one of the first to take into account that the relationship between the person, their environment and the social context within which individuals live, must be part of any theoretical framework. Thus he suggests, that any attempt to research human development must be conducted in context, and not in the traditional research environments or the confinements of the laboratory. He

suggests that the laboratory puts constraints on the person and is a context in its' own right, which influences the very behaviour that is being researched.

Evidence for this is cited from Sroufe (1970), where the father-infant interaction was under investigation, and lower-class families found the situation more anxiety provoking than did middle-class families. The results showed a significant difference between the two, which the researchers attributed to the controlled setting of the laboratory.

Bronfenbrenner puts forward that life is dynamic, not static, and environment is the same. He attributes much of his thinking to Kurt Lewin, who suggested that there is an interactive process in behaviour. Lewin (1951) conceptualised this process as a formula (behaviour (B) is a function (f) of the person (P) and their environment (E): $B=f(PE)$).

Bronfenbrenner, however, suggests that behaviour has to be a function of growth and development within the environment of that individual, thus development is not the same as behaviour. As the developmental process (D) is dynamic, it is also affected by the time (t) when the behaviour i.e. the developmental outcome, is

being observed, and also the period (p) when person and environment are interacting. Therefore, Bronfenbrenner changes Lewin's equation in order to take account of these variables, and says that $Dt = f(t-p) (PE)$, which allows for personal characteristics, such as memory and intelligence, and environmental context, to have an equal say in the developmental process.

Bronfenbrenner takes not just the immediate environment as being important to the understanding of the developmental process, but also the wider social spheres that an individual is part of. He conceptualises this as four ecological systems: 1) the microsystem, which is the immediate social and emotional circle. 2) the mesosystem, which encompasses the wider social circle, within which the several personal microsystems interact e.g. school or church. 3) the exosystem, which encompasses the wider social context in which the mesosystems interact e.g. Board of Education and Local Government. 4) the macrosystem, which Bronfenbrenner (1993) suggests are the powerful and pervasive influences that direct the society in which an individual interacts e.g. the Government and the media. Thus the teenage years must be understood by accounting for the micro, meso, exo and macrosystems, within which teenage development takes place.

1.3.2. Developmental Contextualism

Lerner (1985) has taken this perspective and added a further principle, which is that individuals have input into shaping their own development, thus being “active agents” (Coleman & Hendry, 1999, p. 13). So it is not only environment and development, but according to Lerner, also the choices that an individual makes within the context of their development and their environment, that creates the specific context in which an individual’s life is played out. Thus it becomes clear that development is not a simple biological process, nor is it just a learning process, but a complex interaction of many factors that need to be taken into consideration.

An example of this is the teenager within the family context. A teenager is part of the family, which can be made up of different members e.g. father, mother, siblings, grandparents. These all impact upon one another and create a context within which the teenager develops. How they cope with their life depends on how a family interacts. The family interaction could have a negative or positive effect, depending upon the relationships that surround that teenager, and their own behaviour within those interactions.

Lerner (1985), just like Bronfenbrenner (1993), looks at the wider social context within which an individual develops. Socioeconomic and environmental factors also play an important part. Going back to the above example, a teenager who comes from a large family in an urban neighbourhood, is possibly going to have different influences than a similar teenager, with a similar family who lives in rural isolation. Thus it becomes apparent that developmental contextualism does not just take context as meaning the “associated surroundings, setting” (Macdonald & Kirkpatrick, 1987. p. 149), but takes into account social influences and physical influences as well. Lerner, like Bronfenbrenner, also sees development as influenced by, but also influencing the context, and that the context is forever changing within itself (Lerner, 1985).

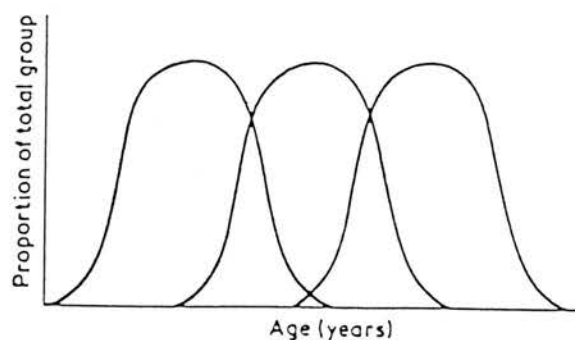
Another principle that Lerner (1985) puts forward to be an important consideration of development, is the notion of ‘goodness of fit’. What Lerner means by this is, that behaviour is an outcome that can be either adaptive or maladaptive. This outcome depends on how well the personal characteristics of an individual, and their physical, social and environmental context fit together, i.e. an adaptive outcome is dependent on a good fit between these systems.

1.3.3. The Focal Model

Both adaptation and the idea of active agency are taken a stage further in the focal model (Coleman, 1978). Coleman found that young people who, during the teenage years, have to face many challenging situations, are on the whole able to cope. He found that they are able to focus their attention on different concerns at different stages. Thus he sees this period as a pattern where peaks represent as a focus of attention on challenges, issues or relationships (see Fig.1.1).

What Coleman suggests is that those who focus on one 'peak' at a time, and choose to focus purely on that, will be able to deal with whatever that represents. However, if a young person's 'peaks' overlap to such a degree, that their focus of attention is on more than one, or on many 'peaks' at one time, e.g. moving home, moving school, entering into a new relationship, then this might be too much for them to deal with, and consequently problems may arise.

Figure 1.1. The focal model showing the pattern of peaks and troughs, which represents a different challenge, issue or relationship. *Source:* Coleman & Hendry (1999).



Research into teenage coping has resulted in agreement with the focal model.

Coleman & Hendry cite studies comparing teenagers in New Zealand and United States of America, which showed that different concerns did indeed peak at different times, and research from Belgium which showed comparable results.

Research in America looked at whether young people's academic performance was affected by them focusing on more than one concern at one time. Results showed poorer academic performance and lower self-esteem for those who had more concerns to focus on, than their peers who focused on one concern (Simmons & Blyth, 1987).

However, this model is not without its' critics, and Dohrenwend & Dohrenwend (1974) suggest that it is just a theory of life events. Life events theory conjectures that if a person has more concerns to deal with at a time, then there is increased likelihood of stress. However, this seems to have missed one major difference between life events theory and the focal model, which is that the focal model stresses that it is personal agency, i.e. how a young person chooses to focus on their concerns, that makes the difference.

1.3.4. Adolescence as a time of 'transitions'

Graber & Brooks-Gunn (1996), have built upon the ideas of focal theory and developmental contextualism and suggest that adolescence (which encompasses the teenage years) is actually a series of transitions that require new modes of adaptation.

Transitions are biological, psychological and social. Each transition involves the feelings and thoughts regarding that transition. These include looking forward to the future, feeling a loss for the stage that has just past, feeling anxious regarding the future, coming to terms with the psychological adjustments, and feeling a degree of ambiguity about status during the transition. Graber & Brooks-Gunn also explain these transitions as being characterised by developmental challenges, which they see as being relatively universal.

Graber & Brooks-Gunn (1996) suggest that if a teenager has key developmental moments, such as changing school, moving home away from friends, or becoming pregnant, then these turning points within a transition may be more problematic for an individual. This can be especially so if the following factors, which are similar to the focal model, are to the fore: if these turning points create additional stress;

when simultaneous events occur so that the young person has much to cope with at one time; when there is a lack of 'goodness of fit' between the context and the person during transitions, for example a young person who is particularly academic being in a poor school environment; and if there are mental health issues at stake, which need to be negotiated at the same time as these turning points.

Current theoretical thinking into the teenage years has shown that contextual factors are important (Bronfenbrenner, 1979; Lerner, 1985), as are the concept of key developmental moments (Graber & Brooks-Gunn, 1996). In order to maintain a balanced and positive transition through this period, attention needs to be focused on one aspect at a time or else problems are more likely to occur (Coleman, 1978). One thing that has not been discussed so far is how thinking changes during this period. Piaget is one theorist who has considered cognitive development.

1.4. Cognitive Development

Early conjectures from Piagetian theory suggest that cognitive development can be explained as a series of four stages which are age related. The first stage is the sensorimotor stage which is from birth to about two years; the second stage is the

pre-operational stage which is from approximately age of two up to six years; the third stage is the concrete operational stage which is from about the age of six up to twelve years; the fourth stage is the formal operational stage, which is from about twelve upwards (Garnham & Oakhill, 1994; Light & Oates, 1990).

Each stage is marked by characteristic abilities, and the progression through each stage “is such that thought, and subsequent action, become progressively less ‘centred’. Through increasing abstraction of representation, ‘mental operations’ become less tied to concrete realities and egocentric perceptions” (Light & Oates, 1990, p 95). By the stage of formal operational thought, the young person should be able to employ hypothetico-deductive reasoning, and be able to think about probabilities and beliefs (Garnham & Oakhill, 1994, Kendall, 2000)

Research has shown, however, that not all young people are able to reach the stage of formal operations by the end of the teenage years. This point was taken up by the Cockcroft Report (Department of Education and Science, 1982). This report suggested that even during sixth year in secondary schools, many pupils needed to manipulate structures to fully appreciate the problem they were trying to solve. It has also been suggested that, because the emphasis of Piaget’s research was

scientific in nature, formal operational thought can be context specific (Muuss, 1996). Therefore it cannot necessarily be broadened to take into account other subjects such as art and literature, or indeed social or relationship situations.

Results from research looking at cognitive reasoning ability, in relation to social or interpersonal relationships, suggests that it is whether or not adolescents are interested in what they are being taught, that determines whether formal operational thought is achieved (Ward & Overton, 1990). Ward & Overton looked at two different contexts, one being punishments for breaking school rules and the other being concerned with retirement and the problems it can bring. In the former situation, 70% of seventeen year olds were able to demonstrate formal reasoning, whereas it was only 30% in the latter situation.

Elkind (1967) has looked at social cognitive development, and puts forward that as an individual matures, the more they are able to think about the very process of thinking. Elkind suggests that it is this metacognitive processing that causes the teenage age group to become, what he terms, 'egocentric'.

Elkind proposes that in thinking about their own lives, young people are unable to differentiate between what others think and what they themselves think. He cites the example of appearance, where he suggests that teenagers assume that others have the same concerns and involvement with appearance that they do. This, Elkind believes, contributes to what he terms 'the imaginary audience', where the individual believes that others are thinking the same thoughts as they are e.g. being critical or admiring, and are reacting to this, rather than the reality.

In addition, Elkind (1967) postulates the idea of the 'personal fable'. Elkind sees this as being the individual constructing a myth about themselves, which can give the feeling of omnipotence and immortality. He suggests that this is a useful way of looking at individuals who are going through this period of their lives, particularly those who have mental health problems or become offenders. He propounds that in order to treat them, professionals should help the young person construct the reality and move away from the myth.

In conclusion, those who are interested in cognitive development during the teenage years, have shown that contextual factors play a part, and metacognitive processing gives the individual a perspective, that is not necessarily the reality.

1.5. Teenage sexuality

Having looked at the current theoretical thinking and cognitive development, thoughts now will be turned to sexuality and how it fits with this thinking. It will be put forward that sexuality is not just an internal biological experience, but also one that is affected by external social factors, which affect society in general, for example the media. This is a central tenet of theories of context such as ecological theory (Bronfenbrenner, 1979), and developmental contextualism (Lerner, 1985).

As previously highlighted, family life and attitudes towards it have changed over the last half century. Divorce and single parenthood are no longer seen as experiences that few go through, which are shown in current figures. Britain's divorce rate is high, and current data suggests that by the age of sixteen as many as 28% will have experienced divorce between their parents (Rodgers & Pryor, 1998).

Many children are born into single parent families, which is not due entirely to divorce rates, but also the changing attitudes towards lone parenthood. Rodgers & Pryor (1998) suggest that more children are born outside of marriage than in it, particularly to those in the under twenty age group.

Changing notions of marriage and parenthood, together with a more relaxed adult attitude to sexual activity, are clearly going to have an effect, not just on society, but also on young people and their attitudes (Kendall, 2000).

Parents are an important influence in their childrens' lives. Parental factors have been shown to be the most influential for both sexes, above socio-economic status, pubertal timing, school performance, peers and siblings (Hill, 2000; Price, 2000; Todd, Currie & Smith, 1999).

One of the most important protective factors associated with teenage sexual health is parental modelling of good sexual behaviour. Social attitudes of parents and adults in the community could lead to beliefs that models of behaviour for teenagers should be the same as for adults. For some adults, sexual gratification can be seen as high on the agenda, and the consequences of this are not always considered. Young people who are affected by how they see their parents conduct their relationships, may well choose to act the same way (Jessor, Turbins & Costa, 1998).

Parental sexual behaviour is not the only way in which parents influence their children. Taris & Semin (1997) suggest that parents can be extremely good at educating their children on sexual health issues. They put forward that parents who are the best educators are those who are open, not intrusive, and able to put aside their own issues and concentrate on those of their children. They also suggest that boundary setting that is not intrusive, has also been shown to be effective in delayed sexual activity. Good communication between parents and their children is also seen as a protective factor (Hill, 2000; Price, 2000; Todd, Currie & Smith, 1999).

Teenage sexuality can cause stress for young people. The focal model suggests that if an adolescent has too many problems or stress factors to focus on at one time, then this can lead to emotional and psychological problems. Graber & Brooks-Gunn (1996) also suggest that transitions and turning points can also lead to stressors. Extra stress factors such as the timing of puberty and adjustment to adolescence can be an added burden for the young person.

One of the important factors for adolescents is belonging to the group, however those who are early or late developers can feel isolated from their peers especially

if they feel that they are different, or feel that their concerns are not the same as their friends (Coley & Chase-Lansdale, 1998; Hill, 2000).

Elkind (1967) postulates the egocentricity of this age group. If people of this age are unable to differentiate their own thinking from that of others, then anyone who feels that they are different e.g. being a late or early pubertal developer, is going to think that others think the same of them. They may act in a manner that subscribes to this, and so a self-fulfilling prophecy may come to fruition.

An important influence on teenage sexual activity is peer group acceptance of this (Corcoran, 1999; Price, 2000). However, research suggests that attitudes and sexual behaviour are most influenced by perceived behaviour of peers, rather than the reality (Meyrick & Harris, 1994). Thus those who think that their peer group is engaged in sexual activity, would be more likely to indulge in sexual activity themselves. This is an example of Elkind's (1967) imaginary audience.

Teenage sexuality is seen therefore, not as just a biological experience, but one that is influenced by contextual factors. Societal changes that have taken place in the last half century, parents and peers are all influences on behaviour. However, as

Lerner (1985) suggests, the individual is an active agent in the shaping of development, and has choice in how they are affected by contextual factors. If teenage thinking does not necessarily reflect the reality, but their perception of the reality, this could lead to detrimental behaviours, such as becoming sexually active at an early age.

When talking about sexuality, it has been put forward that young people are more sexually active than they were in the past. Does research agree with this?

Research into adolescent sexuality is limited and most of the studies conducted have been with those over the age of sixteen. Even those studies have to be accepted warily as it cannot necessarily be taken that adolescents report consistently. An example of this was shown in a study by Alexander, Somerfield, Ensminger, Johnson and Kim (1993), where it was found that 67% inconsistently reported facts about when first intercourse had taken place.

Studies looking at trends across western society would appear to show that young people are reporting that they are indeed indulging in sexual intercourse at an

earlier age, and this has risen steadily from 1964 onwards (Coleman & Hendry, 1999).

To gain another view of estimates of adolescent sexual intercourse, data has been collected on pregnancy rates.

1.6. Pregnancy rates.

At the very beginning of this chapter it was pointed out that there is major concern from government in Scotland, about the teenage pregnancy rates. Scotland is by no means the only country to have this as a concern, as the United States of America has the highest rate of pregnancy for this age group in the world, and the rates in Britain as a whole are the highest in Europe. A good account of these figures can be found in Coleman (1997a).

The figures for Scotland show that “more than 9,000 teenagers become pregnant each year in Scotland” (Scottish Office, 2000). These figures can be broken down into those in the 16-19 age group and the 13-15 age group. Figure 1.2 shows the rates for both groups from 1990-1998. The data show that there has been little change during the last decade. In the older age group there was a peak in 1991

followed by a decline up until 1995, and a slight rise again in the following three years. The younger age group has shown relative stability with a slight rise in 1996, with a slight fall the subsequent two years (NHS Information & Statistics Division, 2000).

A detailed analysis of numbers and rates of teenage pregnancies is shown in Table 1.1.

These figures show that there has been little change over the last ten years in Scotland, however, this also means that the message that teenage pregnancy is something to be avoided is not getting through to those that matter, the teenagers themselves.

Fig. 1.2. Teenage pregnancy rates, 1990 – 1998, by age group at conception.

Source: Information & Statistics Division (2001).

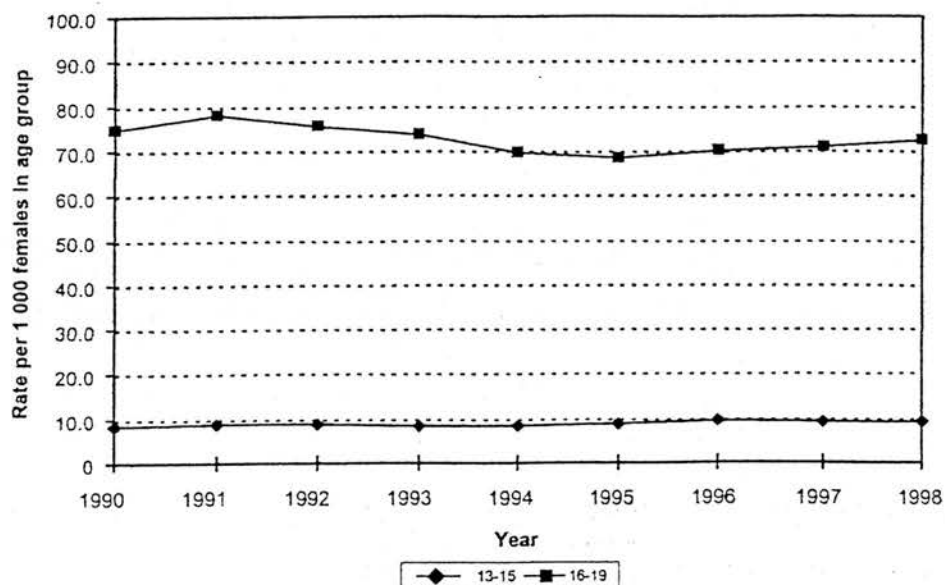


Table 1.1. Teenage pregnancies by year and age of mother at conception: 1990-1999. Source: Information & Statistics Division (2001).

Year	Age of mother at conception							Age groups		
	13	14	15	16	17	18	19	13-15	16-19	13-19
Numbers										
1990	22	156	572	1 588	2 393	3 195	3 551	750	10 727	11 477
1991	21	148	604	1 546	2 405	3 052	3 502	773	10 505	11 278
1992	34	146	581	1 400	2 210	2 879	3 224	761	9 713	10 474
1993	34	175	563	1 377	2 151	2 633	2 907	772	9 068	9 840
1994	35	169	597	1 290	1 907	2 429	2 759	801	8 385	9 186
1995	32	195	601	1 363	1 814	2 382	2 644	828	8 203	9 031
1996	34	215	654	1 460	2 065	2 364	2 586	903	8 475	9 378
1997	40	184	631	1 576	2 156	2 527	2 547	855	8 806	9 661
1998 ^r	29	153	649	1 592	2 231	2 657	2 724	831	9 204	10 035
1999	**	**	**	**	**	**	**	**	**	**
Rates¹										
1990	0.8	5.0	18.1	49.2	69.3	85.7	89.3	8.3	74.6	48.9
1991	0.7	5.2	19.5	48.9	74.8	89.6	94.1	8.8	77.8	50.5
1992	1.1	5.0	20.5	45.4	70.2	90.6	92.4	8.6	75.3	48.3
1993	1.1	5.7	19.4	48.6	69.9	84.1	88.3	8.4	73.5	45.8
1994	1.1	5.3	19.5	44.4	67.3	78.9	84.6	8.4	69.4	42.5
1995	1.0	6.0	18.8	44.6	62.6	84.0	81.9	8.6	68.2	41.7
1996	1.1	6.8	20.1	45.7	67.7	81.8	87.3	9.5	70.1	43.4
1997	1.3	5.9	19.9	48.7	67.7	83.4	84.2	9.2	70.6	44.3
1998 ^r	0.9	5.0	20.9	50.2	69.1	84.3	85.9	8.9	72.4	45.6
1999	**	**	**	**	**	**	**	**	**	**

1 Rates per 1000 females in each age or age group in each year.

Source: Forms SMR01 & SMR02

** Data not available.

^r Revised.

1.7. Teenage parenthood

It has been pointed out that parenthood for someone aged nineteen, whether by choice or not, is a different experience from someone in their early teens (Coleman & Hendry, 1999). However, when discussing teenage pregnancy, this is often not taken into account. This introduction will concern itself with the problems that face the younger age group, and particularly concentrate on those under the age of sixteen.

What are the disadvantages of having a baby whilst being a young teenager?

Caution is recommended when comparing findings from research conducted in cultures other than the UK. For example, much American research has focused on Afro-Americans, and cannot necessarily lead to similar conclusions regarding British teenagers, particularly as only a minority of British teenage pregnancies are from ethnic minority backgrounds (Coleman & Hendry, 1999). Nevertheless, the evidence suggests that education suffers, poverty is a reality for many, and health outcomes are not as good for this group compared to their peers who wait to have a baby later in life (Coley & Chase-Lansdale, 1998; Jessor, Turbins & Costa, 1998; Nitz, 1999; Trad, 1999).

Teenage pregnancy can also lead to lasting emotional difficulties e.g. depression and long-term mental health problems (Coley & Chase-Lansdale, 1998; Corcoran, 1999). Research also suggests that teenage mothers are more likely to abuse their children than older mothers (Kellogg, 1999).

Regardless of age, transition to parenthood is not easy and for those in this age group there are additional difficulties. They have to cope with an experience that forces them to make a transition from child to parent. Going back to the theoretical standpoint of transition theory and the focal model, it is easy to see why teenage parents might experience problems, especially if the transition happens coincidentally with other lifestyle adjustments (Coley & Chase-Lansdale, 1998; Trad, 1999).

What about the children of adolescent parents? It has been shown that they too suffer low educational attainment, with delayed cognitive development in the pre-school years and poor outcomes in adolescence, have poorer health than children born to older mothers and are more likely to have behaviour problems. (Coley & Chase-Lansdale, 1998; Trad, 1999).

It has also been shown, that these children tend to engage in sexual activity earlier than their peers, and that a cycle of early parenthood is a possibility. Thus the same difficulties arise in another generation (Franklin & Corcoran, 2000; Trad, 1999).

One aspect of teenage parenthood that has been little researched, is that of the father. It is acknowledged that fathers play an important role in the upbringing of children, but for fathers of children of teenage mothers, there are added pressures, especially if those fathers are teenagers themselves. One of the problems with this is that relationships formed during the teenage years do not, on the whole, last (Coleman & Hendry, 1999). This may bring problems with access. Financially young people are not necessarily well off, and the burden of having a child to look after can be a great strain on finances. Furthermore, researchers suggest that having a child may interfere with education, and this may further reduce the likelihood of good prospects for the future (Coley & Chase-Lansdale, 1998; Trad, 1999).

Furstenberg & Harris (1993) looked at a twenty year follow-up of the adolescents of teenage mothers. The results showed that those adolescents who lived with their father or stepfather, had better educational, emotional and behavioural functioning

than those who did not have a relationship with their father. Most detrimental of all were those adolescents who had either a poor relationship with their father, or whose father was initially fully involved but this involvement had tailed off.

There is another side to this picture of negativity, as it is not all teenage parents that have problems. It has been suggested that for those who live in poverty and who have no means of gaining employment or the means to further themselves, parenthood is actually something that is an achievement, and it has been shown that they cope well under difficult circumstances (Coleman & Hendry, 1999). However, the overwhelming picture is not positive.

Teenage pregnancy has, on the whole, been seen as one that is fraught with difficulties. These range from financial to physical and mental health problems for the teenage parents, while their offspring can suffer with poor educational outcomes, poor health, are more likely to have behaviour problems, and suffer abuse at the hands of their parents. What then are the risk factors for teenage pregnancy?

1.7.1. Risk Factors

There are several known factors which make pregnancy more likely for some teenagers.

Sexual abuse is seen as a risk factor. Research from America suggests that as many as 68% of teenage mothers have been sexually abused (Kellogg, 1999). Sexually abused teenage mothers, as compared to those who have not been abused, generally have fewer support systems, experience more depression, and are more likely to abuse substances during pregnancy (Stevens-Simon & McAnarney, 1994; Stevens-Simon & Reichert, 1992).

Poverty is another risk factor (Hill, 2000; Nitz, 1999; Coley & Chase-Lansdale, 1998; Trad; 1999). It is hypothesised that this is because “life experiences associated with poverty, such as alienation at school, prevalent models of unmarried parenthood and unemployment, and lack of educational opportunities and stable career prospects all serve to lower the perceived costs of early motherhood” (Coley & Chase-Lansdale, 1998, p.153).

Many researchers make the point that, those whose mothers were adolescents when they had them, are more likely than their peers who have older mothers, to become teenage mothers. Poverty, and associated factors that come with teenage pregnancy, also points to those who are brought up in the care of local authorities as having similar problems. Thus strained parental relationships, disrupted family structure, and problematic mother-daughter relationships, are seen as being related to teenage pregnancy (Coley & Chase-Lansdale, 1998; Coleman & Hendry, 1999; Hill, 2000).

Kowaleski-Jones & Mott (1998) put forward that young women who have sex at an early age, do not use contraceptives and have a child are more likely to suffer with depression, low self-esteem and little sense of control over their lives. These findings were partly replicated by Burns (1999), who also found that sense of control and doubt were risk factors for teenage mothers who participated in unprotected sex. Nisevic & Rosic (2000) suggest that teenagers with poor school achievement and little future prospects tend to have an external locus of control, and may be at risk for maladaptive and risky behaviours, such as not using contraception.

Although low self-esteem has been put forward as a possible risk factor for teenage pregnancy, not all researchers are in agreement. There are some who feel that self-esteem is not correlated with teenage pregnancy at all (Wight, Abraham & Scott, 1998). Some research has attributed failure to use contraception with low self-esteem (Crockenburg & Soby, 1989), whereas others see that it is teenagers with high self-esteem, that practice risky sexual behaviours, and have more sexual partners (Cole, 1997). However, one point that has been accepted, is that low self-esteem has been associated with sexual abuse (Kellogg, 1999; Oates, Forest & Peacock, 1985), and as mentioned above, sexual abuse is a risk factor itself for teenage pregnancy. Self-esteem has also been linked with educational attainment.

Adolescents that do not attain well at school and have low educational prospects are also more likely than their peers, who are high achievers, to become pregnant and go on to have the baby (Hill, 2000; Maynard, 1995). Research has shown that those who have high educational prospects, also have high self-esteem (Nitz, 1999), and Strachan & Gorey (1997) suggest that holding clear educational prospects, is the single most protective factor against teenage pregnancy.

Females who do not participate in sporting activity are also more likely than those who do, to engage in early sexual activity. However, sporting activity was not found to be a differentiating factor for males (Sabo, Miller, Farrell, Melnick & Barnes, 1999).

Teenage pregnancy is linked with other problem behaviours for this age group, for example alcohol and drug use (Coley & Chase-Lansdale, 1998; Kellogg, 1999; Nitz, 1999). Predictors of drinking behaviours appear to be contextual factors, such as peer behaviour, and parental drinking behaviours (Fergusson, Lynskey & Horwood, 1994; Plant, 2000). Substance abuse can contribute to adolescents using bad judgement, and being more vulnerable to acting on sexual impulses without thought to possible consequences. It can also lead to unsafe sexual practices, poor contraceptive use and lack of memory concerning sexual events (Franklin & Corcoran, 2000).

It can be seen that sexual abuse, poverty, strained relationships with parents, disrupted family structure, self-esteem factors, low educational prospects, non-participation in sports, alcohol and drug abuse, are all potential risk factors for

teenage pregnancy. Governments have aimed to counteract the risk factors by the introduction of sex education in schools.

1.8. Sex Education

The rates of teenage pregnancy in Scotland have shown that, so far, the message to teenagers that pregnancy at this age is something that should be avoided, is not getting across, for although the rates have not shown a significant rise, they have also not fallen significantly either.

Current theories of adolescence have suggested that social influences cannot be ignored. Sex education has changed in the past fifteen to twenty years and can be seen as mirroring sociopolitical trends, thus contextual factors play an important part in the way in which sex education has evolved (Franklin & Corcoran, 2000).

Initially sex education was based primarily on knowledge building. This was broadened to encompass values, decision-making and communications skills. Later sex education programmes emphasised abstinence only approaches, and then broadened to try to stem the threat of the HIV/AIDS virus.

Current concerns have taken into account all these previous perspectives but also tried to change adolescent thinking about norms of sexual practice, for example by challenging thoughts about peer pressure, and getting young people to think of the consequences of sexual intercourse without protection (Franklin & Corcoran, 2000; Nitz, 1999).

Franklin & Corcoran (2000) suggest that although adolescents often agree that condoms should be used, in reality social norms and power differentials between males and females, make teenagers ambivalent about using them. Theorists suggest that interventions should be designed to target consistent and correct condom use, and this would hopefully result in better compliance (Wight, Abraham & Scott; 1998; Wight & Abraham, 2000).

The theoretical stance of developmental contextualism can be seen when looking at health promotion. Active agency within the bounds of social influences is an important factor in any promotion of healthy behaviours, particularly in sex education and the prevention of teenage pregnancy (Bandura, 1997).

Adolescent thinking needs to be targeted so that they can move away from the 'personal fable' and, as Elkind (1967) suggests, professionals must help the young person to construct reality rather than the fantasy that it could not happen to them. Prevention of adolescent parenthood requires interrupting the sequence of steps leading to pregnancy (Coley & Chase-Lansdale, 1998; Franklin & Corcoran, 2000), however, if sex education is to be effective, then it has to address the issues that young people themselves feel are important, and are bound up in the context in which they live.

In order to change thinking about sexual issues what do teenagers suggest as being important?

Research has shown that young people consider that honest and direct answers to questions, strategies to evaluate and resist peer pressure, more emphasis on ways of helping them to feel competent, and having a variety of teaching methods that can help to personalise information, to be significant (Burns, 1999; Coleman & Hendry, 1999; Meyrick & Harris, 1994). Some of these ideas are not necessarily thought of as traditionally sex education, but encompass broader issues such as confidence, self-esteem and communication skills.

This is echoed by Coleman & Hendry (1999), Coley & Chase-Lansdale (1998) and Wight and Abraham (2000), who suggest that sex education alone is not the answer to prevent, or reduce the number of unintended pregnancies amongst the teenage population. They put forward that sex education needs to be broadened to give young people the very skills that they are asking for. This gives them control and responsibility for their own lives (active agency) not just for sexual health, but also in personal lifestyle choices, education and employment.

Bandura puts it this way, "People achieve self-directed change when they understand how personal habits threaten their well-being, are taught how to modify them, and believe in their capabilities to marshal the effort and resources needed to exercise control. Personal change occurs within a network of social influences." (Bandura, 1997, p. 307).

1.9. Background to the present study

The theoretical standpoint taken for this study is that context plays an important part in teenage development. Development must be seen in the context in which it is played out (Bronfenbrenner, 1979; Lerner, 1985). Transition from child to adult can be complicated for teenager if the foci of their attention are too broad

(Coleman, 1978; Graber & Brooks-Gunn, 1996) and 'personal agency' and 'goodness of fit' are important concepts in order to negotiate a positive path through this period.

Currently the Scottish Executive is piloting projects in socio-economically deprived areas across Scotland that are context specific. This is the concept of the New Community Schools. These have implications not just for teaching, but more specifically for the mental and physical health of children, families, the wider community and the professional services that serve them (Scottish Executive, 2001).

1.9.1. New Community Schools

The concept of New Community Schools is based on the Full Service School, which emerged in the United States of America in the early 1980's (Childrens Aid Society, 2001). The idea is to provide a fully integrated school-based health and social service, aimed at supporting individuals, families and communities. Formal education is not the only thing on the agenda, the focus has broadened to encompass social work, health education and promotion services.

Bronfenbrenner's stance that development takes place within four ecological systems that all impact upon one another (Bronfenbrenner, 1993) is exemplified in the New Community Schools. Government initiative (macrosystem) puts forward a new way for the education, mental health and care of young people. Local education chiefs (exosystem) acknowledge the need for this, and second people onto the project. The New Community School (mesosystem) is born, and this impacts on the individuals (microsystem) that are served by it.

In Highland region there are two New Community Schools projects, one in Inverness and the other in Easter Ross, both in socio-economically deprived areas of the region. They started in 2000 and have funding for three years, at the end of which they will be fully evaluated.

The early identification of problems, where different professionals can act as a team, can provide 'seamless care' for children and families, especially for those who live in areas where poverty is the norm, with the aim of raised educational attainment and the promotion of social inclusion.

As stated earlier, one of the most notable risks for teenage pregnancy is poverty and lack of educational attainment. In the United States, the Community Schools are teaching that sex education is more than just showing the serious consequences that come from teenage pregnancy. They also focus on higher education, careers, health care, family life, performing arts, sports and recreation. The aim is to give young people a hopeful focus for their future, and help them discover their potential. The effects look promising and this model of sex education is being taken forward and replicated in thirty-nine sites across the country (Childrens Aid Society, 2001).

1.9.2. The role of Clinical Psychology.

Clinical Psychology services have an important part to play in projects such as the New Community School and other school based projects. The NHS Health Advisory Service have documented the following:

“Mental health problems cause concern or distress to those who have them. They may arise from a young person’s difficulties in coping with life.... It is clear that these problems may arise for reasons, at first sight, unconnected with health matters.... In turn, mental health problems and disorders often manifest themselves in difficulties in personal, educational and social functioning, and hence the emphasis in this document on collaboration between the three statutory health, education and social services agencies.” (The NHS Health Advisory Service, 1995, p. 16)

This is echoed by The Scottish Council for Postgraduate Medical and Dental Education (SCPMDE) and Clinical and Applied Psychologists in Scottish Healthcare (CAPISH), who put forward that applied psychology should not just concern itself with primary care, but also have input in “the promotion of good health, and the prevention of ill health that is avoidable” (SCPMDE & CAPISH, 1999, p. 8). Those involved in action research, which aims at “improvement and involvement, is problem focused and context specific” (Hart & Bond, 1995, p.5), are in total agreement, and see clinical psychologists as having a vital role to play.

1.9.3. The Healthy Relationships course.

The current study took place in Inverness Royal Academy, a secondary school in Inverness that serves both rural and urban communities. The New Community School was at an early stage of development during the data collection period, catering only for children aged 5-12, and therefore was not the necessary setting for the current study. However, some of the ideas behind the New Community School, such as the use of outside agencies being used in a consultancy and/or supervisory role, have been taken on by other schools in the region. Inverness Royal Academy is one such school. The school has also taken on board the current thinking about

sex education, and broadened its programme to incorporate issues of self-esteem, confidence and healthy relationships.

The Healthy Relationships course is not just based on sexual relationships, but on all kinds of relationships, such as those with friends, in the family and the wider community. It is for pupils aged approximately fourteen, is mainly discussion based, and aimed at helping them to make healthy choices regarding relationships and sex education. Part of the course was changed in 1999 to include a piece of equipment, called Baby Think It Over, that had been acquired and piloted by the Health Promotion Services in Inverness (Freir, 1998).

1.9.4. Baby Think It Over (BTIO)

The Baby Think It Over is a simulated baby that young people can take home. It cries and needs to be cared for, the idea being to show young people the responsibility that is involved in looking after a baby.

Sex education projects have used bags of flour, bags of sugar and eggs to simulate the experience of looking after a baby and reported outcomes appear positive, and they are inexpensive and easy to implement (Chaika, 1999). These are contrived

simulations and James (1986) makes the point that, an experience where a young person has to interact with a simulated baby that cries and requires “parenting”, is going to be more realistic and is more likely to be taken seriously.

Effective programmes to combat teenage pregnancy must be properly evaluated (Nitz, 1999; Wight & Abraham, 2000) and as yet there is a paucity of published research on the BTIO (Strachan & Gorey, 1997). Most of the outcomes that have been put forward are anecdotal and are in magazines, newspapers and on the World Wide Web, many of which are promoted by the company that makes the BTIO (Baby Think It Over, 1999). The four studies that have been published have shown differing results.

Strachan & Gorey (1997) conducted a study of forty-eight high school students, from three different schools in Buffalo, New York State, USA. Six participants used the BTIO, seventeen of their classmates were considered as vicariously part of the intervention group, and twenty five other volunteers made up the control group. The results showed that those who had looked after the BTIO scored themselves higher on a measure of realistic parenting expectations, than the average teenager

in the comparison group and those in the 'vicarious' group. Those in the latter group showed a nonsignificant positive trend.

Similarly Hart, Cochrane & Quinn (2000) found the intervention to be efficacious in a study for young people to "road test a baby" in Western Australia. Here seven participants were recruited from a Childrens' Home. They took part in a pilot study, which looked at whether a simulated baby experience could enhance early attendance for prenatal care. The findings were positive. However, there was no control group.

Kralewski & Stevens-Simon (2000) carried out a study conducted in urban Denver, Colorado. The objective was, to determine the effect of age on the efficacy of the BTIO for increasing middle school girls' knowledge about the responsibilities of parenthood, and discourage plans for teenage childbearing. They used two comparison groups made up of sixth and eighth grade students. The results showed that caring for the BTIO had no effect on the intent of students to become teen parents. They concluded that this study demonstrated the propensity for young teenagers to rationalise their thinking (the personal fable of omnipotence), which allows those, who perceive parenthood to be attractive, to overlook the negative

aspects of any parenting experience they may have. However, they do point out that this study was not carried out in the context of a sex education class.

The fourth study was carried out in a rural county in Ohio (Price, 2000). The aim of this was to look at rural parents' perceptions of the BTIO programme. The results showed that the parents perceived the programme to be a positive experience for their children and would recommend the experience for others. However, Price points out that one of the limitations of this study was, the results were not confirmed by the children who participated with the BTIO, as they were not asked.

Coleman & Hendry (1999) point out that populations of teenagers are not necessarily comparable from different cultures and sub-cultures, consequently care must be taken when applying conclusions from these studies. More importantly, not only are the results inconclusive, none of the reported studies took place within the context of a sex education class, which is one of the manufacturer's main recommendations (Baby Think It Over, 1999).

1.10. Main aims and hypothesis of the present study

There has been limited research on the BTIO as a tool, the research that has been done is inconclusive, and has not been carried out in the context of a sex education course. Furthermore, there has been no published research on the use of a simulated baby with teenagers in Scotland. The present study aims to address this.

Risk factors for teenage pregnancy that have been put forward are:

(1) Poverty, and particularly the life experiences that are associated with poverty such as alienation at school, lack of educational opportunities, lack of stable career prospects and models of unmarried parenthood and unemployment.

(2) Parental separation and divorce are also factors that need to be considered. Parental instability within the family, and the possible lack of communication that could ensue, could be a distraction for the teenager, and therefore there might be too many foci competing for attention. Communication between parent and teenager is a protective factor against pregnancy.

(3) Those who suffer with depression, low self-esteem and little sense of control over their lives. However, as stated previously, the research on self-esteem and

sexual activity is inconclusive. One important fact is that self-esteem and school attainment are linked. As school attainment is, in itself, a risk factor, self-esteem may yet prove to be an important variable, especially if linked with self-control, i.e. taking responsibility for the consequences of actions. Leaving things to fate, or feeling “omnipotent” (Elkind 1968), rather than knowing that responsibility is a personal issue, is important if trying to get teenagers to understand the implications of not using contraception. This relates to the next point.

(4) Lack of contraceptive use can be attributed to other problem behaviours, such as drinking too much alcohol, which can lower inhibitions and lead to sexual impulsivity and unsafe sexual practices.

This study will look at whether the use of the Baby Think It Over, as part of a sex education course, increases realistic perception of ability to look after a baby. Other variables will also be looked at, which include the following: self-esteem, locus of control, demographic variables, perceptions of future educational prospects, alcohol intake trends, thoughts on sex education and contraception, and knowledge of sexual health issues.

The following hypotheses will be tested:

(1) Teenagers who care for a simulated baby will rate themselves less able to parent, when compared with teenagers who have not cared for a simulated baby.

This difference will be sustained at a nine month follow-up.

(2) Following a period of caring for a simulated baby, teenagers will have higher self-esteem, when compared with teenagers who have not cared for a simulated baby. This change will be sustained at a nine month follow-up.

(3) Following a period of caring for a simulated baby, teenagers will have greater internal locus of control, when compared to teenagers who have not cared for a simulated baby. This change will be sustained at a nine month follow-up.

This study took place at Inverness Royal Academy, Inverness. The Baby Think It Over was used as part of the Healthy Relationships course (which was itself part of Personal and Social Educational). The course was run by two teachers in the school, one a principal Guidance teacher and the other a principal teacher of PE.

2.1 Design

The current study has a mixed design. There were two conditions, a BTIO group and a control group. All participants completed questionnaires at three data collection points: prior to the experimental group taking home the BTIO (pre BTIO), after all of the experimental group had taken the BTIO home (post BTIO) and nine months after post BTIO (follow-up). Qualitative data was also collected post BTIO and at follow-up from the experimental group and the teachers involved in this study.

2.1.2 Approval for this study

Approval for the study was obtained from the Rector of Inverness Royal Academy and the Director of Education for Highland Region. Approval was sought from the Highland Health Board Ethics Committee, however, due to the fact that the study was undertaken within the education sector, the Highland Health Board Ethics Committee suggested it was not within their remit to

authorise ethical approval. Parental consent and pupil consent was obtained for each participant in both the experimental group and the control group (see appendix 1 and appendix 2).

2.2 Participants

2.2.1 Recruitment

The study was carried out within the structure of the Healthy Relationships Course. This course takes place over approximately an eight week period, consequently there were only 16 pupils able to be accommodated.

All eighty pupils in both of the two teacher's third year classes (aged approximately 14 years) involved in this project were informed about the BTIO and invited to participate. Approximately forty-five pupils volunteered, forty-three females and two males. Both of the males were included at the teachers' request. From the forty-three female volunteers, fourteen were randomly selected. Once parental consent was obtained (see appendix 1), the sixteen volunteers (fourteen females and two males) constituted the experimental group (BTIO group).

From the remaining pupils in the class, fourteen females and two males were randomly selected. Parental consent was requested (see appendix 2), however one parent of a female participant refused consent and so another female was randomly selected in her place. Once parental consent was obtained for these sixteen, these constituted the control group.

The result of the selection process meant that the BTIO group and the control group were sex and age matched (the participants are all in the same class and therefore already age matched).

During the study, four participants from the BTIO group withdrew. One female withdrew due to obtaining weekend work and therefore no longer being available to participate. One male and one female withdrew for undisclosed personal reasons. A third female left the school prior to the follow-up data collection point, but completed the rest of the study. Therefore there were thirteen participants pre BTIO and post BTIO, but only twelve at follow-up in the BTIO group, and there were sixteen participants in the control group.



2.3 Assessment Measures

2.3.1 The Culture-Free Self-Esteem Inventories for Children, Second Edition (Battle, 1992). (CFSEI-2 Form A) (see Appendix 3)

The CFSEI-2 Form A was used to measure self-esteem. This questionnaire was standardised with children and adolescents of both sexes (Primary School through to Senior High School). The CFSEI-2 Form A is widely used in the United States of America, Canada and the United Kingdom.

One of the benefits of using the CFSEI-2 Form A is that it not only gives a total self-esteem score, but also has four subtest self-esteem scores that can be calculated. These are general self-esteem, social/peer-related self-esteem, academic/school-related self-esteem and parental/home-related self-esteem.

Coley & Chase-Lansdale (1998) and Hill (2000) have put forward that poor peer relations can lead to extra stress for an adolescent. Parents have also been put forward as a significant and important influence in the lives of their children (Hill, 2000; Price, 2000; Todd, Currie & Smith, 1999), and adolescents who have poor parental relationships are associated with low self-esteem (Coleman & Hendry, 1999). High self-esteem has been linked to academic achievement and to those with high educational prospects (Hill, 2000; Maynard, 1995; Nitz,

1999). Therefore having subscales to measure these different factors may help to clarify which areas of self-esteem change during this study, which the overall self-esteem score cannot do.

The CFSEI-2 Form A has a good test-retest reliability (correlation = .81). The questionnaire has also been rigorously tested for validity and is considered to be a valid measure of self-esteem (Battle,1992)

2.3.2 Locus of Control Scale For Children (Nowicki & Strickland, 1973) (LCSC) (see appendix 4)

The LCSC was developed specifically for administration to children (Nowicki & Strickland,1973). It provides a single score, where a high score indicates an external locus of control and a low score indicates an internal locus of control. This test has been standardised with young people aged nine to eighteen years, and is considered to be a valid measurement of locus of control (Nowicki & Duke, 1983). The test-retest reliability is adequate ($r = .66$ for 13 year olds).

2.3.3 Sexual Health Questionnaire showing demographic information, sexual knowledge and sexual attitudes (see appendix 5)

A sexual health questionnaire was designed because questionnaires for school aged children about their health behaviours tend to be long and take much time to fill out (e.g. Health Behaviour in School-aged Children (HBSC), Todd, Currie & Smith, 1999), or aimed at older adolescents (over 16's). The teachers running the

current project had asked for questionnaires in total to take no more than twenty minutes for participants to fill out, as classroom time is at a premium. The researcher is also aware of the problems that can ensue if information is given that is against the law (issues to do with sexual activity and age of consent, for instance) and questionnaires for those over the age of 16 ask specific questions about sexual activity.

Items needed to include demographic information, prospective thoughts about expectations of when the participants could be due to leave school, certain health behaviours that have been shown to have an effect on teenage pregnancy (e.g. alcohol, thoughts about the ability to carry and use condoms, who they would be happy to discuss contraception with), attitudes and knowledge of sexual issues (e.g. the law).

The researcher contacted various researchers in the field of adolescent sexual health who were kind enough to forward their questionnaires to her. Permission was given for any or all parts of the questionnaires to be used as long as these were referenced.

The questionnaires chosen, because they covered the information deemed to be necessary for this study, were: Young Peoples Survey on Teenage Sexual Health (Centre for Sexual Health Research, 1999) and The Sex and Lifestyle Questionnaire: Your Attitudes, Beliefs and Behaviour (SHARE Questionnaire, 1999). The former is from a study into the sexual health needs of young people

in the Southampton area. It has reasonably comprehensive sections on knowledge and attitudes of sex and contraception. The latter is an 83 item, in depth survey of young people over the age of 16 in Scotland. Only demographic questions and questions relating to issues affecting future sexual relationships were used from this questionnaire, as much of the survey looks at sexual history and sexual practice, which was deemed inappropriate due to the age of the participants in the current study.

A question was also included which was taken from the Baby Think It Over questionnaire (Baby Think It Over, 1998), which asks participants to rate their ability to look after a baby.

The questionnaire was then piloted with a focus group of six teenagers, aged between 13 years and 16 years. They also filled out the CFSEI-2 Form A and the LCSC. They were timed for filling out all three questionnaires, and asked their opinion as to what the questionnaire was, from their view, supposed to be finding out about. They all agreed that the sexual health questionnaire was easy to fill out, that it referred to general attitudes and knowledge about sexual health as well as demographic information. They did not find this threatening, embarrassing or difficult. All three questionnaires took approximately twenty minutes to fill out.

A follow-up questionnaire was also constructed with changes only in demographic information and sex education information. This was piloted in the same way as the previous questionnaire (see appendix 6).

2.3.4 *The Baby Think It Over (BTIO)*

The BTIO is a computerised, life-size doll. It is 21 inches long and weighs 6.5 - 7lbs. The version used in the current study is Generation 5. The BTIO is lifelike in appearance, but cannot smile or interact like a real baby. It comes in different ethnic skin tones and each ethnic version has different facial features. The two dolls used in this study are simulated Caucasian male and female dolls.

BTIO has a small computer inside an electronics box that fits into the doll's back. Access to this is by a key. The computer works by means of four AA batteries.

Care of the BTIO involves a care key being inserted into the correct keyhole in the electronic box when the BTIO cries, being turned clockwise until resistance is felt and held in that position until the BTIO coos.

In order to set the computer, the electronics box has to be taken out of the BTIO and set to the required mode before inserting it back into position ready for BTIO to begin the simulation period.

Inside the electronics box, the BTIO 'temperament' can be set. It has three temperaments, each denoting different amounts of time that BTIO will cry: 'cranky baby', 'normal baby' and 'easy baby', and a 'Demo' mode for

demonstration purposes. In each of the three settings, the BTIO will require two hours of care in every 24 hour period, but in the 'cranky baby' the BTIO cries more frequently and for shorter periods of time, whereas in the 'easy baby' mode, BTIO cries less frequently and for longer periods of time. In 'normal baby' mode the BTIO will cry for care every 90 to 270 minutes. This is the mode that was used in this study.

The computer has a reset memory button to reset the computer each time the BTIO is given out, and a digital display that shows how the BTIO has been 'handled' once the simulation period is over. The digital display has four triangles each denoting a different kind of event in the digital readout. The orange triangle indicates the number of times the BTIO's head was not properly supported, the green triangle indicates the number of times the BTIO was handled roughly, the yellow triangle indicates the number of times that the BTIO was left to cry for more than one minute (called a neglect event), and the red triangle indicates the total number of minutes that the BTIO was allowed to cry.

The computer also has an automatic shutdown facility, which happens when the electronics box is removed from the BTIO, and data is recorded up until that time. This means that if a person is unable to deal with the crying and becomes frustrated with the experience, there is the option of stopping the simulation rather than breaking the BTIO. Verification of the true amount of time the simulation went on is recorded and participants know this, therefore the temptation to remove the electronics box without good cause is less likely.

The care key that is used to stop BTIO crying is a small plastic device that is attached to the participant's wrist by means of a hospital band, and therefore the only way to remove the care key is to cut the band. This ensures that the participant is the only person who can care for the BTIO during the simulation period.

The BTIO cries for five reasons: if it is in the wrong position, if it needs care, if the key is inserted but it wants to be left alone, if it is handled too roughly and if the head is not properly supported.

All participants are given a 'Student Handbook' (see appendix 7) which explains all aspects of care whilst the BTIO is in their care. Participants are also given a 'Birth Certificate', a pre and post evaluation questionnaire, a parental evaluation questionnaire, a diary, and a contract for participants to sign (see appendix 8).

2.4 Procedure

An introductory session was held for all participants in the BTIO group. The teachers demonstrated how the BTIO worked, and instructed them in its handling. The participants were organised as to when they would be taking a BTIO home, and each pair was told to decide between themselves who would have the male or the female doll. This group were then given a pack which included: a student handbook, a pre and post evaluation questionnaire, a parental questionnaire and a birth certificate and a diary to fill out and were instructed in

how to do this. They filled out the pre evaluation questionnaire and chose names for their BTIO, which they entered onto the birth certificate.

During the next Healthy Relationships class, all participants from the whole sample anonymously completed the three questionnaires (CFSE-2, Form A; LCSC; demographic information, sexual knowledge and sexual attitudes questionnaire). These were secured by the participants in sealed envelopes and returned to the researcher.

That afternoon the first participants took their BTIO home and filled in the diary according to instructions. Parents were asked to fill in the parental evaluation and the participants filled in the post evaluation questionnaire when their simulation time was complete. The BTIO was brought back to the school on the Monday morning and handed in to the teacher designated to collect the BTIO's, together with the diary and the other questionnaires already filled out. He recorded on the correct forms the data from the BTIO (see appendix 8). This was sent to the researcher. This happened for six weekends in a row.

Unfortunately, both BTIO's were found to be broken at this stage. They were sent to be mended, which took approximately three weeks, and on their return the last participants in the BTIO group completed their simulation.

Once all participants had undertaken their weekend of caring for BTIO, they completed repeat measures of CFSEI-2, LCSC and the follow-up questionnaire

of sexual knowledge and sexual attitudes. Again, these were secured by each participant in a sealed envelope and returned to the researcher.

A short structured interview was held individually with four of the BTIO group participants, who volunteered for this. The interview comprised questions regarding their thoughts about having undertaken the BTIO simulation (see appendix 16). An interview was held with the two teachers concerned, which asked the teachers to comment on their opinion of the BTIO, and changes that they felt they might make should they use the BTIO again (see appendix 18).

Follow up measures (CFSEI-2; LCSC; follow-up questionnaire of sexual knowledge and attitudes) were administered nine months post BTIO simulation. Again, these were secured by each participant in a sealed envelope and returned to the researcher.

Another short structured interview was held individually with the four BTIO group participants who had been interviewed previously post BTIO (see appendix 17). An interview was again held with the two teachers concerned (see appendix 19).

2.5 Analysis of data

2.5.1 Participant confidentiality

To ensure participant confidentiality, all participants were assigned a serial number, and this was used to identify participants. All paper data were stored

securely in a locked filing cabinet, the researcher being the only person with access to this.

2.5.2 Data analysis

Data were entered into and analysed using the Statistical Package for Social Sciences (SPSS) for Windows Version 9, and InStat 2.3 for Macintosh. Twenty-nine participants completed all questionnaires pre BTIO and post BTIO. Twenty-eight participants completed all questionnaires at follow-up, due to the fact, as previously stated, that one participant in the BTIO group left the school prior to the follow-up data collection point. A significance level was set at $p < 0.05$.

This section starts with demographic data of the experimental (BTIO) group and the control group, followed by the findings relevant to each hypothesis. In addition, the rate of change between groups will be analysed. Then descriptive data from the sexual health questionnaire, the Baby Think It Over questionnaire, and the interviews will be presented.

3.1 Data Analysis.

The data were analysed using Statistical Package for Social Sciences (SPSS) for Windows, Version 9, and Instat 2.3 for Macintosh.

Under most circumstances parametric statistics such as the t test are robust, in the sense that they can still be used despite violation of the assumptions underlying them. However, with small numbers conforming with assumptions is more crucial. Hence for this study as there were small numbers and the data were not, for the most part, of a normal distribution, nonparametric statistics were used, in particular the Friedman test for all repeated measures. On several occasions, analysis using the Friedman test indicated significant differences, however the subsequent post hoc test (Dunn) did not specify the location of the

differences; this probably occurred because the Dunn test fails to take tied ranks into account. Unfortunately no other nonparametric post hoc test was available. The Dunn test was conducted only if the Friedman test indicated significant differences. Two-tailed tests were used throughout.

Throughout the results section the following will be used for both the BTIO group and the control group: the first data collection point will be termed “pre BTIO”; the second data collection point will be termed “post BTIO”; the third data collection point will be termed “follow-up”.

The numbers in each group at each data collection point were as follows: BTIO group at: pre BTIO ($N = 13$), post BTIO ($N = 13$); follow-up ($N = 12$). Control group at: pre BTIO ($N = 16$); post BTIO ($N = 16$); follow-up ($N = 16$).

3.2 Demographic data from the experimental (BTIO) group and the control group.

Table 3.1. Age ranges of groups

BTIO group (N = 13)

Mean age = 14.6 years

(range = 14.1 years – 14.9 years)

Control group (N = 16)

Mean age = 14.5 years

(range = 13.9 years – 14.9 years)

Table 3.2. Showing demographics of the groups

	Living with	Position in family
BTIO group	Both parents = 10	Only child = 0
	Mother and Stepfather = 1	Eldest in family = 6
	Mother = 2	Youngest in family = 5
	Siblings = 13*	Middle of family = 2
Control group	Both parents = 14	Only child = 1
	Mother and stepfather = 1	Eldest in family = 7
	Mother = 1	Youngest in family = 7
	Siblings = 15 ⁺	Middle of family = 1

* 3 had 1 sibling; 7 had 2 siblings; 3 had 3 or more siblings

⁺ 9 had 1 sibling; 4 had 2 siblings; 2 had 3 or more siblings

3.3 Perceived ability to look after a baby.

It was hypothesised that those who had taken the BTIO home would rate themselves less able to parent post BTIO than pre BTIO, and that this would be sustained at a nine month follow-up. There would be no change for the control group.

3.3.1 BTIO group

The results showed that the variation among mean ranks is not significant between pre BTIO, post BTIO and follow-up for the BTIO group ($P = 0.11$; $df = 2$). Table 3.3 summarises the results.

3.3.2 Control group

The results showed that the variation among mean ranks is not significant between pre BTIO, post BTIO and follow-up for the control group ($P = 0.72$; $df = 2$). Table 3.3 summarises the results.

The results show that there were no significant changes in self rating for either group in their ability to look after a baby.

Table 3.3 Summary of the results for the rating of ability to look after a baby.

	<i>Pre BTIO</i>	<i>Post BTIO</i>	<i>Follow-up</i>
<u>BTIO group</u>			
median	7	6	9
mean	7.3	6.1	6.3
range	6 - 9	3 - 9	3 - 9
sd	0.98	1.93	1.96
<u>Control group</u>			
median	7	6.5	7.5
mean	6.7	6.6	6.5
range	1 - 9	1 - 9	1 - 9
sd	2.15	2.13	2.25

3.4 Self-esteem.

It was hypothesised that those who had taken the BTIO home would have a higher score of overall self-esteem post BTIO than pre BTIO, and that this would be sustained at a nine month follow-up. There would be no change in the self-esteem scores for the control group.

3.4.1 BTIO Group

The results showed that the variation among mean ranks is not significant between pre BTIO, post BTIO and follow-up for the BTIO group ($P = 0.39$; $df = 2$). Table 3.4 summarises the results.

3.4.2 Control group

The results showed that the variation among mean ranks is not significant between pre BTIO, post BTIO and follow-up for the control group ($P = 0.94$; $df = 2$). Table 3.4 summarises the results.

The results show that there were no significant changes for either group in their scores of overall self-esteem.

Table 3.4. Summary of the results of the self-esteem scores.

	<i>Pre BTIO</i>	<i>Post BTIO</i>	<i>Follow-up</i>
<u>BTIO group</u>			
median	38.5	38.5	38.5
mean	37.7	35.5	39.2
range	25 - 48	17 - 43	29 - 48
sd	6.44	8.04	5.57
<u>Control group</u>			
median	38	39	37
mean	36.5	35.4	35.6
range	18 - 47	17 - 44	16 - 46
sd	7.19	9.08	9.05

As mentioned in the last chapter, the CFSEI-2 questionnaire does not just measure total self-esteem, but also has subscales that measure general self-esteem, social self-esteem, academic self-esteem and parental self-esteem. The results from each subscale will be presented in order.

3.4.3 General self-esteem for the BTIO group.

The results showed that the variation among mean ranks is not significant between pre BTIO, post BTIO and follow-up for the BTIO group ($P = 0.27$; $df = 2$). Table 3.5 summarises the results.

3.4.4 General self-esteem for the control group.

The results showed that the variation among mean ranks is not significant between pre BTIO, post BTIO and follow-up for the control group ($P = 1.00$; $df = 2$). Table 3.5 summarises the results.

The results show that there were no significant differences in general self-esteem scores for either group.

Table 3.5. Summary of the results of the general self-esteem scores.

	<i>Pre BTIO</i>	<i>Post BTIO</i>	<i>Follow-up</i>
<u>BTIO group</u>			
median	16	15.5	15.5
mean	15.3	14.5	15.8
range	11 - 19	6 - 17	12 - 19
sd	2.99	3.12	2.12
<hr/>			
<u>Control group</u>			
median	16	15.5	16.5
mean	15.06	14.69	14.56
range	6 - 19	7 - 19	6 - 19
sd	3.19	3.72	4.08
<hr/>			

3.4.5 Social self-esteem for the BTIO group.

The results showed that variation among mean ranks is significant between pre BTIO, post BTIO and follow-up for the BTIO group ($P = 0.03$; $df = 2$). Table 3.6 summarises the results. Dunn's Multiple Comparisons Post Hoc Test was then carried out. Table 3.7 summarises the results.

3.4.6 Social self-esteem for the control group.

The results showed that the variation among mean ranks is not significant between pre BTIO, post BTIO and follow-up for the control group ($P = 0.68$; $df = 2$). Table 3.6 summarises the results.

The results show that although there was a significant difference in the social self-esteem scores for the BTIO group, the Dunn's test does not show the exact location of this difference; it is nevertheless interesting that the BTIO social self-esteem scores went down at post BTIO and then rose at follow-up.

Table 3.6. Summary of the results of the social self-esteem scores.

	<i>Pre BTIO</i>	<i>Post BTIO</i>	<i>Follow-up</i>
<u>BTIO group</u>			
median	8	7.5	9
mean	7.9	7.4	8.6
range	5 - 10	6 - 9	7 - 10
sd	1.56	1.24	0.79
<u>Control group</u>			
median	7	8	8
mean	7.4	7.4	7.9
range	5 - 10	2 - 10	5 - 10
sd	1.59	2.25	1.48

Table 3.7. Dunn's Multiple Comparisons Post Hoc Test on the BTIO group's social self-esteem scores.

<i>Comparison</i>	<i>Rank Sum Difference</i>	<i>P value</i>
pre BTIO vs post BTIO	6.0	ns
pre BTIO vs follow-up	-4.5	ns
post BTIO vs follow-up	-10.0	ns

3.4.7 Academic self-esteem for the BTIO group.

The results showed that variation among mean ranks is significant between pre BTIO, post BTIO and follow-up for the BTIO group ($P = 0.01$; $df = 2$). Table 3.8 summarises the results. Dunn's Multiple Comparisons Post Hoc Test was carried then carried out. The significant comparison was between the pre BTIO score and the post BTIO score. Table 3.9 summarises the results.

3.4.8 Academic self-esteem for the control group.

The results showed that the variation among mean ranks is not significant between pre BTIO, post BTIO and follow-up for the control group ($P = 0.74$; $df = 2$). Table 3.8 summarises the results.

The results show that there is a significant difference for the BTIO group between pre BTIO scores and post BTIO scores, however it is interesting to note that this difference is in lowered academic self-esteem score and not higher academic self-esteem score.

Table 3.8. Summary of the results of the academic self-esteem scores.

	<i>Pre BTIO</i>	<i>Post BTIO</i>	<i>Follow-up</i>
<u>BTIO group</u>			
median	8	7.5	7.5
mean	7.7	6	6.8
range	3 - 10	1 - 9	3 - 10
sd	2.06	2.95	2.48
<hr/>			
<u>Control group</u>			
median	7	6.5	7.5
mean	6.5	5.9	6.4
range	1 - 10	1 - 9	1 - 9
sd	2.53	2.84	2.94

Table 3.9. Dunn's Multiple Comparisons Post Hoc Test on the BTIO group's academic self-esteem scores.

<i>Comparison</i>	<i>Rank Sum Difference</i>	<i>P value</i>
pre BTIO vs post BTIO	13.0	* P<0.05
pre BTIO vs follow-up	8.0	ns
post BTIO vs follow-up	-5.0	ns

3.4.9 Parental self-esteem for the BTIO group.

The results showed that the variation among mean ranks is not significant between pre BTIO, post BTIO and follow-up for the BTIO group (P = 0.19; df = 2). Table 3.10 summarises the results.

3.4.10 Parental self-esteem for the control group.

The results showed that the variation among mean ranks is not significant between pre BTIO, post BTIO and follow-up for the control group ($P = 0.54$; $df = 2$). Table 3.10 summarises the results.

The results from this study show no significant differences for either group in parental self-esteem scores.

Table 3.10. Summary of the results of the parental self-esteem scores.

	<i>Pre BTIO</i>	<i>Post BTIO</i>	<i>Follow-up</i>
<u>BTIO group</u>			
median	6	7	8.5
mean	6.8	7.4	7.9
range	4 - 10	3 - 10	5 - 10
sd	2.25	2.35	2.02
<u>Control group</u>			
median	8	8	7
mean	7.4	7.4	6.7
range	4 - 10	2 - 10	0 - 10
sd	2.25	2.47	2.63

3.5 Locus of control

It was hypothesised that those who had looked after the BTIO would have a more internal locus of control score post BTIO than pre BTIO, and that this would be sustained at a nine month follow-up. There would be no change in the locus of control scores for the control group.

3.5.1 Locus of control scores for the BTIO group.

The results showed that variation among mean ranks is significant between pre BTIO, post BTIO and follow-up for the BTIO group ($P = 0.05$; $df = 2$). Table 3.11 summarises the results. Dunn's Multiple Comparisons Post Hoc Test was carried out, and there were no significant differences. Table 3.12 summarises the results.

3.5.1 Locus of control scores for the control group.

The results showed that the variation among mean ranks is not significant between pre BTIO, post BTIO and follow-up for the control group ($P = 0.39$; $df = 2$). Table 3.11 summarises the results.

Although the Dunn's test does not show where the significance lies, the results indicate that the BTIO group did have a more internal locus of control at follow-up than at pre BTIO or post BTIO, whereas there was little change in the results from the control group.

Table 3.11. Summary of the results of the locus of control scores.

	<i>Pre BTIO</i>	<i>Post BTIO</i>	<i>Follow-up</i>
<u>BTIO group</u>			
median	11	11.5	9.5
mean	11.2	12.3	10
range	2 - 20	5 - 23	4 - 17
sd	5.01	4.96	4.29
<u>Control group</u>			
median	13	12	13
mean	13.8	13.8	14
range	6 - 25	6 - 26	5 - 27
sd	5.43	6.16	5.80

Table 3.12. Dunn's Multiple Comparisons Post Hoc Test on the BTIO group's locus of control scores.

<u>Comparison</u>	<u>Rank Sum Difference</u>	<u>P value</u>
pre BTIO vs post BTIO	-9.5	ns
pre BTIO vs follow-up	0.5	ns
post BTIO vs follow-up	10.0	ns

3.6 Assessing amount of change.

The data were then analysed using the Mann-Whitney Test in order to assess whether there are differences between groups in the amount of change from pre BTIO to post BTIO, and pre BTIO to follow-up on the following variables: 1) participants' thoughts re their ability to look after a baby; 2) participants' total scores of self esteem; 3) participants' scores of general self-esteem; 4) participants' scores of social self-esteem; 5) participants' scores of academic self-esteem; 6) participants' scores of parental self-esteem; 7) participants' scores of locus of control.

Table 3.13 shows a summary of the differences between groups in the amount of change from pre BTIO to post BTIO, and Table 3.14 shows a summary of the differences between groups in the amount of change from pre BTIO to follow-up.

The results show that there was a significant difference between the two groups in the amount of change on parental self-esteem from pre BTIO and follow-up. However care must be taken in interpreting this single significant result from many analyses, as it could be due to a Type I error.

Table 3.13. Summary of whether there are differences between groups in the amount of change from pre BTIO to post BTIO (N = 29).

<i>Variable</i>	<i>Mean rank</i>	<i>Mean rank</i>	<i>Range</i>	<i>U Value</i>	<i>Significance</i>
	<i>BTIO group</i>	<i>control group</i>			
	<i>(N=13)</i>	<i>(N=16)</i>			
ability	17.85	12.69	-1.00 – 5.00	U = 67.00	p = .110
total self-esteem	16.88	13.47	-8.00 – 14.00	U = 79.50	p = .288
general self-esteem	16.19	14.03	-5.00 – 6.00	U = 88.50	p = .503
social self-esteem	16.19	14.03	-4.00 – 6.00	U = 88.5	p = .503
academic self-esteem	18.38	12.25	-1.00 – 5.00	U = 60.00	p = .056
parental self-esteem	13.38	16.31	-3.00 – 4.00	U = 83.00	p = .374
locus of control	14.00	15.81	-7.00 – 7.00	U = 91.00	p = .589

Table 3.14. Summary of whether there are differences between groups in the amount of change from pre BTIO to follow-up (N = 28).

<i>Variable</i>	<i>Mean rank</i>	<i>Mean rank</i>	<i>Range</i>	<i>U Value</i>	<i>Significance</i>
	<i>BTIO group</i>	<i>control group</i>			
	<i>(N=12)</i>	<i>(N=16)</i>			
ability	15.71	13.59	-1.00 – 5.00	U = 81.50	p = .507
total self-esteem	12.96	15.66	-19.00 – 18.00	U = 77.50	p = .397
general self-esteem	13.29	15.41	-8.00 – 9.00	U = 81.50	p = .507
social self-esteem	14.08	14.81	-4.00 – 2.00	U = 91.00	p = .837
academic self-esteem	16.17	13.25	-5.00 – 5.00	U = 76.00	p = .371
parental self-esteem	10.67	17.38	-5.00 – 6.00	U = 50.00	p = .033*
locus of control	16.17	13.25	-7.00 – 9.00	U = 76.00	p = .371

3.7 Descriptive data from the sexual health questionnaire.

The data from the sexual health questionnaire will now be presented in descriptive format.

3.7.1 Thoughts on the future

The question was asked “*How likely is it that you will be doing the following in 2 years time?*”.

Answers showed that eleven of the BTIO group pre BTIO, thirteen post BTIO and ten at follow-up, wanted to be at school or college in two years time; fourteen of the control group pre BTIO, sixteen post BTIO and fifteen at follow-up, wanted to be at school or college in two years time. One participant from the BTIO group said they wanted to have a child pre BTIO, but by post BTIO and at follow-up this had changed to none from either group wanting to have a child.

Table 3.15 and Table 3.16 summarise the results from this question.

Table 3.15. Showing how many subjects in the BTIO group answered that were very likely or likely to be doing the following in 2 years time.

	Be in a secure job?	Be living with a boy/girlfriend husband/wife?	Be in a training scheme?	Have a child/children?	Be at school or college	Be in a steady relationship with someone?
Pre BTIO (n = 13)	3	1	4	1	11	4
Post BTIO (n = 13)	1	0	2	0	13	3
Follow-up (n = 12)	2	0	3	0	10	5

Table 3.16. Showing how many subjects in the control group answered that were very likely or likely to be doing the following in 2 years time.

	Be in a secure job?	Be living with a boy/girlfriend husband/wife?	Be in a training scheme?	Have a child/children?	Be at school or college	Be in a steady relationship with someone?
Pre BTIO (n = 16)	3	4	3	0	14	8
Post BTIO (n = 16)	3	5	6	0	16	10
Follow-up (n = 16)	6	9	5	0	15	8

3.7.2 Alcohol.

The question was asked “*In the last twelve months, about how often have you got drunk?*”. Figure 3.1 and Figure 3.2 summarise the results from this question (see p. 84). Both groups reported drinking more post BTIO and at follow-up than pre BTIO. However the time periods overlap and so these results may well be an underestimate.

3.7.3 Discussing contraception.

The question was asked “*Would you be happy discussing contraception with your: boyfriend/girlfriend; friends; parents/guardian; brother/sister; teacher; doctor?*”.

Most participants from both groups would be happy discussing contraception with their friends and boyfriend or girlfriend. However less than half would be happy discussing contraception with their parents (in the BTIO group: five at pre BTIO and at post BTIO, and six at follow-up; in the control group: five pre BTIO and six post BTIO and at follow-up). In the BTIO group only one participant would be happy discussing contraception with their teacher (pre BTIO, post BTIO and at follow-up), whereas in the control group slightly more participants would feel happy discussing contraception with their teacher (three at pre BTIO,

five at post BTIO, and six at follow-up). Table 3.17 and Table 3.18 summarise the results from this question.

Figure 3.1. Showing the reported drinking habits of the BTIO group.

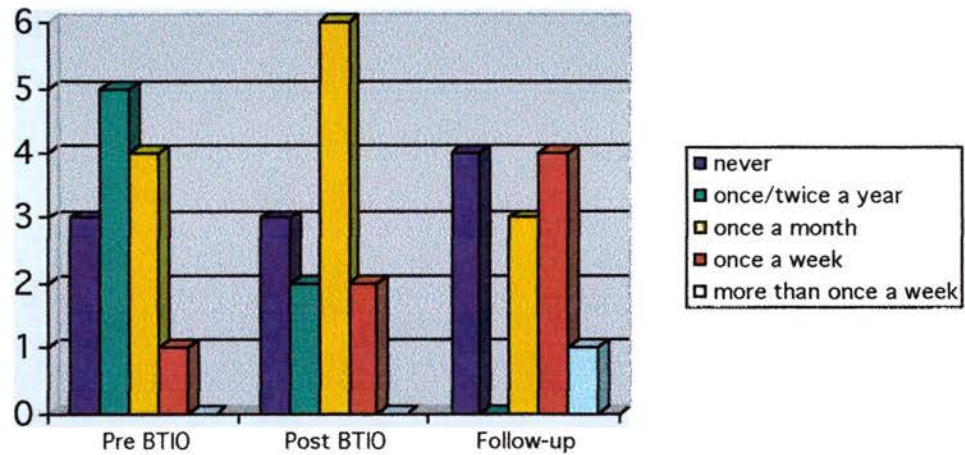


Figure 3.2. Showing the reported drinking habits of the control group.

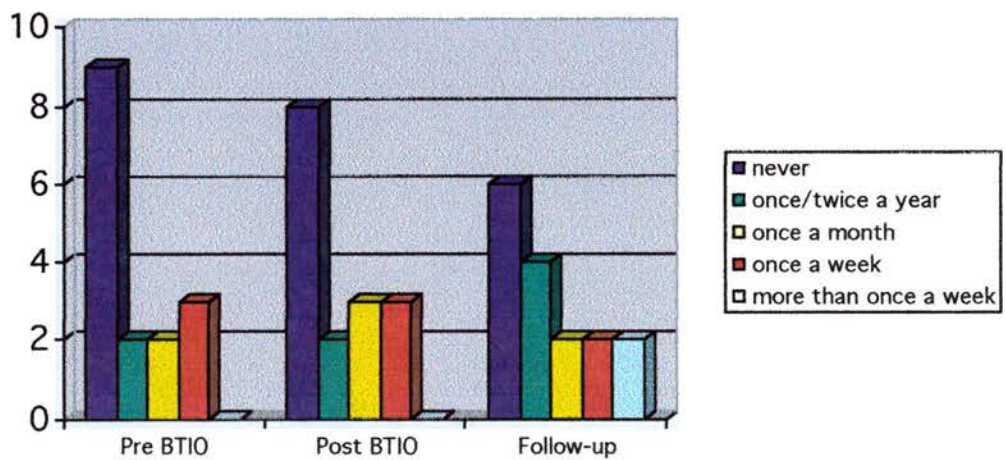


Table 3.17. Showing how many from the BTIO group would feel happy discussing contraception with various people in their lives.

	Boyfriend Girlfriend	Friends	Parents	Siblings	Teacher	Doctor
Pre BTIO (n = 13)	9	10	5	6	1	7
Post BTIO (n = 13)	10	9	5	5	1	7
Follow-up (n = 12)	10	10	6	5	1	7

Table 3.18. Showing how many from the control group would feel happy discussing contraception with various people in their lives.

	Boyfriend Girlfriend	Friends	Parents	Siblings	Teacher	Doctor
Pre BTIO (n = 16)	10	14	5	6	3	8
Post BTIO (n = 16)	10	13	6	6	5	10
Follow-up (n = 16)	10	12	6	8	6	12

3.7.4 Condoms.

The question was asked *“How easy or difficult would it be for you to: get a condom; carry condoms when you go out; talk openly about sex with a girlfriend/boyfriend; persuade a girlfriend/boyfriend that you should use a condom; use a condom properly; say no to something sexual you didn’t want to do”*.

The results showed that in the BTIO group six participants would be unsure or find it difficult to use a condom properly pre-BTIO, and this reduced to four post BTIO and to only one at follow-up, and most of the BTIO group would find it easy to get or carry condoms. However, the results from the control group showed that ten participants would be unsure or find it difficult to use a condom properly pre BTIO, which reduced to four post BTIO and went up to five at follow-up, and when it came to getting or carrying condoms the results showed that the control group were less confident than the BTIO group. Table 3.19 and Table 3.20 summarise the results from this question.

Table 3.19. Numbers of the BTIO group replying “unsure” or “difficult” when asked the question “How easy or difficult would it be for you to..”.

	Get a condom	Carry a condom	Talk openly about sex with a girl/boyfriend	Persuade a girl/boyfriend to use a condom	Use a condom properly	Say no to something you didn't want to do
Pre BTIO (n = 13)	2	2	5	6	6	2
Post BTIO (n = 13)	2	2	5	4	4	2
Follow-up (n = 12)	2	1	4	2	1	2

Table 3.20. Numbers of the control group replying “unsure” or “difficult” when asked the question “How easy or difficult would it be for you to....”.

	Get a condom	Carry a condom	Talk openly about sex with a girl/boyfriend	Persuade a girl/boyfriend to use a condom	Use a condom properly	Say no to something you didn't want to do
Pre BTIO (n = 16)	9	9	7	8	10	3
Post BTIO (n = 16)	7	8	6	6	4	3
Follow-up (n = 16)	5	6	4	4	5	3

3.7.5 Sex education.

(The tables for this and subsequent questions can be found in appendices 9 - 12)

The question was asked “*How much do you agree with the following statements about the sex education you have had: sex education was embarrassing; sex education made me feel more able to discuss sexual matters; sex education made me feel more confident about getting condoms should I need to; sex education made me feel more confident about using condoms properly; sex education was relevant to my own experience now; sex education will be relevant to my experience in the future*”. Table 3.21 – Table 3.26 summarise the results from this question (see appendix 9, p.179).

Most did not find sex education embarrassing (see Table 3.21); Half of the BTIO group and over half of the control group felt that sex education made them feel more able to discuss sexual matters (see Table 3.22). Over half of both groups felt that sex education made them feel more confident about getting condoms should they need to (see Table 3.23); over half of both groups felt that sex education made them feel more confident about using condoms properly (see Table 3.24). Less than half of both groups felt that sex education was relevant to their own experience now (see Table 3.25), but this changed to being more

positive when asked whether sex education would be relevant to their future (see Table 3.26).

3.7.6 Attitudes to sex and the use of condoms.

Participants were asked various questions about their attitudes to sex and the use of condoms. Table 3.27 – Table 3.40 summarise the results from these questions (see appendix 10, p.183).

One of the interesting results from this is that when participants were asked whether they felt they knew how to use a condom properly, they answered slightly differently than they did when previously asked this (see Table 3.36). Most of the participants from both groups felt that most of their close friends had not had sex (see Table 3.37); however there was a mixed response to a question asking whether they intended to discuss using condoms before sexual intercourse with their first or next sexual partner (see Table 3.40).

3.7.7 Responsibility for making sure contraception is used.

Participants were asked about who should take responsibility for making sure contraception is used. They were given a choice of males, females or both, and

all participants answered “*both*” to this question pre BTIO, post BTIO and at follow-up.

3.7.8 Knowledge of contraception and sexual matters.

Participants were asked various questions about their knowledge of sex and contraception. Table 3.41 – Table 3.47 summarise these results (see appendix 11, p.191).

Participants were asked the following: “*You can’t buy condoms if you’re under 16.*” Eight agreed or didn’t know/were uncertain about this from the BTIO group at pre BTIO, which reduced to two at post BTIO, and went up to three at follow-up. Six agreed or didn’t know/were uncertain about this from the control group, which reduced to five at post BTIO and to three at follow-up (see Table 3.41).

“*If a woman is under 16 and is on the pill, her doctor must tell her parents.*”

Most disagreed with this statement (see Table 3.42).

“Even if contraception is used correctly, there is still a chance that a woman can become pregnant.” Most agreed with this statement (see Table 3.43).

“It’s against the law to have sexual intercourse with a girl who is under 16.”

Most agreed with this statement (see Table 3.44).

“The pill does not protect against sexually transmitted diseases (e.g. AIDS).”

Most agreed with this statement (see Table 3.45).

“It’s against the law to have sexual intercourse with a boy who is under 16”.

Some from both groups disagreed with this statement both pre BTIO and post BTIO and at follow-up (see Table 3.46).

“A girl cannot become pregnant the first time she has sexual intercourse.” One participant from the BTIO group agreed with this statement at pre BTIO and at follow-up; one participant from the control group was unsure at pre BTIO and one agreed with this statement at follow-up; all other participants from both groups disagreed with this at all three data collection points (see Table 3.47).

3.7.9. *Qualitative comments.*

Participants were asked “*Is there anything that has happened or is there anything that you have learnt that has caused you to change the way you think about any sexual relationships that you might have?*” Post BTIO comments were confined to knowledge gained about contraception. At follow-up, only one participant from the BTIO group commented that having taken the BTIO home had changed her thinking, four commented that it was their relationships that influenced their thinking, and seven said “no”.

3.7.10. *Honesty and accuracy.*

Participants were asked to rate how honest and accurate they had been in their answers to questions on the sexual health questionnaire. Table 3.48 and Table 3.49 show the results to these questions. The results show that most people rated themselves as having been completely honest or very honest and completely accurate and very accurate at all three data collection points (see appendix 12, p.196).

3.8 The Baby Think It Over Questionnaire

The results from the Baby Think It Over pre and post questionnaires will not be analysed as only the BTIO group did this and there is no comparison. However some of the qualitative data will be presented from the Post-Simulation Questionnaire and the Parent Questionnaire as it is of interest for this project.

3.8.1 Caring for the Baby Think It Over.

Participants were asked *“In what ways do you think caring for Baby Think It Over was like caring for a real baby?”* and *“In what ways was caring for Baby Think It Over not like caring for a real baby?”*.

Eleven participants commented on both questions; one participant only commented on the second question; one participant made no comments at all. Some of the comments to the first question were about the time it took to care for the BTIO and the fact that it stopped some participants going to do things. Most of the comments to the second question were about the type of care and the fact that the BTIO has a key, rather than the need to feed, change or bath it (see appendix 13, p.198).

3.8.2 *Changing opinions.*

Participants were asked “*Has using the Baby Think It Over changed your opinions about parenthood?*”. Nine participants said there had been no change in their opinions, but two did not make any comment. Four participants said that it had changed their opinions. However most of the comments did acknowledge the fact that looking after a baby would be hard (see appendix 14, p.201).

3.8.3 *The Parents evaluation (see appendix 15, p.203).*

All parents thought that this had been a valuable exercise for their teenagers. Parents were asked “*What do you think your child has learned from this experience?*”. Ten parents filled out the parent evaluation. Most comments were about responsibility and also the “neediness” of a baby.

Parents were also asked what they thought was an appropriate length of time for the student to use the BTIO. The length of times ranged from three days to two weeks.

All parents thought it would be a good idea if the BTIO was made more realistic, so that it cried for different reasons and carer would have to “feed” or “change” it.

3.9 Structured interviews with participants

(see appendix 16, p.205; and appendix 17, p.208).

Structured interviews were carried out with four of the participants (one quarter of the original BTIO group) who were in the experimental group post BTIO and at follow-up.

The replies indicated that the participants had on the whole found the experience of having taken the BTIO home and looked after it for a weekend to be a positive experience. Three out of the four felt that in order to make the experience more meaningful it would be better to do more than just use a key to care for it. Three out of the four felt that they were the right age when they had taken BTIO home, two of them commented because they felt if they had been younger they might not have taken it seriously. The fourth person was less sure and felt it might have been more useful in first or second year. All four would recommend it as an experience for other people of their age group.

3.10 Interviews with teachers.

(see appendix 18, p.211; and appendix 19, p.215)

Unstructured interviews with the two teachers involved in the BTIO project were carried out.

Interviews showed that both teachers had found the BTIO to be a valuable addition to their Healthy Relationships course. One of the points that was brought out was that because of using the BTIO, the teachers had found that there was a gap in 2nd year sex education teaching, and decided that this needed to be rectified.

Post BTIO, Teacher 2 pointed out that he felt that it had been a good experience for the young people involved to take the BTIO home for the weekend, as he felt that it gave them a better understanding of the responsibility involved in looking after a baby, compared to the previous year when it had only been taken home over night.

Both teachers highlighted the practical difficulties of using the BTIO as part of the course. Batteries were an issue, as they had to use more than they had

expected. The teachers felt that the BTIO could have been made to be more realistic, which was also highlighted by parents (see p.92) and pupils (see p.93). Both teachers felt that one teacher needed to be responsible for the giving out and taking back of the doll.

Both teachers felt that the year group they were using the BTIO with was the correct one, as they felt the younger age groups would not take it seriously. This had also been put forward by some of the pupils (see p.93)

Teachers did comment on the fact that those in the BTIO group were more able to correct their peers during discussion after they had taken the BTIO home. However, the timing of this study meant that discussion about sexual health, relationships and pregnancy did not take place immediately post BTIO, but at some time between post BTIO and follow-up.

Both teachers felt that the BTIO had proved to be a valuable asset to the Healthy Relationships course, as prior to its use there had not been much about parenting and pregnancy. The teachers were keen that the BTIO would be used year on year, and were hopeful that if the new generation BTIO's were more realistic, i.e.

that they could be fed and have their nappy changed, that this would be better and they might even think about purchasing one for the school.

3.11 Summary of findings.

Significant differences were found in the results of the BTIO group's social self-esteem scores, their academic self-esteem scores and their locus of control scores. There were no other significant results for the BTIO group. No significant results were found for the control group. There was a significant difference between groups in the change in parental self-esteem scores from pre BTIO to follow-up, however care must be taken in interpreting this result as it may well be due to a Type I error.

Descriptive data from the sexual health questionnaire showed the following:

(1) Nearly all participants wanted to be in further education in two years time.

(2) Reported drinking habits showed an increase, but this may well have been an underestimate as the time periods from the data collection points overlapped with the 12 month period that was stated in the question (see 3.7.2. p. 81).

(3) Although most participants reported that they would be happy discussing contraception with their friends and boyfriend or girlfriend, less than half would be happy discussing contraception with their parents and even fewer discussing contraception with their teacher.

(4) Participants were asked if they would find it easy to use a condom properly in three different sections of the questionnaire. There were differences in answers to these questions, however the most important point here is that there were some from both groups who reported to feeling either unsure in their ability, or would find it difficult to use a condom.

(5) Sex education was not found to be embarrassing, but participants also put forward that the sex education they received was, they felt, more relevant to their future experience than their experience at the time of this study.

(6) Most participants felt that their close friends had not had sex.

(7) All participants responded that the responsibility for making sure contraception is used is up to both males and females.

(8) When it came to knowledge of contraception and sexual matters participants showed varied knowledge. Some from both groups felt that it was only possible to buy condoms if you were over sixteen. Some from both groups did not know about the law regarding sexual intercourse with boys under the age of sixteen.

(9) Only one participant from the BTIO mentioned that taking the BTIO home had caused them to change the way that they thought about any sexual relationships that they might have.

(10) Comments from both participants and parents about the BTIO suggested that the BTIO would be better if it were more realistic i.e. that it could be changed, fed and bathed. This was also stressed by the participants who were interviewed. All parents thought that taking the BTIO home had been a valuable exercise for their child. All four of those interviewed would recommend it as an experience for other people of their age.

(11) The teachers found the BTIO to be a valuable addition to their Healthy Relationships course. They found that it did promote discussion, which was a goal of the BTIO, and it also enabled those who had been through the experience

to correct their peers when it came to talking about relationships and aspects of teenage pregnancy. The BTIO project had highlighted a gap in the 2nd year teaching programme, which the teachers wanted to address in future years. They felt that the 2nd years could be introduced to the subject of healthy relationships, rather than leaving this until 3rd year, and this would leave more time in 3rd year for greater discussion of relationships and sexual issues. The more negative comments were about the practical difficulties with the BTIO, such as one teacher being involved in the distribution and collection of the BTIO and the paperwork involved.

4.1 Summary of this study

This study aimed to investigate whether the Baby Think It Over simulated baby would be a useful tool as part of a sex education programme in Highland region secondary schools. Previous research with this tool is limited, has been carried out in America and Australia, and the findings are inconclusive (Hart, Cochrane & Quinn, 2000; Kralewski & Stevens-Simon, 2000; Price, 2000; Strachan & Gorey, 1997). This study took place in a secondary school in Inverness, Scotland, which has a catchment area that is both urban and rural. The pupils were aged approximately fourteen years.

Comparisons were carried out between two groups, an experimental group and a control group. The study looked at whether there was a difference between perceived ability to look after a baby post BTIO to pre BTIO. Data were also collected looking at self-esteem and locus of control. Additional information was gathered about attitudes and behaviours, that have been shown to have an effect on teenage pregnancy (e.g. alcohol, thoughts about the ability to carry and use condoms), and knowledge of sexual issues (e.g. the law). These same measures were also assessed at a follow-up, which was nine months from post BTIO. The results of this study will be discussed in the following sections, limitations will be discussed, and suggestions made for future research.

4.2 Perceived ability to look after a baby

Similar to the findings of Kralewski & Stevens-Simon (2000), those in the experimental group did not show any significant differences between pre BTIO, post BTIO and follow-up. Kralewski & Stevens-Simon concluded that their findings were due to the fact that those who had undertaken the BTIO were able to overlook the negative aspects of the parenting experience. They thought this was because the participants believed in their own omnipotence i.e. the idea of 'personal fable' (Elkind, 1967).

This could also be true for this study, however, those participants who were interviewed in this study, commented that they would not want a baby at this point in time because they knew it would be difficult e.g. "No (I would not want a baby now) because I know it will be difficult. I just know I wouldn't be able to handle it." (see appendix 16), even though they had scored themselves quite high (quite able to look after a baby) at all three data collection points.

It is important to remember that in this study, participants were a self-selected group. They had had to volunteer to join the study in the first place. This could have made a big difference to the results. Kralewski & Stevens-Simon (2000), although they had also invited participants to join their study, had used a

neighbourhood in the Denver metropolitan area that had been highlighted as having a high teen pregnancy rate. Figures for teen pregnancy in Inverness are not broken down into districts and therefore it is not possible to state that the school used in this study was one of those that covered an area of high teen pregnancy.

One of the interesting facts that came from the demographic information was that the majority, from both groups in this study, were living with both parents. Models of unmarried parenthood, parental divorce and separation, and being brought up in care are seen as risk factors for teenage pregnancy (Coley & Chase-Lansdale, 1998; Coleman & Hendry, 1999; Hill, 2000). The fact that most of these participants were living with both parents suggests that their model of parenthood is one of stability. This could be a factor in whether or not these participants saw teenage parenthood as something to be avoided, and certainly single parenthood was not the majority model for this group.

4.3 Self-esteem

Contrary to the hypothesis, neither group showed significant changes in overall self-esteem post BTIO and at follow-up compared to pre BTIO, but if you look at the results from the subscales, the results are mixed.

Battle (1992) describes general self-esteem as “the aspect of self-esteem that refers to individuals’ overall perceptions of their worth”, and social self-esteem as “the aspect of self-esteem that refers to individuals’ perceptions of the quality of their relationships with peers” (Battle, 1992; p. 3). If those in the BTIO group did feel increased confidence in their abilities to discuss something that they felt they knew about because they had experienced it, i.e. by taking the BTIO home, then this is an important qualitative finding.

What is important to note in this study is, that both the teachers involved in the study remarked that they felt the participants in the BTIO group showed increased confidence in discussions about relationships and parenting, especially when it came to correcting their peers (see appendix 19).

As was highlighted in Chapter 1 (see p. 32), self-esteem is still being debated as a risk factor for teenage pregnancy. Previous research in this area has specifically asked about numbers of sexual partners and risky sexual practice (Cole, 1997), or looked at self-esteem and those who had already become pregnant (Crockenberg & Soby, 1989; Wight, Abraham & Scott, 1998), this study did neither.

When it came to academic self-esteem, there was a drop in both group's scores post BTIO (although it was only the BTIO group which showed any significance). This might well have been due to the fact that this study finished just as exams were looming, and this may have been an influencing factor. It is conceivable that the added stress of taking the BTIO home together with exams, might have added to the academic pressures felt by those in the BTIO group.

An important point is, that the majority from both groups stated that they wanted to be in further education in two years time (see tables 3.15 and 3.16). Thus participants' intentions appear to be of clear educational expectations for the future, and may be a more important factor than scores of academic self-esteem.

It has been put forward that those who are high achievers and have high educational prospects are less likely to become pregnant as a teenager than those who have no educational prospects (Hill, 2000; Maynard, 1995; Nitz 1999). Strachan & Gorey (1997) go as far as saying "In fact, the single largest personal predictor (protective effect) of adolescent pregnancy seems to be the holding of clear educational expectations." (p.172).

Parental self-esteem results were not found to be significant in this study. Battle (1992) describes parental self-esteem as “the aspect of self-esteem that refers to individuals’ perceptions of their status at home – including their subjective perceptions of how their parents or parent-surrogates view them” (Battle, 1992; p. 3). If teenagers feel respected and able to talk to their parents then they should be able to talk about sexual health with their parents too.

In this study just less than half of the participants in both groups reported that they would be happy talking about contraception with their parents. Certainly participants would not, on the whole, be happy discussing contraception with their teachers (see Table 3.17 and Table 3.18).

Hill (2000), Price (2000) and Todd, Currie & Smith (1999) see discussion between parents and teenagers as an important factor in increased awareness, knowledge of sexual issues, including teenage pregnancy and contraception. Those who are unable to communicate about sexual health issues with their parents turn to their friends for information, rather than seeking the advice of their teachers.

The majority of participants in both groups did report being happy to discuss contraception with their friends (see Table 3.17 and Table 3.18), however on

looking at answers given to questions regarding knowledge of contraception and sexual matters e.g. whether or not a person can buy condoms when they are under sixteen years old (see appendix 11), the lack of knowledge of some of the participants could be a concern.

4.4 Locus of control

The LCSC used in this study records high scores as meaning external locus of control, or that consequences of behaviour are attributed to luck, chance or the actions of others. Low scores mean a more internal locus of control, where consequences of behaviour are taken as being under the control of self.

In this study locus of control scores for the BTIO group were significant, although the Dunn's test did not show exactly where that significance lay, whereas there was little change in the scores for the control group.

It is interesting to note, that although the exact location of the significance was not pinpointed, the scores of the BTIO group went up slightly post BTIO, but actually went down at follow-up (see Table 3.9). This suggests that participants in the BTIO group were becoming more able to see consequences of their behaviour being under their own control by the end of this study.

Transcripts from the participants' interviews do suggest that they felt taking the BTIO home had changed their thinking, especially about taking responsibility for using contraception, e.g. "... it made me think so I'd always use it (contraception), I'm just not ready to have a baby" (see appendix 17), which would suggest a more internal locus of control. However, having no interviews with those in the control group gives no indication of their thoughts on the matter.

The teachers reported that in their view there are big changes in maturity as pupils go from 3rd year into 4th year at school (see appendix 19). If it was just that participants were becoming more mature in their thinking, and moving away from the 'personal fable' (Elkind, 1967), then the results should have shown similar changes for both groups, however this did not happen.

Burns (1999) and Nisevic & Rosic (2000) suggest that teenagers with poor school achievement and little future prospects tend to have an external locus of control, and may be at risk for maladaptive and risky behaviours. As mentioned before, most of the participants in this study have clear educational expectations and ideas of their future, which suggests that these participants possibly have a more internal locus of control.

Those in the BTIO group who were interviewed, did comment that they wanted to go to college or have their life first before having a baby e.g. “Definitely wait until I was older and been to college and had my life first before even thinking about it (having a baby)” (see appendix 16). This would fit with a more internalised locus of control.

4.5 Descriptive data

Some of the points made above have already looked at some of the descriptive data e.g. talking about contraception, and what participants wanted to do in two years time, however there were also some other findings that are of interest.

4.5.1 Drinking habits

The question was asked “How often have you been drunk in the last 12 months”. The results from this show that participants reported an increase in times they had been drunk from pre BTIO to post BTIO, and then from post BTIO to follow-up (see Figure 3.1 and Figure 3.2).

It is important to point out though, that the data collection points overlapped with the twelve month period stated in the question, so it could be conceivable that the reported drinking habits were actually an underestimate.

It should also be noted that three participants in the BTIO group reported that they had “never been drunk” at pre BTIO and post BTIO, and yet this went up to four at follow-up, which is difficult to understand.

Participants were asked how honest and how accurate they had been in their replies to questions. Those in the BTIO group reported themselves as having answered that they had been “completely” or “very” honest, and “completely” or “very accurate” at pre BTIO and follow-up. One participant had recorded that they had been “fairly honest” post BTIO, and another participant recorded that they had been “fairly accurate” post BTIO (see appendix 12). This could show that their answers were not as accurate or honest as they thought, and may need to be called into question, which is similar to the findings of Alexander *et al.* (1993).

It should be pointed out that increased alcohol intake during the teenage years can often be used as a mechanism for pleasure seeking experience, and be considered a normal part of ‘growing up’ (Coleman & Hendry, 1999), however, alcohol has also been seen as a risk factor for teenage pregnancy (Coley & Chase-Lansdale, 1998; Franklin & Corcoran, 2000; Kellogg, 1999; Nitz, 1999).

Research suggests that at least two of the predictors for drinking behaviours are those of peer behaviour, and parental drinking behaviours (Fergusson, Lynskey & Horwood, 1994; Plant, 2000), which allude to contextual factors (Bronfenbrenner, 1979; Lerner, 1985).

The context for the participants in this study, is that they are all in the same class at school. They must see each other's patterns of behaviour and this might well be incentive to copy. Therefore if some of their peers were drinking more, or even perceived as so, it is conceivable that this would be the incentive for them to drink more themselves.

Another contextual factor to take into account, is that of parental drinking habits. One of the questions that was not asked was whether their parents drank alcohol, how often, whether or not the teenagers were allowed to partake of alcohol with their parents, or indeed with or without their parents permission. These factors might have been an interesting addition. They might have given a clearer view as to the context in which these teenagers were developing, and be possible reasons for the rise in alcohol intake.

4.5.2 Ability to use a condom properly

Participants were asked whether or not they would find it easy or difficult to use a condom properly in three different sections of the sexual health questionnaire. The answers given were slightly different on the three occasions (see Table 3.19, Table 3.20, p.85; Table 3.24, appendix 9; Table 3.36, appendix 10).

Again, it is important to be aware that participants' subjective views as to their honesty and accuracy may have to be called into question. However, the fact that some from both groups felt that they would find it difficult to use a condom properly, or were unsure, is a worrying fact. This is particularly important if these are the people who their peers might go to for information on correct condom use. As all participants correctly responded that the responsibility for making sure that contraception is used is up to both males and females, it is then of great importance that all of them should feel confident in using a condom.

4.5.3 Sex education

Most participants replied that they did not find sex education to be embarrassing (see Table 3.21, appendix 9), which is positive. They also felt that the sex education they received was more relevant to their future experience than at the time of this study (see Tables 3.25 and 3.26, appendix 9).

Most participants also answered that most of their close friends had not yet had sexual intercourse (see Table 3.37, appendix 10), which might be construed that most of them too had also not yet had sexual intercourse. Therefore sex education that looks at AIDs and HIV, contraception, teenage pregnancy, parenthood, as well as relationships, might well not be what is uppermost in their minds at this time. However, this also might be construed as the idea of ‘personal fable’ (Elkind, 1967), in that it might not be relevant because their thinking is that it ‘definitely won’t happen to me’ (Coley & Chase-Lansdale, 1998).

Research suggests that an increased ability to discuss sexuality increases the use of contraception (Hill, 2000). An interesting point is that the participants in this study, however much they thought that sex education was not embarrassing and found that they were more able to discuss sexual matters (see Table 3.22, appendix 9), did not, on the whole, feel comfortable talking about contraception with their teachers. Maybe they felt that they were more able to discuss sexual matters with their peers, however, and as previously pointed out, this is positive, as long as the information they are imparting to one another is correct.

4.5.4 Peer sexual relationships

As mentioned above, most of the participants from both groups reported that most of their close friends had not had sexual relationships (see Table 3.37, appendix 10). Research suggests that one of the biggest influences as to whether or not teenagers become sexually active, is peer group acceptance of this (Corcoran, 1999; Price, 2000). It has been argued that attitudes and sexual behaviour have more to do with the perceived behaviour of peers, than what peers actually do (Meyrick & Harris, 1994). If this group see that their friends are not sexually active, or think that they are not, then they are probably less likely to entertain becoming sexually active themselves.

4.5.5 Qualitative data from the sexual health questionnaire

The participants were asked to comment on whether or not anything had happened to them, or if there was anything that they had learnt, that might have caused them to change the way that they thought about sexual relationships they might have. It was hoped that those in the BTIO group might have answered that having taken the BTIO home would have been something that had caused them to change the way they thought, and yet only one participant from this group mentioned the BTIO. Other comments, from both groups, were that they had split up from boyfriends, or just started relationships, but on the whole most either left this blank or wrote “no”.

As stated previously, the interviews at follow-up revealed that the BTIO had made those participants think differently about using contraception, thus the BTIO did have an effect, and they would recommend the BTIO as an experience for other people of their age (see appendix 17).

4.5.6 Suggestions for making the BTIO experience more meaningful

Both the parents, the participants in the BTIO group and those interviewed stressed that in order to make the BTIO experience more meaningful, it would have to be made more realistic. They did feel that it was a valuable exercise, however, but just putting a key in the back of the BTIO when it cried was felt to be unrealistic. Comments such as “You just had to put a key in its back and you never had to change nappies, wash or bath it....”, “It doesn’t need as much care as a real baby would need”, and “.... and when it cried we didn’t know what was wrong with it we just put the key in its back”, attest to this (see appendix 13). The newer generation BTIOs do have to have their nappies changed and be fed. Therefore the newer BTIOs might make the BTIO experience a more realistic one.

4.6 Teachers’ interviews

Both the teachers who were involved in this study, and the Healthy Relationships course, were very enthusiastic about using the BTIO. They both felt that it was a

positive addition to the course as prior to its' use there was too little on parenting, the emphasis being on relationships and sexual diseases such as HIV and AIDs. The previous year to this study, the BTIO had been used in the school for the first time, but it had been taken home overnight, and only by very few in each class, so the teachers were interested to see the difference that having so many take it home, and over a much longer period of time, would have.

Both teachers felt that those that did have the opportunity to be involved in the study felt it was a "feather in their cap" and that "amongst their peers they felt they were sort of special" (see appendix 18). They both felt that those in the BTIO group were more able post BTIO to correct their peers in class during class discussion (see appendix 19), and they felt that this was a positive, and direct effect of the BTIO. Therefore, as far as the teachers were concerned, there had been a qualitative raise in the BTIO group's self-esteem, even though the quantitative measures did not show this .

The teachers both felt that there had been practical difficulties with administering the BTIO, because it was time consuming and there was quite a bit of paperwork to be completed. Logistically they felt that it might have been better for one teacher to take overall control over giving out and taking back the BTIO, but in their case

this had not been possible. They also felt that it was better for a teacher to administer the BTIO rather than have an outside person to do this for them. They felt that when the participants brought the BTIO back, it was a good opportunity to get extra feedback as to how they had got on with the BTIO, and they could use this as a catalyst for classroom discussion.

There was disappointment in the fact that both BTIO's had sustained damage. They thought that if one teacher had been in overall control, then they would have been able to know who had caused the damage, and maybe would have been able to deal with this. As it stood, although they did not find out who had damaged the BTIOs it was nevertheless a catalyst for discussion, especially about how delicate babies are and how gently they need to be treated.

Batteries were used at a greater rate than they had imagined. They felt that if they had known just how quickly the BTIO used the batteries then they would have been better prepared.

Another factor that they felt needed addressing was the fact that the BTIOs in this study had only one set of clothing, and no blanket or covering. In the instructions that come with the BTIO, the manufacturer suggests that sets of clothing, nappies,

nappy bags and all the usual paraphernalia that a mother would usually have to take with her to care for her baby properly, was the ideal situation (Baby Think It Over, 1998). The BTIO itself just comes with a nappy from the manufacturers. Clothing, car seats and buggies that were used in this study had been kindly donated either by individuals or Health Promotion. Any other research with this tool might well have to address this, and have more items for the BTIO prior to giving it to participants.

One of the most gratifying aspects of this study, was that it gave the teachers a chance to evaluate their Healthy Relationships course as a whole. Having an outside researcher doing a study of this nature, allowed them to see that they were not only trying to fit a lot of information in during the course, but that there was an identified gap in the teaching of 2nd year pupils. This would be addressed in the following year, where love, relationships and caring would be talked about in 2nd year, leaving more time for sex education and sexual relationships in 3rd year.

Both teachers felt that the age group using the BTIO with was the correct one. They felt that the younger age groups might not treat the experience seriously. This was echoed by two of the participants interviewed.

In summary, the teachers agreed that the BTIO had been a very useful tool in the context of the Healthy Relationships course. They felt that it was an experience that added an extra dimension to the class discussions about contraception, pregnancy and sexual relationships, which could not have been gained by discussion alone. Qualitatively they concluded that taking part in the BTIO group had led to increased self-esteem and confidence with peers. The problems encountered were focused on practical issues of the equipment, and the difficulties of not having one person totally in charge of the paperwork and the administration of the BTIO. Both teachers and participants felt that the experience with the BTIO would have been enhanced if the BTIO had been more realistic e.g. that it cried to be fed or changed, and participants would then have to feed it or change its nappy. The newer models do have this facility.

Those interested in action research put forward that research, and the participation in research for teachers, can allow both reflexive practice and objective evaluation, which can lead to educational change driven by contextual factors (Hart & Bond, 1995). One of the most important, direct results of taking part in this study, was that both teachers identified a gap in their sex education teaching plan. This was something that neither they, nor the researcher, could have hypothesised as an

outcome, and yet, because of it, an important curriculum change would be made in following years.

4.7 Limitations of the study, and suggestions for further research

4.7.1 Power

One criticism that could be levelled against this study is that it used a small number of participants, and therefore was not powerful enough (Howell, 1992).

Previous research that has found that those who used the infant simulator and rated themselves as less able to look after a baby after the intervention, have used a small number of participants. Hart, Cochrane & Quinn (2000) do not report on power or effect size in their research article and have $N = 7$, but Strachan & Gorey (1997), who had $N = 6$ using the BTIO, report that:

“converting to a measure of practical significance – Cohen’s (1988) U_3 statistic- and again assuming that the magnitude of the effect observed with this relatively small sample were maintained with a much larger one, 90% of those adolescents experiencing the infant simulator lifespace intervention may be expected to do better (i.e., have a more realistic notion about the likely demands of parenting an infant) than the average adolescent not participating in such a program.” (p.176)

The pilot study carried out by the researcher (Freir, 1998), which looked at the use of the BTIO and factors that need to be taken into consideration when using it e.g. battery consumption, had also shown changes from pre BTIO to post BTIO in

attitude towards thoughts of ability to look after a baby, with the two teenage participants.

At the time of setting up the current study, only the Strachan & Gorey (1997) research was available, and this suggested that significant results were obtainable with a small *N*.

To fully understand the factors underlying the effects of the BTIO, this pilot study should be built upon using a larger sample size.

4.7.2 The sample

The sample in this study were a self-selected group, and possibly this could lead to the sample being biased.

Of the two studies that showed significant differences from pre to post BTIO, samples were selected either from lower socio-economic, urban group in America (Strachan & Gorey, 1997), or were from a Children's Home in Western Australia (Hart, Cochrane & Quinn, 2000).

The sample in the current study were not identified by economic status. The school in Inverness has a catchment that is both rural and urban. Participants were

not asked where they lived, or parental income factors. This might be important. Most of the participants came from families with both parents. If the pupils who did not want to take part were from a different socio-economic group, single parent families, or families where parents had remarried, then the results might have been different. As mentioned previously, parental drinking and their attitudes to their children's drinking was not looked at. Any further research would need to look in detail at parental factors.

Although risk factors suggest that disadvantaged teenagers are more likely to become pregnant, those from other backgrounds are not necessarily not at risk. It is therefore necessary to investigate the use of the BTIO in all socio-economic groups.

Possibly a better way of achieving a more representative sample e.g. those from all socio-economic groups, and with different levels of self-esteem and thoughts on pregnancy, would be to invite teenagers to opt out of a study, rather than opt in.

The sample in the current study was predominantly made up of females. The two males who opted into the study, were automatically included at the request of the teachers, and one of those had to pull out of the study before it started.

Consequently, this did not allow for comparisons between the sexes. Further research needs to look at whether or not there are differences dependent on sex, and make sure that there are equal numbers of males and females.

The participants for both groups were from the same year group, in the same school, and the results could have been confounded by this. This was carefully thought about prior to the study taking place. Strachan & Gorey (1997) compared the BTIO group with what they termed a 'class intervention', as well as a control group. They found that there were significant changes in attitude towards parenting for those in the BTIO group, and there was a nonsignificant positive trend for those in the class intervention group, compared to the control group.

In the current study, it was felt that it was better to use a sample where participants were going through the same programme of sex education, and look at any resultant differences, than use two groups who were being taught differently, e.g. the school in this study used discussion as its primary teaching tool, whereas another school may have used a more didactic approach.

It would be interesting to see what the results would be with different approaches to teaching.

The current study did not just extend discussion about the BTIO to those in the same year group, but also to those in the school, and the wider community.

The teachers reported that it was one of the most talked about issues during the term that the study was being carried out. This has had an effect on the expectations of the future 3rd years (those that had been in 2nd year at the time of the study), who were questioning the teachers as to when they would get the opportunity to take the BTIO home.

The study became talked about in the community, to the extent that there was an article in the local paper, highlighting this (Highland News, 2000). Future research could investigate effects in the wider community.

Context has an important part to play in the teenage years (Kendall, 2000). By not looking at contextual factors, and the wider effects, a study such as this could be missing vital information. Future research might take this into account.

No research thus far has looked at a longitudinal study using the BTIO. It might be found that there is, in fact, a latent positive effect of using the BTIO, and therefore

a longitudinal study that looks at the long term effects, would probably be a very useful addition to the studies done so far.

4.7.3 The Baby Think It Over

As mentioned above the BTIOs used in this study were Generation 5. They arrived from the manufacturers with a nappy and no other equipment.

Parents, participants and teachers all commented on the fact of that the BTIO seemed 'unrealistic'. Any further study would have to make sure that, even if using the same model, that it had enough clothing and equipment to make the experience feel more real. The newer models do in fact come with bottles for feeding, and nappies for changing. It would be interesting to see if the newer models made a difference to the experience for participants.

The manufacturers recommend that the BTIO is used for three days, although nowhere does it say why this is the optimum time. The BTIO in this study was used over a weekend (approximately 65 hours). Previous studies looking at participant outcomes have used either two days (Strachan & Gorey, 1997), or three days (Hart, Cochrane & Quinn, 2000; Kralewski & Stevens-Simon, 2000). The one other study with the BTIO, which looked at parents' perceptions of the BTIO,

used it over a weekend (Price, 2000). Prior to this study, the school involved had used the BTIO the previous year. At that time they used it overnight (approximately 16 hours). It would be interesting to know whether the time that participants have to look after the BTIO, affects the results. Further research might take this into account.

4.7.4 Summary of directions for further research

Future research needs to be carried out with the Baby Think It Over, and it should try and take into account the limitations of this study: (1) a larger, non-biased sample, which might be achieved by using an opt out scheme of recruitment; (2) a longitudinal study should be undertaken, to show the longer term effects of the BTIO; (3) equal males to females, to look at sex differences in thoughts about sexual health; (4) parental factors should be taken into account; (5) BTIO effects on different methods of teaching sex education e.g. discussion based education compared with didactic teaching; (6) the effects of the BTIO on the school community and the wider community; (7) using a newer generation BTIO that has more 'realistic' features might aid future research; (8) research that evaluates which is the best time scale to use the BTIO, e.g. whether a shorter time would work as well or better than a longer time.

4.8 Contribution of this study

An important motivation for this study was to add to the limited body of research looking at the Baby Think It Over as a tool in sex education for teenagers. Previous research has taken place in other countries, i.e. Australia and America, and the results have been mixed. Teenagers growing up in Highland region of Scotland could well have a different view of their teenage years compared to those growing up in other countries.

Previous research has used high risk samples. Although it is important for those who are a higher risk to be made aware of possible difficulties in parenting, thus giving them an informed choice, other teenagers, who are not identified as high risk can also become pregnant.

This study was undertaken in the context of the manufacturer's recommendations, which is that it is used as part of a sex education programme. None of the previous studies have done this.

The Baby Think It Over is an expensive piece of equipment that has ongoing expenses when it is used e.g. batteries, paperwork and items of equipment. Anecdotal evidence suggests positive results, and yet in the current political, health

and education climate, evidence based practice is the 'gold standard', therefore, research which can add to the argument, as to whether or not evidence points to the BTIO as being a useful tool in sex education, must be regarded as positive.

Clinical psychology involvement in a study such as this, keeps in line with current thinking on child services and involvement with health promotion (NHS Health Advisory Service, 1995; SCPDME & CAPISH, 1999). The researcher in this study was from outside of the education system, which gave the teachers the opportunity to look objectively at their teaching of sex education, and it identified a gap. This had not happened when they used the BTIO the year before, so it is not just the fact of using the BTIO which highlighted this gap, but the way that this study was carried out. By looking at wider issues, this study had far greater implications for the teaching of sex education in this school than had been expected.

The results from this study show that using the Baby Think It Over as a simulated experience of parenting, can be a useful addition to a sex education programme that is based on discussion. Positive changes did take place for some of the teenagers who took part, but these are not necessarily quantitative. It also had impact on the teaching of sex education in this particular school. In conclusion, the results of this study do provide the basis for meaningful hypotheses to be tested in the future.

REFERENCES

- Alexander, C., Somerfield, M., Ensminger, M., Johnson, K. & Kim, Y. (1993). Consistency of adolescents' self-report of sexual behaviour in a longitudinal study. *Journal of Youth and Adolescence*, **22**, 455-472.
- Baby Think It Over. (1998). *Operating Instructions: Generation 5*. Eau Claire, WI: Baby Think It Over.
- Baby Think It Over. (1999). *Success Stories*. Retrieved November 29, 1999, from the World Wide Web:
<http://btio.com/btiosucc.htm>
- Bandura, A. (1997). *Self-Efficacy: The Exercise of Control*. New York: Freeman & Co.
- Battle, J. (1992). *Culture-Free Self-Esteem Inventories – Second Edition: Examiner's Manual*. Austin, Texas: Pro-Ed.
- Brindis, C. (1999). Building for the future: adolescent pregnancy prevention. *Journal of the American Medical Womens Association*, **54**, 129-132.
- Bronfenbrenner, U. (1979). *The Ecology of Human Development*. Cambridge, MA: Harvard University Press.
- Bronfenbrenner, U. (1993). The ecology of cognitive development: Research models and fugitive findings. In R.H. Wozinak & K. Fischer (Eds), *Scientific Environments*. Hillsdale, N.J: Erlbaum.
- Burns, V.E. (1999). Factors influencing teenage mothers' participation in unprotected sex. *Journal of Obstetric, Gynecologic, & Neonatal Nursing*, **28**, 493-500.

Center for Sexual Health Research. (1999). *Young Peoples Survey on Teenage Sexual Health*. Southampton: University of Southampton Public Health Department, Portsmouth & SE Hampshire Health Authority.

Chaika, G. (1999). Egg babies, sugar babies, flour babies... Can they keep teens from having real babies? *Education World*. Retrieved May 25, 2000, from the World Wide Web:

http://www.education-world.com/a_curr/curr128.shtml.

Childrens Aid Society. (2001). *Community Schools*. Childrens Aid Society. Retrieved March 6, 2001, from the World Wide Web:

<http://www.childrensaidsociety.org/cas/comsch2.html>.

Cole, F.L. (1997). The role of self-esteem in safer sexual practices. *Journal of the Association of Nurses in AIDS Care*, **8**, 64-70.

Coleman, J. (1997a). *Key Data on Adolescence*. Brighton, Sussex: Trust for the Study of Adolescence.

Coleman, J. (1978). Current contradictions in adolescent theory. *Journal of Youth and Adolescence*, **7**, 1-11.

Coleman, J.C. & Hendry, L.B. (1999). *The Nature of Adolescence (3rd Edn)*. London: Routledge.

Coley, L.C. & Chase-Lansdale, P.L. (1998). Adolescent pregnancy and parenthood: Recent evidence and future directions. *American Psychologist*, **53**, 152-166.

Corcoran, J. (1999). Ecological factors associated with adolescent pregnancy: a review of the literature. *Adolescence*. Fall, 1-15. Retrieved October 12, 2000, from Findarticles.com, on the World Wide Web:

http://www.findarticles.com/cf_0/m2248/135_34/60302526/print.jtml

Crockenberg, S.B. & Soby, B.A. (1989). Self-esteem and teenage pregnancy. In A.M. Mecca, N.J. Smelser & J. Vasconcellos (Eds). *The Social Importance of Self-Esteem*. Berkeley, CA: University of California Press.

Department of Education and Science. (1982). *Mathematics Counts (The Cockcroft Report)*. London: HMSO.

Dohrenwend, B. & Dohrenwend, B. (Eds). (1974). *Stressful Life Events, Their Nature and Effects*. New York: John Wiley.

Elkind, D. (1967). Egocentrism in adolescence. *Child Development*, **38**, 1025-1034.

Fergusson, D.M., Lynskey, M.T. & Horwood, L.J. (1994). Childhood exposure to alcohol and adolescent drinking patterns. *Addiction*, **89**, 1007-1016.

Franklin, C. & Corcoran, J. (2000). Preventing adolescent pregnancy: a review of programs and practices. *Social Work*, **45**, 40-52.

Freir, V. (1998). Baby Think It Over: an evaluation by V. Freir. Unpublished article: Health Promotion Services, Inverness.

Furstenberg, F.F. & Harris, K.M. (1993). When and why fathers matter: Impacts of father involvement on children of adolescent mothers. In R.I. Lerman & T.J. Ooms (Eds). *Young Unwed Fathers*. Philadelphia: Temple University Press.

Garnham, A. & Oakhill, J. (1994). *Thinking and Reasoning*. Oxford: Blackwell Publishers.

Graber, J. & Brooks-Gunn, J. (1996). Transitions and turning points: navigating the passage from childhood through adolescence. *Developmental Psychology*, **32**, 768-776.

- Hart, E. & Bond, M. (1995). *Action Research for Health and Social Care: a guide to practice*. Buckingham: Open University Press.
- Hart, B., Cochrane, K. & Quinn, C. (2000). Positive pre-conception partnerships – the essential ingredient for good mental health. *International Journal of Mental Health Promotion*, **1**, 26-32.
- Highland News. (2000). Holding the baby: new school course leaves pupils with some unusual homework. 25th March.
- Hill, C. (2000). *Sex Under Sixteen: Young people comment on the social and educational influences on their behaviour*. London: Family Education Trust.
- Howell, D. C. (1992). *Statistical Methods for Psychology – Third Edition*. Belmont, California: Duxbury Press
- James, D. (1986). Alternative methodologies in teaching: Simulation of parenting with an egg. *Australian Social Work*, **39**, 3-8.
- Jessor, R., Turbins, M.S. & Costa, F.M. (1998). Protective factors in adolescent health behavior. *Journal of Personality & Social Psychology*, **75**, 788-800.
- Kellogg, N.D. (1999). Early sexual experiences among pregnant and parenting adolescents. *Adolescence (Summer)*. Retrieved 5 March, 2001, from the World Wide Web: http://www.findarticles.com/cf_0/m2248/134_34/55994467/print.html
- Kendall, P.C. (2000). Guiding theory for therapy with children and adolescents. In P.C. Kendall (Ed). *Child and Adolescent Therapy: Cognitive-Behavioural Procedures (2nd Edition)*. London: The Guilford Press.
- Kowaleski-Jones, L. & Mott, F.L. (1998). Sex, contraception and childbearing among high-risk youth: do different factors influence males and females? *Family Planning Perspectives*, **30**, 163-169.

- Kralewski, J. & Stevens-Simon, C. (2000). Does mothering a doll change teens' thoughts about pregnancy? *Pediatrics*, **105**, 1-5.
- Lerner, R. M. (1985). Adolescent maturational changes and psychosocial development: a dynamic interactional perspective. *Journal of Youth and Adolescence*, **14**, 355-372.
- Lewin, K. (1951). *Field Theory in Social Science*. New York: Harper & Row.
- Light, P. & Oates, J. (1990). The development of children's understanding. In I. Roth (Ed). *Introduction To Psychology (Vol. 1)*. Milton Keynes: Open University Press.
- Macdonald, A.M. & Kirkpatrick, E.M. (1987). *Chambers Everyday Dictionary (Revised Edn)*. Leicester: Galley Press.
- Maynard, R. (1995). Teenage childbearing and welfare reform: Lessons from a decade of demonstration and evaluation research. *Children and Youth Services Review*, **17**, 309-332.
- Meyrick, J. & Harris, R. (1994). Adolescent sexual behaviour, contraceptive use and pregnancy: a review. *Association for Child Psychology and Psychiatry*, **16**, No. 5.
- Muuss, R.E. (1996). *Theories of Adolescence (6th Edn)*. New York: McGraw-Hill.
- NHS Health Advisory Service. (1995). *Child and adolescent mental health services: together we stand*. London: HMSO.
- NHS Information & Statistics Division (2001). Teenage Pregnancy in Scotland 1989-1999. *Health Briefing*, **00/08**. Retrieved 5 March, 2001, from the World Wide Web:[http://www.show.scot.nhs.uk/isd/Scottish Health Statistics/subject/Teenpreg/0800Teen.pdf](http://www.show.scot.nhs.uk/isd/Scottish_Health_Statistics/subject/Teenpreg/0800Teen.pdf)

- Nisevic, S. & Rosic, S. (2000). Coping strategies and locus of control in adolescents. *Medicinski Pregled*, **53**, 250-256.
- Nitz, K. (1999). Adolescent pregnancy prevention: A review of interventions and programs. *Clinical Psychology Review*, **19**, 457-471.
- Nowicki, S. & Duke, M. (1983). The Nowicki-Strickland life-span locus of control scales: Construct validation. In H. Lefcourt (Ed.) *Research with the locus of control construct, Volume 2*. New York: Academic Press.
- Nowicki, S. & Strickland, B.R. (1973). A locus of control scale for children. *Journal of Consulting and Clinical Psychology*, **40**, 148-154.
- Oates, R.K., Forest, D. & Peacock, A. (1985). Self-esteem of abused children. *Child Abuse and Neglect*, **9**, 159-163.
- Plant, M. (2000). Young people and alcohol use. In P. Aggleton, J. Hurry & I Warwick (Eds), *Young People and Mental Health*, Chichester, West Sussex: Wiley & Sons, Ltd.
- Price, J.H. (2000). Rural parents' perceptions of the Baby Think It Over program – A pilot study. *American Journal of Health Studies*. Retrieved March 15, 2001, from Findarticles.com, on the World Wide Web:
http://www.findarticles.com/cf_0/m0CTG/1_16/65640244/print.jhtml
- Rodgers , B. & Pryor, J. (1998). *Divorce and Separation: the outcomes for children*. York: The Joseph Rowntree Foundation.
- Sabo, D.F., Miller, K.E., Farrell, M.P., Melnick, M.J. & Barnes, G.M. (1999). High school athletic participation, sexual behavior and adolescent pregnancy: a regional study. *Journal of Adolescent Health*, **25**, 207-216.

Scottish Council for Postgraduate Medical and Dental Education (SCPMDE) and Clinical and Applied Psychologists in Scottish Health Care (CAPISH). (1999). *Psychology Services in Scottish Healthcare*. Edinburgh, Scotland: SCPMDE.

Scottish Executive (2000). *Deacon Launches 'Healthy Respect' - £3 Million Project to Work to Improve Teenage Sexual Health*. Scottish Executive Press Release. Retrieved November 13, 2000 from the World Wide Web: <http://www.scotland.gov.uk/news/2000/11>.

Scottish Executive (2001). *New Community Schools*. Scottish Executive. Retrieved 6 March 2001, from the World Wide Web: <http://www.scotland.gov.uk/education/newcommunityschools/default.htm>.

Simmons, R. & Blyth, D. (1987). *Moving Into Adolescence: the impact of pubertal change and school context*. New York: Aldine De Gruyter.

Sroufe, L.A. (1970). A methodological and philosophical critique of intervention-oriented research. *Developmental Psychology*, **2**, 140-145.

Stevens-Simon, C., Kelly, L., Singer, D. & Cox, A. (1996). Why pregnant adolescents say they did not use contraceptives prior to conception. *Journal of Adolescent Health*, **19**, 48-53.

Stevens-Simon, C. & McAnarney, E.R. (1994). Childhood victimization: Relationship to adolescent pregnancy outcome. *Child Abuse and Neglect*, **7**, 567-575).

Stevens-Simon, C. & Reichert, S. (1992). Sexual abuse, adolescent pregnancy and child abuse: A developmental approach to an intergenerational cycle. *Archives in Pediatric Adolescent Medicine*, **148**, 23-27.

Strachan, W. & Gorey K.M. (1997). Infant simulator lifespace intervention: Pilot investigation of an adolescent pregnancy prevention program. *Child and Adolescent Social Work Journal*, **14**, 171-180.

Tanner, J. (1978). *Foetus Into Man*. London: Open Books.

Taris, T. & Semin, G. (1997). Parent-child interaction during adolescence and the adolescent's sexual experience: control, closeness and conflict. *Journal of Youth and Adolescence*, **26**, 373-398.

The SHARE questionnaire. (1999). *The Sex and Lifestyle Questionnaire: Your Attitudes, Beliefs and Behaviour*. Glasgow: MRC Social and Public Health Sciences Unit.

Todd, J., Currie, C. & Smith, R. (1999). *Health Behaviours of Scottish Schoolchildren: Technical Report 2: Sexual Health in the 1990's*. Edinburgh, Scotland: Research Unit in Health and Behavioural Change, University of Edinburgh Medical School.

Trad, P.V. (1999). Assessing the patterns that prevent teenage pregnancy. *Adolescence*, **34**, 221-240.

Ward, S. & Overton, W. (1990). Semantic familiarity, relevance, and the development of deductive reasoning. *Developmental Psychology*, **26**, 488-493.

Wight, D. & Abraham, C. (2000). From psycho-social theory to sustainable classroom practice: Developing a research-based teacher-delivered sex education programme. *Health Education Research: Theory and Practice*, **15**, 25-38.

Wight, D., Abraham, C. & Scott, S. (1998). Towards a psycho-social theoretical framework for sexual health promotion. *Health Education Research*, **13**, 317-330.

APPENDIX 1

LETTER TO PARENTS

AND CONSENT FORM FOR PARENTS AND PUPILS

IN BTIO GROUP



JOHN CONSIDINE M.A., M.Ed. Rector

INVERNESS ROYAL ACADEMY
CULDUTHEL ROAD
INVERNESS
IV2 6RE
Telephone - 01463 222884
Fax - 01463 243591

15 December 1999

Dear Parent

S3 HEALTHY RELATIONSHIPS COURSE

The school is fortunate to have the 'Baby Think It Over' programme of baby care as an important part of the S3 Healthy Relationships Course. This aspect of the course is being evaluated in a research project being carried out by V. Freir, Psychologist in Clinical Training, Clinical Psychology Department, Nurses Residence, by Craig Dunain, Inverness. Your son/daughter has shown an interest in taking part in this parenting simulation. The purpose of this letter is to set out the main points of what will be involved.

The Infant Simulator (Baby) will be collected from the school on a Friday at 3.30 p.m. and returned the following Monday at 8.40 a.m. The Baby will cry at random, unpredictable times 24 hours a day and require the student to care for it by inserting a care key in its back. Baby stops crying when the care key is inserted. The care key must be held in place from 1 to 30 minutes, approximating the time needed to care for an infant.

It will be the student's responsibility to keep Baby safe and cared for, but family members can help by offering emotional support and treating Baby as if it were real.

The parenting simulation is designed to help young adults understand three important facts about babies: (1) Babies' demands are unpredictable and must be met promptly, (2) Babies require a great deal of time and attention, and (3) Babies change a parent's life profoundly. An important feature of the project is the completion of a diary. The Programme helps young adults explore the physical, emotional, social and financial consequences of parenthood.

Your son/daughter will be asked to fill out a **confidential** questionnaire related to sexual health matters before and after the BTIO experience. They will also be asked to fill out the same questionnaire in approximately 9-12 months time. The questionnaire will only be seen by the researcher not the school. If you have any questions that are unanswered in this letter please contact me at the school.

Yours sincerely

Mr R F Mackay
Senior Teacher, PE Department

.....Parental Consent form attached

CONSENT FORM

As a Parent/Guardian of _____ Class _____ I have read the attached letter concerning the S3 Healthy Relationships Course and the Baby Think It Over Project. I understand that the BTIO Project will require my son or daughter to be the sole caretaker of BTIO, a computerised infant simulator whose crying replicates that of an infant. The experience is intended to demonstrate to my son or daughter the full-time commitment required for parenting an infant.

The Bay cries at random intervals throughout the day and night. When it cries, it will be the responsibility of my son or daughter to attend to Baby's needs.

Baby's crying and need for care may cause my child to lose sleep and possibly disturb other family members.

I am aware that this equipment is expensive and requires to be well treated and maintained.

Your son or daughter has been fully instructed in the operation of BTIO and has been informed of how to terminate the project at any time should the need arise.

Your son or daughter will be asked to fill out a confidential questionnaire on sexual knowledge and behaviour (including contraception), that will only be seen by the researcher and not the school, at the start of the project, after they have used the BTIO, and again in approximately 9 months time. All questionnaires will be done in school time and in the school.

Your child may at any point decide that they no longer wish to take part in the project and that this will not, in any way, affect their school marks.



(For Parent to complete)

Having read the above, I agree/do not agree * to allow my son or daughter to participate in the BTIO Programme and the research project being carried out by V.Freir.

Parent's signature: _____ Date _____

(For Pupil to complete)

Having been made aware of my responsibilities of care, I agree to participate in the BTIO Programme and the research project being carried out by V. Freir.

Pupil's signature: _____ Date _____

*please delete

APPENDIX 2

**LETTER TO PARENTS AND CONSENT FORM
FOR PARENTS WITH CHILDREN IN CONTROL GROUP**



INVERNESS ROYAL ACADEMY
CULDUTHEL ROAD
INVERNESS
IV2 6RE
Telephone - 01463 222884
Fax - 01463 243591

JOHN CONSIDINE M.A., M.Ed. Rector

16 December 1999

Dear Parent

S3 HEALTHY RELATIONSHIPS COURSE

The school is taking part in a research project (concerning parenting and sexual health matters) being undertaken by V. Freir, Psychologist in Clinical Training, Clinical Psychology Department, Nurses Residence, by Craig Dunain, Inverness.

As part of the research, your son or daughter will be asked to fill out a confidential questionnaire on sexual knowledge and behaviour (including contraception), that will only be seen by the researcher and not the school, at the start of the project and again in approximately 9 months time. All questionnaires will be done in school time and in the school.

Your child may at any point decide that they no longer wish to take part in the project and that this will not, in any way, affect their school marks.

Yours sincerely

Mr R F Mackay
(Senior Teacher, P.E. Department)



(For Parent to complete)

Having read the above, I agree/do not agree* to allow my son or daughter _____

Class _____ to participate in the research project being carried out by V. Freir.

Parent's signature: _____ Date: _____

* please delete

APPENDIX 3

CULTURE-FREE SELF-ESTEEM INVENTORY – 2nd EDITION

(CFSEI-2)

FORM A

CFSEI-2

Culture-Free Self-Esteem Inventories Second Edition

FORM A

Name _____ Age _____ Date _____
School / Class _____ Date of Birth _____
Examiner _____ Total _____ G _____ S _____ A _____ P _____ L _____

Directions

Please mark each statement in the following way: If the statement describes how you usually feel, make a check mark (✓) in the "yes" column. If the statement does not describe how you usually feel, make a check mark (✓) in the "no" column. Check only one column (either yes or no) for each of the 60 statements. This is *not* a test, and there are no right or wrong answers.

	Yes	No
1. I spend a lot of time daydreaming.....	<input type="checkbox"/>	<input type="checkbox"/>
2. Boys and girls like to play with me.....	<input type="checkbox"/>	<input type="checkbox"/>
3. I like to spend most of my time alone.....	<input type="checkbox"/>	<input type="checkbox"/>
4. I am satisfied with my school work.....	<input type="checkbox"/>	<input type="checkbox"/>
5. I have lots of fun with my mother.....	<input type="checkbox"/>	<input type="checkbox"/>
6. My parents never get angry at me.....	<input type="checkbox"/>	<input type="checkbox"/>
7. I wish I were younger.....	<input type="checkbox"/>	<input type="checkbox"/>
8. I have only a few friends.....	<input type="checkbox"/>	<input type="checkbox"/>
9. I usually quit when my school work is too hard.....	<input type="checkbox"/>	<input type="checkbox"/>
10. I have lots of fun with my father.....	<input type="checkbox"/>	<input type="checkbox"/>
11. I am happy most of the time.....	<input type="checkbox"/>	<input type="checkbox"/>
12. I am never shy.....	<input type="checkbox"/>	<input type="checkbox"/>
13. I have very little trust in myself.....	<input type="checkbox"/>	<input type="checkbox"/>
14. Most boys and girls play games better than I do.....	<input type="checkbox"/>	<input type="checkbox"/>
15. I like being a boy / I like being a girl.....	<input type="checkbox"/>	<input type="checkbox"/>
16. I am doing as well in school as I would like to.....	<input type="checkbox"/>	<input type="checkbox"/>
17. I have lots of fun with both of my parents.....	<input type="checkbox"/>	<input type="checkbox"/>
18. I usually fail when I try to do important things.....	<input type="checkbox"/>	<input type="checkbox"/>
19. I have never taken anything that did not belong to me.....	<input type="checkbox"/>	<input type="checkbox"/>
20. I often feel ashamed of myself.....	<input type="checkbox"/>	<input type="checkbox"/>
21. Boys and girls usually choose me to be the leader.....	<input type="checkbox"/>	<input type="checkbox"/>
22. I usually can take care of myself.....	<input type="checkbox"/>	<input type="checkbox"/>
23. I am a failure at school.....	<input type="checkbox"/>	<input type="checkbox"/>
24. I find it hard to make up my mind and stick to it.....	<input type="checkbox"/>	<input type="checkbox"/>
25. My parents make me feel that I am not good enough.....	<input type="checkbox"/>	<input type="checkbox"/>
26. I never get angry.....	<input type="checkbox"/>	<input type="checkbox"/>
27. I often feel that I am no good at all.....	<input type="checkbox"/>	<input type="checkbox"/>
28. I have many friends about my own age.....	<input type="checkbox"/>	<input type="checkbox"/>
29. Most boys and girls are smarter than I am.....	<input type="checkbox"/>	<input type="checkbox"/>
30. Most boys and girls are better than I am.....	<input type="checkbox"/>	<input type="checkbox"/>
31. My parents dislike me because I am not good enough.....	<input type="checkbox"/>	<input type="checkbox"/>
32. I like everyone I know.....	<input type="checkbox"/>	<input type="checkbox"/>
33. Children pick on me very often.....	<input type="checkbox"/>	<input type="checkbox"/>
34. I like to play with children younger than I am.....	<input type="checkbox"/>	<input type="checkbox"/>
35. I like to be called on by my teacher to answer questions.....	<input type="checkbox"/>	<input type="checkbox"/>
36. I would change many things about myself if I could.....	<input type="checkbox"/>	<input type="checkbox"/>
37. There are many times when I would like to run away from home.....	<input type="checkbox"/>	<input type="checkbox"/>
38. I am as happy as most boys and girls.....	<input type="checkbox"/>	<input type="checkbox"/>
39. I can do things as well as other boys and girls.....	<input type="checkbox"/>	<input type="checkbox"/>
40. I often feel like quitting school.....	<input type="checkbox"/>	<input type="checkbox"/>
41. I worry a lot.....	<input type="checkbox"/>	<input type="checkbox"/>
42. My parents understand how I feel.....	<input type="checkbox"/>	<input type="checkbox"/>
43. When I have something to say, I usually say it.....	<input type="checkbox"/>	<input type="checkbox"/>
44. I never worry about anything.....	<input type="checkbox"/>	<input type="checkbox"/>
45. I am as nice looking as most boys and girls.....	<input type="checkbox"/>	<input type="checkbox"/>
46. Other boys and girls are mean to me.....	<input type="checkbox"/>	<input type="checkbox"/>
47. I know myself very well.....	<input type="checkbox"/>	<input type="checkbox"/>
48. I am doing the best school work that I can.....	<input type="checkbox"/>	<input type="checkbox"/>
49. People can depend on me to keep my promises.....	<input type="checkbox"/>	<input type="checkbox"/>
50. My parents think I am a failure.....	<input type="checkbox"/>	<input type="checkbox"/>
51. I always tell the truth.....	<input type="checkbox"/>	<input type="checkbox"/>
52. I need more friends.....	<input type="checkbox"/>	<input type="checkbox"/>
53. I always know what to say to people.....	<input type="checkbox"/>	<input type="checkbox"/>
54. My teacher feels that I am not good enough.....	<input type="checkbox"/>	<input type="checkbox"/>
55. My parents love me.....	<input type="checkbox"/>	<input type="checkbox"/>
56. I never do anything wrong.....	<input type="checkbox"/>	<input type="checkbox"/>
57. Most boys and girls are stronger than I am.....	<input type="checkbox"/>	<input type="checkbox"/>
58. I am proud of my school work.....	<input type="checkbox"/>	<input type="checkbox"/>
59. I often get upset at home.....	<input type="checkbox"/>	<input type="checkbox"/>
60. I am never unhappy.....	<input type="checkbox"/>	<input type="checkbox"/>

APPENDIX 4

LOCUS OF CONTROL SCALE FOR CHILDREN

(LCSC)

LOCUS OF CONTROL SCALE FOR CHILDREN (LCSC)



Name: _____ Date of birth: _____

Date completed: _____

We are trying to find out what young people think about certain things. We want you to answer the following questions about the way you feel. There are no right or wrong answers. Don't take too much time answering any one question, but do try to answer them all.

One of your concerns during the test may be, 'What should I do if I can answer both yes and no to a question?' It is not unusual for that to happen. If it does, think about whether your answer is just a little more one way than the other. For example, if you would assign 51 per cent to 'yes' and 49 per cent to 'no', mark the answer 'yes'. Try to pick one or the other response for each of the questions and do not leave any blanks.

Tick yes or no next to each item. Thank you.

1. Do you believe that most problems will solve themselves if you just leave them? Yes No
2. Do you believe that you can stop yourself from catching a cold? Yes No
3. Are some people just born lucky? Yes No
4. Most of the time do you feel that getting good marks at school means a great deal to you? Yes No
5. Are you often blamed for things that aren't your fault? Yes No
6. Do you believe that if somebody studies hard enough, he or she can pass any subject? Yes No
7. Do you feel that most of the time it doesn't pay to try hard because things never turn out right anyway? Yes No
8. Do you feel that if things start out well in the morning, it is going to be a good day no matter what you do? Yes No
9. Do you feel that most of the time parents listen to what their children have to say? Yes No
10. Do you believe that wishing can make good things happen? Yes No
11. When you get punished, does it usually seem it is for no good reason at all? Yes No
12. Most of the time do you find it hard to change a friend's (mind) opinion? Yes No
13. Do you feel that cheering, more than luck, helps a team to win? Yes No
14. Do you feel that it is nearly impossible to change your parents' mind about anything? Yes No
15. Do you believe that your parents should allow you to make most of your own decisions? Yes No
16. Do you feel that when you do something wrong there is very little you can do to make it right? Yes No
17. Do you believe that most people are just born good at sports? Yes No
18. Are most of the other people your age stronger than you are? Yes No



- Do you feel that one of the best ways to handle most problems is just not to think about them? Yes No
- Do you feel you have a lot of choice in deciding who your friends are? Yes No
- If you find a four-leaf clover, do you believe that it might bring you good luck? Yes No
- Do you often feel that whether you do your homework has much to do with what kind of marks you get? Yes No
- Do you feel that when someone your age decides to hit you, there is little you can do to stop him or her? Yes No
- Have you ever had a good luck charm? Yes No
- Do you believe that whether or not people like you depends on how you behave? Yes No
- Will your parents usually help you if you ask them to? Yes No
- Have you felt that when people were mean to you it was usually for no reason at all? Yes No
- Most of the time, do you feel that you can change what might happen tomorrow by what you do today? Yes No
- Do you believe that when bad things are going to happen they are going to happen no matter what you try to do to stop them? Yes No
- Do you think that people can get their own way if they just keep trying? Yes No
- Most of the time do you find it useless to try to get your own way at home? Yes No
- Do you feel that when good things happen they happen because of hard work? Yes No
- Do you feel that when somebody your age wants to be your enemy there is little that you can do to change matters? Yes No
- Do you feel that it is easy to get friends to do what you want them to do? Yes No
- Do you usually feel that you have little to say about what you eat at home? Yes No
- Do you feel that when someone doesn't like you there is little you can do about it? Yes No
- Do you usually feel that it is almost useless to try in school because most other children are cleverer? Yes No
- Are you the kind of person who believes that planning ahead makes things turn out better? Yes No
- Most of the time, do you feel that you have little to say about what your family decides to do? Yes No
- Do you feel it is better to be clever than to be lucky? Yes No

© Nowicki, 1973. *Locus of Control* by Stephen Nowicki in a version developed by Philip Gammage. Reproduced by kind permission of the author.

This measure is part of *The Child Psychology Portfolio* edited by Irene Sclare. Once the invoice has been paid, it may be photocopied for use **within the purchasing institution only**. Published by The NFER-NELSON Publishing Company Ltd, Darville House, 2 Oxford Road East, Windsor, Berkshire SL4 1 DF, UK. Code 4059044

APPENDIX 5

**SEXUAL HEALTH QUESTIONNAIRE
SHOWING DEMOGRAPHICS, SEXUAL KNOWLEDGE,
AND SEXUAL ATTITUDES**

NAME

DATE OF BIRTH

MALE/FEMALE

Thank you for agreeing to fill out this questionnaire.

*All your answers will remain confidential.
So, please be honest about how you feel
and what you think.*

1. Which adults do you stay with at home?

(Please tick **all that apply**)

my mother

my father

my step-mother

my step-father

my grandmother

my grandfather

another woman who is not my mum

another man who is not my dad

yes

no

2. Do you have any brothers or sisters

if yes how many of each

if yes where do you come in your family (e.g. eldest, youngest etc.)

3. How likely is it that you will be doing the following in **2 years time**?

(Please tick **one box per line**)

	very likely	likely	unsure	unlikely	very unlikely
be in a secure job?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
be living with a girlfriend/wife boyfriend/husband?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
be in a training scheme? (e.g. Skillseekers)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
have a child/children?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
be at school or college?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
be in a steady relationship with someone?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. In the last twelve months, about how often have you got drunk?
(Please tick *only one box*)

- never
- once or twice a year
- about once a month
- about once a week
- more than once every week

5. Would you feel happy about discussing contraception with your:
(please tick *one box per line*)

	yes	no	don't know	does not apply
boyfriend/girlfriend	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
friends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
parents/guardian	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
brother/sister	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
teacher	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
doctor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. How easy or difficult would it be for you to:
 (please tick *one box per line*)

	very easy	easy	unsure	difficult	very difficult
get a condom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
carry condoms when you go out	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
talk openly about sex with a girl/boyfriend	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
persuade a girl/boyfriend that you should use a condom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
use a condom properly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
say no to something sexual you didn't want to do	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6b On a scale of one to ten (1 being the worst and 10 being the best), how would you rate your abilities now as the caregiver for a baby's needs (feeding, bathing, changing, soothing, keeping it safe and healthy)?

Now we're going to ask you about your attitudes towards sex and contraception.

Below are some statements about attitudes to sex and the use of condoms.

7. Please read the statement and then circle the number that you agree with.

<u>Key</u>	1	2	3	4	5
	strongly agree	agree	don't know/ uncertain	disagree	strongly disagree
a) I intend to use condoms the first/next time I have sexual intercourse.	1	2	3	4	5
b) You should be in love before you have sexual intercourse.	1	2	3	4	5
c) You should always use a condom during sexual intercourse.	1	2	3	4	5
d) Generally speaking, I want to do what my close friends think is right.	1	2	3	4	5
e) Using condoms reduces the risk of getting AIDS and other sexually transmitted diseases.	1	2	3	4	5
f) One night stands are okay.	1	2	3	4	5
g) Most of my close friends think that you should use condoms during sex.	1	2	3	4	5
h) I think the use of condoms reduces sexual pleasure and spontaneity.	1	2	3	4	5
i) I worry about getting pregnant/ getting a girl pregnant at my age.	1	2	3	4	5
j) I feel that I know how to use a condom properly.	1	2	3	4	5
k) Most of my close friends have <i>not</i> had sex.	1	2	3	4	5
l) People should refuse to have sex with someone who objects to using a condom.	1	2	3	4	5
m) I feel I could insist that a condom was used during sex.	1	2	3	4	5
n) I intend to discuss using condoms before having sexual intercourse with my first/next sexual partner.	1	2	3	4	5

8. Who should take responsibility for making sure contraception is used?

- males
- females
- both

9. Now we want to ask you about your knowledge of sex and contraception

Below are some statements about contraception and sexual matters.

Please read the statement and then circle the number that you agree with.

<u>Key</u>	1	2	3	4	5
	strongly agree	agree	don't know/ uncertain	disagree	strongly disagree
a) You can't buy condoms if you're under 16.	1	2	3	4	5
b) If a woman is under 16 and is on the pill, her doctor must tell her parents.	1	2	3	4	5
c) Even if contraception is used correctly, there is still a chance that a woman can become pregnant.	1	2	3	4	5
d) It's against the law to have sexual intercourse with a girl who is under 16.	1	2	3	4	5
e) The pill does not protect against sexually transmitted diseases (e.g. AIDS).	1	2	3	4	5
f) It's against the law to have sex with a boy who is under 16.	1	2	3	4	5
h) A girl cannot become pregnant the first time she has sexual intercourse.	1	2	3	4	5

And finally:

The last question asks you about how honest and accurate your answers to this questionnaire have been. (*Please tick **one box per line***)

	completely	very	fairly	not very
How honest have your answers been?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How accurate have your answers been?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE

APPENDIX 6

**FOLLOW-UP SEXUAL HEALTH QUESTIONNAIRE
SHOWING SEXUAL KNOWLEDGE,
AND SEXUAL ATTITUDES**

Follow up questionnaire

NAME

DATE OF BIRTH

MALE/FEMALE

Thank you for agreeing to fill out this questionnaire.

***All your answers will remain confidential.
So, please be honest about how you feel and
what you think.***

1. How likely is it that you will be doing the following in **2 years time**?

(Please tick one box per line)

	very likely	likely	unsure	unlikely	very unlikely
be in a secure job?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
be living with a girlfriend/wife boyfriend/husband?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
be in a training scheme? (e.g. Skillseekers)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
have a child/children?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
be at school or college?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
be in a steady relationship with someone?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. In the last twelve months, about how often have you got drunk?

(Please tick only one box)

never	<input type="checkbox"/>
once or twice a year	<input type="checkbox"/>
about once a month	<input type="checkbox"/>
about once a week	<input type="checkbox"/>
more than once every week	<input type="checkbox"/>

3. Would you feel happy about discussing contraception with your:
(please tick one box per line)

	yes	no	don't know	does not apply
boyfriend/girlfriend	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
friends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
parents/guardian	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
brother/sister	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
teacher	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
doctor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. How easy or difficult would it be for you to:
(please tick one box per line)

	very easy	easy	unsure	difficult	very difficult
get a condom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
carry condoms when you go out	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
talk openly about sex with a girlfriend/boyfriend	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
persuade a girlfriend/boyfriend that you should use a condom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
use a condom properly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
say no to something sexual you didn't want to do	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. How much do you agree with the following statements about the sex education you have had.

Sex education:	strongly agree	agree	unsure	disagree	strongly disagree
was embarrassing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
made me feel more able to discuss sexual matters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
made me feel more confident about getting condoms should I need to	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
made me feel more confident about using condoms properly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
was relevant to my own experience now	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
will be relevant to my experience in the future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. On a scale of one to ten (1 being the worst and 10 being the best), how would you rate your abilities now as the caregiver for a baby's needs (feeding, bathing, changing, soothing, keeping it safe and healthy)?

Now we're going to ask you about your attitudes towards sex and contraception.

Below are some statements about attitudes to sex and the use of **condoms**.

7. Please read the statement and then circle the number that you agree with.

Key	1 strongly agree	2 agree	3 don't know/ uncertain	4 disagree	5 strongly disagree
a) I intend to use condoms the first/next time I have sexual intercourse.	1	2	3	4	5
b) You should be in love before you have sexual intercourse.	1	2	3	4	5
c) You should always use a condom during sexual intercourse.	1	2	3	4	5
d) Generally speaking, I want to do what my close friends think is right.	1	2	3	4	5
e) Using condoms reduces the risk of getting AIDS and other sexually transmitted diseases.	1	2	3	4	5
f) One night stands are okay.	1	2	3	4	5
g) Most of my close friends think that you should use condoms during sex.	1	2	3	4	5
h) I think the use of condoms reduces sexual pleasure and spontaneity.	1	2	3	4	5
i) I worry about getting pregnant/ getting a girl pregnant at my age.	1	2	3	4	5
j) I feel that I know how to use a condom properly.	1	2	3	4	5
k) Most of my close friends have <i>not</i> had sex.	1	2	3	4	5
l) People should refuse to have sex with someone who objects to using a condom.	1	2	3	4	5
m) I feel I could insist that a condom was used during sex.	1	2	3	4	5
n) I intend to discuss using condoms before having sexual intercourse with my first/next sexual partner.	1	2	3	4	5

8. Who should take responsibility for making sure contraception is used?

males

females

both

9. Now we want to ask you about your knowledge of sex and contraception

Below are some statements about contraception and sexual matters.

Please read the statement and then circle the number that you agree with.

Key	1	2	3	4	5
	strongly agree	agree	don't know/ uncertain	disagree	strongly disagree

- a) You can't buy condoms if you're under 16. 1 2 3 4 5
- b) If a woman is under 16 and is on the pill, her doctor must tell her parents. 1 2 3 4 5
- c) Even if contraception is used correctly, there is still a chance that a woman can become pregnant. 1 2 3 4 5
- d) It's against the law to have sexual intercourse with a girl who is under 16. 1 2 3 4 5
- e) The pill does not protect against sexually transmitted diseases (e.g. AIDS). 1 2 3 4 5
- f) It's against the law to have sex with a boy who is under 16. 1 2 3 4 5
- h) A girl cannot become pregnant the first time she has sexual intercourse. 1 2 3 4 5

And finally:

The last question asks you about how honest and accurate your answers to this questionnaire have been. (*Please tick one box per line*)

	completely	very	fairly	not very
How honest have your answers been?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How accurate have your answers been?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If there are any comments you would like to make then please write them in below:

THANK YOU FOR COMPLETING THIS
QUESTIONNAIRE

APPENDIX 7

BABY THINK IT OVER STUDENT HANDBOOK

TABLE OF CONTENTS

Introduction	2
Terminology	2
Operating Instructions	
When Baby Cries	2
Other Baby Care	4
Car Seat Safety	5
Sudden Infant Death Syndrome	7
Shaken Baby Syndrome	9



Baby Think It Over, Inc.
2709 Mondovi Road, Eau Claire, WI 54701
<http://www.btio.com>



Student Handbook (Generation 5)

Introduction

Congratulations! You will soon experience many of the same responsibilities as the parent of a new baby. Of course, Baby Think It Over does not act like a real baby in every way. Baby does not smile, laugh, throw up, or wet its diaper.

Baby's cry is a recording of a real baby, and you won't know when, or how long it will need your attention. Like a real baby, it may sometimes need you at inconvenient times, including when you are sleeping. As with an infant, Baby's head needs proper support; carry and hold it correctly. Keep Baby with you at all times and if you go out, you may need to take baby equipment and supplies, such as a stroller, diaper bag, and car seat. The infant simulator is often mistaken for a real baby. Dress Baby warmly in cold weather; never leave it unattended.

Terminology

Baby Think It Over®, Baby, or infant simulator -

refer to the computerized infant you will care for.

Parenting simulation -

the experience of caring for Baby.

Electronics box -

the small computer that fits in Baby's back. A readout inside the box tells your instructor how well Baby was cared for.

Care key -

the small plastic device you wear on your wrist to care for Baby.

Care session -

caring for Baby by holding the care key in its back for the length of time Baby requires.

Operating Instructions

When Baby Cries

Although there might be times in real life when a parent would let a baby cry, most of the time, and especially with a very young infant, the parent should respond quickly.

A real baby's cry can signal many different needs. Baby Think It Over will cry for only five reasons:

1. Baby is in the wrong position.
2. Baby needs care, provided by the care key.
3. Baby has the care key inserted, but wants to be left alone.
4. Baby has been handled too roughly.
5. Baby's head has not been properly supported.

1. Wrong Position

Baby likes to be on its back, right side, or upright. If you hold it upside down, on its left side, or lay it on its stomach, it will begin crying after a few seconds and will continue crying until positioned correctly. If crying continues for more than one minute, the electronics box will report a neglect event.

2. Needs Care

Baby will cry for care. This may happen many times a day, but the times will be random, not evenly spaced. Real babies need to be fed, burped, soothed, etc. You will simulate all these actions by using a care key. Your instructor will fasten the care key to your wrist with a wristband, similar to one you would wear in the hospital. You, and only you, can care for your Baby. If you remove the wristband, you will not be able to put it back on. If there will be times that you cannot care for Baby during your parenting simulation, arrangements for a babysitter must be made with your instructor's approval.



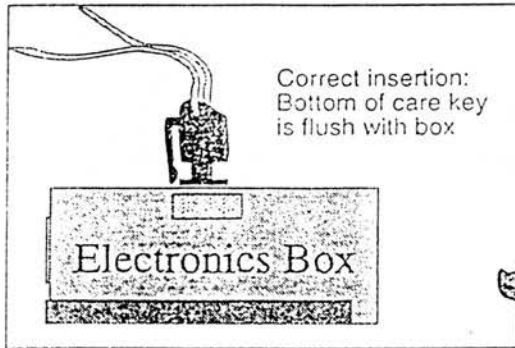
Do not allow the care key to dangle from your wrist, where it can be pulled into machinery or snagged, possibly causing serious injury. Keep it clipped to the wristband, or wrap the cord around your wrist when you are not using it to care for Baby.

When crying begins, check to see if you are holding Baby correctly. If you are, or if changing the position doesn't stop the crying, then it probably needs the care key. Insert the care key into the hole in the electronics box as shown in the drawings, and gently turn the care key clockwise.

There will be a delay of up to three seconds between the time that you insert the care key and the time that Baby stops crying. Do not overturn the care key.

Overturning can damage the care key or electronics box, and you will have no way to stop the crying!

Crying for the care key does not necessarily mean Baby is "hun-



gry". Real babies are not always hungry when they cry, and constant feeding can lead to weight problems later in life. That is why you put the care key in Baby's back, not in its mouth. Remember, using the care key is not always feeding.

During the care session, you must continue to hold the care key in place as well as position Baby correctly, or it will start to cry again. Cradle Baby in your left arm (if you are right-handed) and hold the care key in Baby's back

with your right hand. If you are left-handed, hold Baby in your right arm and the care key with your left hand.

A care session can last as little as one minute or as long as thirty. You will not know how long the care session will last until Baby coos or cries to signal that the care key should be removed. Care sessions are random, so you will never be able to predict when Baby will need its care key.

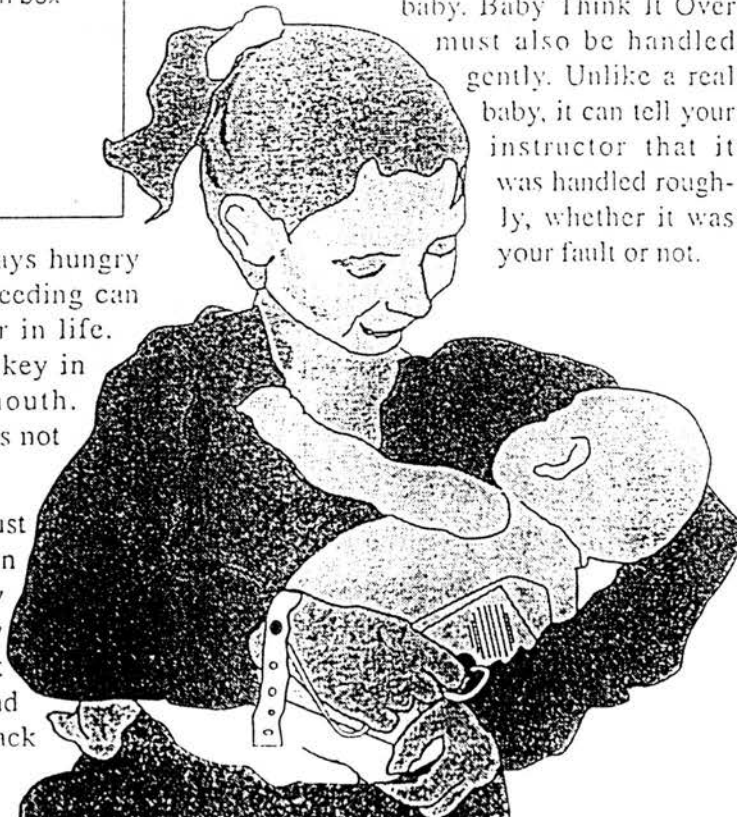
If Baby cries when you remove the care key, you probably let it slip out of place before the care session was over. Re-insert the care key, turn it gently, and wait a few seconds for the crying to stop. Continue holding the care key in place until the care session is complete. Remember to position Baby correctly.

3. Wants To Be Left Alone

When the care session is over, Baby coos or cries to tell you that it is finished. If Baby has been well cared for with no neglect, rough handling, or improper head support it will coo. Remove the care key. Until the next care session, the care key can not be inserted or Baby will cry.

4. Handled Too Roughly

Babies are fragile. They must be handled gently. An accident, or shaking or hitting, by a frustrated adult can hurt or even kill a baby. Baby Think It Over must also be handled gently. Unlike a real baby, it can tell your instructor that it was handled roughly, whether it was your fault or not.



Remember, don't...

- ... juggle too many things in your arms at one time while holding Baby; it's too easy to drop something, and it could be Baby.
- ... play with Baby by throwing it in the air and catching it. This can cause permanent brain damage in a real baby.
- ... let other people hold Baby unless you would trust them with your own child. Some people think it's funny to abuse Baby, or may want to get you in trouble by damaging it.
- ... leave Baby unattended or put it anywhere that would be unsafe for a real baby, including a table, counter or chair.
- ... let anyone shake Baby, and never shake it yourself. Although shaking may not seem as bad as hitting or dropping a baby, in real life, shaking can cause brain damage, and sometimes death.

If Baby is handled roughly, even accidentally, it will cry for 30 seconds and cannot be quieted. Using the care key or changing Baby's position will not help during this time, just as an injured baby cannot be immediately comforted. Each time Baby is handled roughly, it records a rough handling event.

5. Head Support

When holding a real baby, the head must be supported. Baby Think It Over is designed to stress this need. If you fail to support the head, it will fall back and Baby will cry for 30 seconds and cannot be quieted. Baby will report how many times the head was not properly supported.

In the event the head position is not corrected, Baby continues to cry. If Baby is left to cry for longer than one minute, the computer will record a neglect event.

Other Baby Care

Bathing & Changing

Real babies need their diapers changed and infants need to be bathed. Your instructor may require you to do these tasks. Follow your instructor's directions

for bathing Baby. NEVER immerse Baby in water, and NEVER let water touch the electronics box in its back.

Skin Care

Real babies have delicate skin. Baby has vinyl skin that STAINS VERY EASILY. Keep Baby away from pens, newspapers, magazines and new unwashed clothing, especially new blue jeans and new sweat-shirts. The inks and dyes can stain Baby's skin, and these stains may not come off.

Supplies & Equipment

Your instructor may require you to use equipment that a real baby needs. Parents never know when a very young infant will need to be fed or have its diaper changed while away from home, so they need to carry many items with them in a diaper bag. Take good care of these things as well as Baby. If equipment is assigned, such as a bed, stroller, or carrier, use them consistently.

If You Drive

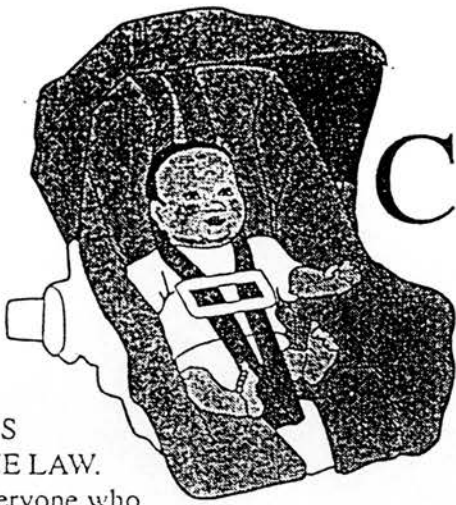
If you are driving when Baby begins to cry, pull the vehicle safely off the road before attempting to use the care key. If you cannot safely pull over, let Baby cry. If Baby cries more than one minute, note the incident in your diary.

It is illegal in most states to transport a baby without a car seat. Use a car seat every time you drive or ride in any vehicle with Baby. Learn how to strap Baby in properly before you begin your parenting simulation.

Some Final Thoughts

If, after your parenting simulation, you received a good grade or extra credit, congratulate yourself. A poor evaluation does not necessarily mean you won't be a good parent someday. It may mean you are not ready for parenting yet. In either case, your time with Baby should have given you more information to use in making informed choices for your future.





Car Seat Safety

IT'S THE LAW.

Everyone who rides in a vehicle is required to use safety restraints. Adults use seat belts. Children too small to be protected by seat belts ride in car seats, and infants use infant car seats.

There are many brands and types of car seats available. When buying one, be sure it is appropriate for the size and age child who will be using it.

- **infant only seat:** birth to approximately 20 pounds and 12 months.
- **convertible seat:** converts from rear-facing for infants to forward-facing for toddlers over one year and at least 20 pounds.
- **booster seat:** used by older children as a transition seat before seat belts. For these seats, children should be over 40 pounds and four years old.

Infant car seats are placed in the car differently than a car seat for an older child. Infant car seats allow the baby to be positioned at an incline, not a sitting position. In an infant car seat, the baby faces the rear of the car, not the front. A car seat, whether for an infant or an older child, must always be secured to the seat with a seat belt. If not secured, the car seat can be thrown through or from the car during a collision or sudden stop.

Be sure the seat was manufactured after January 1, 1981 and meets safety standards. The car seat should be registered with the manufacturer (even if you purchase a used one) in the event of recalls.

Children of all ages, including infants, should **NEVER** be placed in the front seat with a passenger-side air bag. Whenever possible, children of all ages should ride in the back seat.

Do not carry sharp or heavy objects, including groceries, loose in the vehicle. Any loose object can become deadly in a sudden stop or accident.

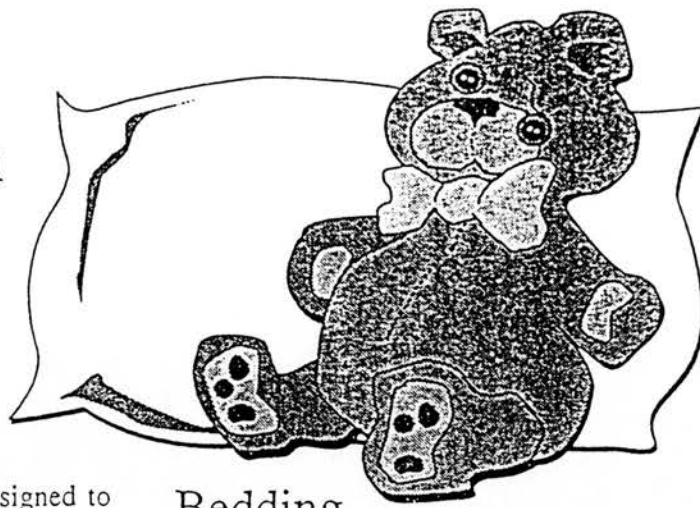
Do not give a baby hard or long pointed items such as an ice cream stick, lollipop, pencil or pen to play with while riding. A sudden stop or accident could cause the baby to be injured.

The Air Bag Safety
Campaign wants you to
remember:

AIR BAG SAFETY:
BUCKLE EVERYONE!
CHILDREN IN BACK!



Sudden Infant Death Syndrome SIDS



Baby Think It Over has been designed to help educate about SIDS. The crying that results from placing Baby on its tummy occurs to draw attention to the fact that real babies should be put to sleep on their backs. Although real babies can be put on their tummies when they are awake, Baby Think It Over can not.

No one knows for sure what causes Sudden Infant Death Syndrome. A baby is put to bed with no indication of any problems, but is later found dead. SIDS is not common, yet nearly 6,000 infant deaths each year in the United States are attributed to SIDS.

SIDS usually affects babies age 3 weeks to 4 months. It affects more boys than girls, and most deaths occur during the fall, winter, and spring.

No one can predict which babies are most at risk for SIDS and no one is to blame for a SIDS death, but studies have shown that parents can greatly reduce the risk by following a few basic guidelines.

Back to Sleep

Whether for a nap or to bed for the night, a baby should usually be put to sleep on its back. Before leaving the hospital, new parents should talk to their doctor about which sleeping position is best. Some health conditions may require tummy-down sleeping.

Bedding

A baby should sleep on a firm mattress or surface. Don't use fluffy blankets or comforters under the baby. A baby should not sleep on a waterbed, sheepskin, pillow, or other soft material.

Soft Toys

Don't place soft stuffed toys or pillows in the crib or bassinette with an infant. Some babies have smothered from such toys.

Smoke-Free Zone

Provide a smoke-free zone around your baby. The risk of SIDS is greater for infants exposed to cigarette smoke or whose mothers smoked during pregnancy. Don't let ANYONE smoke around your baby.

Educate Others

Be sure that anyone who might watch your baby knows about SIDS and the precautions to take. This applies to babysitters, family members, and friends. Don't leave your baby with anyone who might put the infant at risk because they don't know how to reduce the chances of SIDS.





Shaken Baby Syndrome

Shaken Baby Syndrome is the medical term used to describe violent shaking of a baby and the injuries caused by such shaking. An infant's head is large and heavy, while the neck is very weak. When a baby is shaken, the brain is tossed around inside the skull and the tiny blood vessels that connect the brain to the skull can tear.

Many babies are hospitalized each year as a result of Shaken Baby Syndrome—and as many as one fourth of them die.

Often, there is no visible outward sign of damage, but there is damage inside. Shaking a baby may result in:

- Swelling of the brain
- Hemorrhage (bleeding) in the brain
- Mental retardation
- Blindness
- Hearing loss
- Speech difficulties
- Paralysis
- Seizures
- Death

Shaking usually happens because the person caring for a baby becomes frustrated when they are unable to stop the baby's crying. More men than women are guilty of shaking babies. More boy babies are shaken than girl babies. Twins have a higher chance of being shaken than a child without a twin.

The important thing to remember is that you must stay calm and never, never shake a baby. If you cannot quiet the baby, try one of the suggestions below.

- Take several deep breaths and count slowly to ten. Take several more deep breaths.
- Say the alphabet out loud.
- Read a poem that gives you inspiration.
- Put the baby in a safe place, then leave the room for a few minutes.
- Create a new, distracting noise to get the baby's attention (such as a blender or vacuum cleaner).
- Close your eyes and think of something pleasant, like your favorite place.
- Ask someone else to help. If you are alone with a baby who's crying has lasted a long time, call someone to come and help.
- Try hugging and cuddling. Sometimes very young infants can be comforted by carrying them around in a snugly.
- Gentle motion may help. A baby swing that offers proper head support, an infant seat held safely on top of a clothes dryer while the dryer is running, or taking a ride in a car sometimes helps sooth the baby.

In using any of these methods, remember to use caution, attend the baby at all times and be gentle.



APPENDIX 8

BABY THINK IT OVER STUDENT PACK



Pre-Simulation Questionnaire

Age now _____ years _____ months

What grade are you in? _____

Are you a male female

Do you have a child? Yes No

Do you plan to have children? Yes No Undecided

_____ If yes, how many?

_____ If yes, at what age would you like to have your first child?

How important is it to have a spouse or partner before having children?

- not important
- slightly important
- moderately important
- very important
- essential

How do you think having a baby usually affects a couple's relationship?

- improves the relationship a lot
- improves the relationship a little
- has no effect
- makes the relationship harder
- destroys the relationship

How do you think having a baby right now would affect your family?

- not at all
- we would need to make a few changes because of the baby
- we would need to make a lot of changes because of the baby
- life would never be the same again

On a scale of one to ten, how would you rate your abilities now as the caregiver for a baby's needs (feeding, bathing, changing, soothing, keeping it safe and healthy)? _____

On a scale of one to ten, how would you rate your abilities now to pay for baby's expenses (food, clothing, doctor, etc.)? _____

What one word would best describe your feelings if you were to become a parent in the next year?

What one word would best describe your parents' feelings if you were to become a parent in the next year? _____



Post-Simulation Questionnaire

Age now ____ years ____ months

What grade are you in? _____

Are you a male female

Do you have a child? Yes No

Do you plan to have children?

Yes No Undecided

_____ If yes, how many?

_____ If yes, at what age would you like to have your first child?

How important is it to have a spouse or partner before having children?

- not important
- slightly important
- moderately important
- very important
- essential

How do you think having a baby usually affects a couple's relationship?

- improves the relationship a lot
- improves the relationship a little
- has no effect
- makes the relationship harder
- destroys the relationship

How do you think having a baby right now would affect your family?

- not at all
- we would need to make a few changes because of the baby
- we would need to make a lot of changes because of the baby
- life would never be the same again

On a scale of one to ten, how would you rate your abilities now as the caregiver for a baby's needs (feeding, bathing, changing, soothing, keeping it safe and healthy)? _____

On a scale of one to ten, how would you rate your abilities now to pay for a baby's expenses (food, clothing, doctor, etc.)? _____

What one word would best describe your feelings if you were to become a parent in the next year? _____

What one word would best describe your parents' feelings if you were to become a parent in the next year? _____

In what ways do you think caring for Baby Think It Over was like caring for a real baby?

In what ways was caring for Baby Think It Over not like caring for a real baby?

Has using Baby Think It Over changed your opinions about parenthood?

Yes No

If yes, how? If no, please explain.



Parent Evaluation

- Yes No Was having your child use Baby Think It Over beneficial?
- Yes No Do you feel your child has a more realistic idea of parenting than before using Baby Think it Over?
- Yes No Did using Baby Think It Over open conversations you feel were beneficial between you and your child?
- Yes No Do you plan to have other children in your family use Baby Think It Over?
- Yes No Would you recommend this experience to other parents of teenagers?
- Yes No Do you think this experience can play a part in deterring teens from early pregnancy?
- Yes No Do you think it would be more effective if used again at a later age?
- Yes No Did the results of having your child use Baby Think It Over differ from what you anticipated?

If so, in what way? _____

- Yes No Do you think it would have been more appropriate for your child at a different age?

If so, what age? _____ Why? _____

What do you think is an appropriate length of time for the student to use Baby?

___ three days ___ four days ___ one week ___ two weeks Other: _____

What are your most memorable moments from this experience? (good or bad)

What do you think your child learned from this experience?

Do you have any suggestions for improving this program?



Parenting Contract

I will...

- accept full responsibility for my Baby.
- take care of my Baby as if it were a real, live baby.
- carry my Baby, the diaper bag and the items needed for proper care with me at all times, wherever I go.
- always use a car seat to properly transport Baby in a vehicle.
- not leave Baby alone or with someone else unless previously authorized by my instructor.
- never abuse or neglect my Baby. I will treat it gently and patiently.
- not tamper with the electronics box, care key, or wristband.
- keep a complete record of all care sessions and other information required for my diary.
- keep my Baby for the entire assigned period of time, turn in my completed diary and other worksheets required at the end of my assigned time, and return my Baby only to the instructor or person designated by the instructor.

Signature _____ Date _____

Based on a parenting contract devised by:
David Duffey, MA, LPC
Marywood Children and Family Services
510 West 26th Street
Austin, TX 7870

WANT BIRTH CERTIFICATE

This Particular that

was born on _____ the _____ day of _____, 19____

The parent's name is _____

Weight when born _____ lbs. _____ oz.

Height when born _____ inches

Witnessed by _____

Copyright © 1996 Baby Think It Over, Inc.

Baby Think It Over™



Baby Think It Over™



Assignment Checklist

Student Name: _____ Baby #: _____
 Other: _____
 Date Issued: _____ Time: _____ a.m. / p.m. By: _____
 Temperament: Cranky Normal Easy

1st MONITORING	Date: _____ Time: _____ a.m. / p.m. By: _____
	Wristband Attached: <input type="checkbox"/> Yes <input type="checkbox"/> No
	Care Key: <input type="checkbox"/> OK <input type="checkbox"/> Lost <input type="checkbox"/> Broken
	_____ Total Simulation Time
	_____ ORANGE Improper Head Support
	_____ GREEN Rough Handling
	_____ YELLOW Neglect events
	_____ RED Total Minutes Cried
Numbers Blinking? <input type="checkbox"/> Yes <input type="checkbox"/> No	
New Temperament: <input type="checkbox"/> Cranky <input type="checkbox"/> Normal <input type="checkbox"/> Easy	

2nd MONITORING	Date: _____ Time: _____ a.m. / p.m. By: _____
	Wristband Attached: <input type="checkbox"/> Yes <input type="checkbox"/> No
	Care Key: <input type="checkbox"/> OK <input type="checkbox"/> Lost <input type="checkbox"/> Broken
	_____ Total Simulation Time
	_____ ORANGE Improper Head Support
	_____ GREEN Rough Handling
	_____ YELLOW Neglect events
	_____ RED Total Minutes Cried
Numbers Blinking? <input type="checkbox"/> Yes <input type="checkbox"/> No	
New Temperament: <input type="checkbox"/> Cranky <input type="checkbox"/> Normal <input type="checkbox"/> Easy	

3rd MONITORING	Date: _____ Time: _____ a.m. / p.m. By: _____
	Wristband Attached: <input type="checkbox"/> Yes <input type="checkbox"/> No
	Care Key: <input type="checkbox"/> OK <input type="checkbox"/> Lost <input type="checkbox"/> Broken
	_____ Total Simulation Time
	_____ ORANGE Improper Head Support
	_____ GREEN Rough Handling
	_____ YELLOW Neglect events
	_____ RED Total Minutes Cried
Numbers Blinking? <input type="checkbox"/> Yes <input type="checkbox"/> No	

Damaged/Lost Items	Charge
Date Paid	Total Charges



Assignment Checklist

Student Name: _____ Baby #: _____
 Other: _____
 Date Issued: _____ Time: _____ a.m. / p.m. By: _____
 Temperament: Cranky Normal Easy

1st MONITORING	Date: _____ Time: _____ a.m. / p.m. By: _____
	Wristband Attached: <input type="checkbox"/> Yes <input type="checkbox"/> No
	Care Key: <input type="checkbox"/> OK <input type="checkbox"/> Lost <input type="checkbox"/> Broken
	_____ Total Simulation Time
	_____ ORANGE Improper Head Support
	_____ GREEN Rough Handling
	_____ YELLOW Neglect events
	_____ RED Total Minutes Cried
Numbers Blinking? <input type="checkbox"/> Yes <input type="checkbox"/> No	
New Temperament: <input type="checkbox"/> Cranky <input type="checkbox"/> Normal <input type="checkbox"/> Easy	

2nd MONITORING	Date: _____ Time: _____ a.m. / p.m. By: _____
	Wristband Attached: <input type="checkbox"/> Yes <input type="checkbox"/> No
	Care Key: <input type="checkbox"/> OK <input type="checkbox"/> Lost <input type="checkbox"/> Broken
	_____ Total Simulation Time
	_____ ORANGE Improper Head Support
	_____ GREEN Rough Handling
	_____ YELLOW Neglect events
	_____ RED Total Minutes Cried
Numbers Blinking? <input type="checkbox"/> Yes <input type="checkbox"/> No	
New Temperament: <input type="checkbox"/> Cranky <input type="checkbox"/> Normal <input type="checkbox"/> Easy	

3rd MONITORING	Date: _____ Time: _____ a.m. / p.m. By: _____
	Wristband Attached: <input type="checkbox"/> Yes <input type="checkbox"/> No
	Care Key: <input type="checkbox"/> OK <input type="checkbox"/> Lost <input type="checkbox"/> Broken
	_____ Total Simulation Time
	_____ ORANGE Improper Head Support
	_____ GREEN Rough Handling
	_____ YELLOW Neglect events
	_____ RED Total Minutes Cried
Numbers Blinking? <input type="checkbox"/> Yes <input type="checkbox"/> No	

Damaged/Lost Items	Charge
Date Paid	Total Charges

APPENDIX 9

**TABLES SHOWING THE RESULTS OF
QUESTIONS ABOUT SEX EDUCATION**

(Tables 3.21 – 3.26)

Table 3.21. Showing subjects answers to the statement “sex education was embarrassing”.

<u>BTIO group</u>	<u>Post BTIO(N=13)</u> <u>Follow-up (N=12)</u>	
	Strongly agree/agree	2
Don't know/uncertain	2	2
Disagree/strongly disagree	9	6
<u>Control group</u>	<u>Post BTIO(N=16)</u> <u>Follow-up (N=16)</u>	
	Strongly agree/agree	1
Don't know/uncertain	2	1
Disagree/strongly disagree	13	12

Table 3.22. Showing subjects answers to the statement “sex education made me feel more able to discuss sexual matters”.

<u>BTIO group</u>	<u>Post BTIO(N=13)</u> <u>Follow-up (N=12)</u>	
	Strongly agree/agree	7
Don't know/uncertain	5	3
Disagree/strongly disagree	1	3
<u>Control group</u>	<u>Post BTIO(N=16)</u> <u>Follow-up (N=16)</u>	
	Strongly agree/agree	13
Don't know/uncertain	1	2
Disagree/strongly disagree	2	4

Table 3.23. Showing subjects answers to the statement “Sex education made me feel more confident about getting condoms should I need to”.

<u>BTIO group</u>	<u>Post BTIO(N=13)</u>	<u>Follow-up (N=12)</u>
Strongly agree/agree	9	6
Don't know/uncertain	4	3
Disagree/strongly disagree	0	3

<u>Control group</u>	<u>Post BTIO(N=16)</u>	<u>Follow-up (N=16)</u>
Strongly agree/agree	12	14
Don't know/uncertain	3	1
Disagree/strongly disagree	1	1

Table 3.24. Showing subjects answers to the statement “Sex education made me feel more confident about using condoms properly”.

<u>BTIO group</u>	<u>Post BTIO(N=13)</u>	<u>Follow-up (N=12)</u>
Strongly agree/agree	9	9
Don't know/uncertain	4	2
Disagree/strongly disagree	0	1

<u>Control group</u>	<u>Post BTIO(N=16)</u>	<u>Follow-up (N=16)</u>
Strongly agree/agree	11	13
Don't know/uncertain	2	0
Disagree/strongly disagree	1	3

Table 3.25. Subjects answers to the statement "Sex education was relevant to my own experience now".

<u>BTIO group</u>	<u>Post BTIO(N=13)</u>	<u>Follow-up (N=12)</u>
Strongly agree/agree	3	4
Don't know/uncertain	8	5
Disagree/strongly disagree	2	3

<u>Control group</u>	<u>Post BTIO(N=16)</u>	<u>Follow-up (N=16)</u>
Strongly agree/agree	6	7
Don't know/uncertain	6	3
Disagree/strongly disagree	4	6

Table 3.26. Showing subjects answers to the statement "Sex education will be relevant to my experience in the future".

<u>BTIO group</u>	<u>Post BTIO(N=13)</u>	<u>Follow-up (N=12)</u>
Strongly agree/agree	10	8
Don't know/uncertain	3	4
Disagree/strongly disagree	0	0

<u>Control group</u>	<u>Post BTIO(N=16)</u>	<u>Follow-up (N=16)</u>
Strongly agree/agree	15	14
Don't know/uncertain	1	1
Disagree/strongly disagree	0	1

APPENDIX 10

**TABLES SHOWING THE RESULTS OF
QUESTIONS ABOUT ATTITUDES TOWARDS
SEX AND CONTRACEPTION**

(Tables 3.27 – 3.40)

Table 3.27. Showing subjects answers to the statement "I intend to use condoms the first/next time I have sexual intercourse".

<u>BTIO group</u>	<u>Pre BTIO(N=13)</u>	<u>Post BTIO(N=13)</u>	<u>Follow-up (N=12)</u>
Strongly agree/agree	13	13	12
Don't know/uncertain	0	0	0
Disagree/strongly disagree	0	0	0

<u>Control group</u>	<u>Pre BTIO(N=16)</u>	<u>Post BTIO(N=16)</u>	<u>Follow-up (N=16)</u>
Strongly agree/agree	14	14	13
Don't know/uncertain	2	2	2
Disagree/strongly disagree	0	0	1

Table 3.28. Showing subjects answers to the statement "You should be in love before you have sexual intercourse"

<u>BTIO group</u>	<u>Pre BTIO(N=13)</u>	<u>Post BTIO(N=13)</u>	<u>Follow-up (N=12)</u>
Strongly agree/agree	7	6	7
Don't know/uncertain	4	5	1
Disagree/strongly disagree	2	2	4

<u>Control group</u>	<u>Pre BTIO(N=16)</u>	<u>Post BTIO(N=16)</u>	<u>Follow-up (N=16)</u>
Strongly agree/agree	11	10	9
Don't know/uncertain	3	5	3
Disagree/strongly disagree	2	1	4

Table 3.29. Showing subjects answers to the statement "You should always use a condom during sexual intercourse".

<u>BTIO group</u>			
	<u>Pre BTIO(N=13)</u>	<u>Post BTIO(N=13)</u>	<u>Follow-up (N=12)</u>
Strongly agree/agree	10	12	11
Don't know/uncertain	1	0	1
Disagree/strongly disagree	2	1	0
<u>Control group</u>			
	<u>Pre BTIO(N=16)</u>	<u>Post BTIO(N=16)</u>	<u>Follow-up (N=16)</u>
Strongly agree/agree	13	13	11
Don't know/uncertain	1	2	2
Disagree/strongly disagree	2	1	3

Table 3.30. Showing subjects answers to the statement "Generally speaking, I want to do what my close friends think is right.

<u>BTIO group</u>			
	<u>Pre BTIO(N=13)</u>	<u>Post BTIO(N=13)</u>	<u>Follow-up (N=12)</u>
Strongly agree/agree	1	2	4
Don't know/uncertain	2	3	3
Disagree/strongly disagree	10	8	5
<u>Control group</u>			
	<u>Pre BTIO(N=16)</u>	<u>Post BTIO(N=16)</u>	<u>Follow-up (N=16)</u>
Strongly agree/agree	5	2	3
Don't know/uncertain	4	5	5
Disagree/strongly disagree	7	9	8

Table 3.31. Table showing subjects answers to the statement “Using condoms reduces the risk of getting AIDS and other sexually transmitted diseases”.

<u>BTIO group</u>	<u>Pre BTIO(N=13)</u>	<u>Post BTIO(N=13)</u>	<u>Follow-up (N=12)</u>
Strongly agree/agree	11	12	12
Don't know/uncertain	1	0	0
Disagree/strongly disagree	1	1	0

<u>Control group</u>	<u>Pre BTIO(N=16)</u>	<u>Post BTIO(N=16)</u>	<u>Follow-up (N=16)</u>
Strongly agree/agree	14	16	15
Don't know/uncertain	1	0	1
Disagree/strongly disagree	1	0	0

Table 3.32. Subjects answers to the statement “One night stands are okay”.

<u>BTIO group</u>	<u>Pre BTIO(N=13)</u>	<u>Post BTIO(N=13)</u>	<u>Follow-up (N=12)</u>
Strongly agree/agree	0	1	3
Don't know/uncertain	6	7	3
Disagree/strongly disagree	7	5	6

<u>Control group</u>	<u>Pre BTIO(N=16)</u>	<u>Post BTIO(N=16)</u>	<u>Follow-up (N=16)</u>
Strongly agree/agree	2	3	3
Don't know/uncertain	7	6	2
Disagree/strongly disagree	7	7	11

Table 3.33. Showing subjects answers to the statement “Most of my close friends think that you should use condoms during sex”.

<u>BTIO group</u>	<u>Pre BTIO(N=13)</u>	<u>Post BTIO(N=13)</u>	<u>Follow-up (N=12)</u>
Strongly agree/agree	9	10	8
Don't know/uncertain	3	3	4
Disagree/strongly disagree	1	0	0

<u>Control group</u>	<u>Pre BTIO(N=16)</u>	<u>Post BTIO(N=16)</u>	<u>Follow-up (N=16)</u>
Strongly agree/agree	12	13	13
Don't know/uncertain	4	3	2
Disagree/strongly disagree	0	0	1

Table 3.34. Showing subjects answers to the statement “I think the use of condoms reduces sexual pleasure and spontaneity”.

<u>BTIO group</u>	<u>Pre BTIO(N=13)</u>	<u>Post BTIO(N=13)</u>	<u>Follow-up (N=12)</u>
Strongly agree/agree	1	1	2
Don't know/uncertain	4	5	5
Disagree/strongly disagree	8	7	5

<u>Control group</u>	<u>Pre BTIO(N=16)</u>	<u>Post BTIO(N=16)</u>	<u>Follow-up (N=16)</u>
Strongly agree/agree	1	2	3
Don't know/uncertain	11	6	5
Disagree/strongly disagree	4	8	8

Table 3.35. Showing subjects answers to the statement “I worry about getting pregnant/getting a girl pregnant at my age”.

<u>BTIO group</u>	<u>Pre BTIO(N=13)</u>	<u>Post BTIO(N=13)</u>	<u>Follow-up (N=12)</u>
Strongly agree/agree	8	10	9
Don't know/uncertain	2	2	1
Disagree/strongly disagree	3	1	2

<u>Control group</u>	<u>Pre BTIO(N=16)</u>	<u>Post BTIO(N=16)</u>	<u>Follow-up (N=16)</u>
Strongly agree/agree	11	11	13
Don't know/uncertain	0	1	0
Disagree/strongly disagree	5	3	3

Table 3.36. Showing subjects answers to the statement “I feel that I know how to use a condom properly”.

<u>BTIO group</u>	<u>Pre BTIO(N=13)</u>	<u>Post BTIO(N=13)</u>	<u>Follow-up (N=12)</u>
Strongly agree/agree	4	10	9
Don't know/uncertain	4	2	3
Disagree/strongly disagree	5	1	0

<u>Control group</u>	<u>Pre BTIO(N=16)</u>	<u>Post BTIO(N=16)</u>	<u>Follow-up (N=16)</u>
Strongly agree/agree	12	12	11
Don't know/uncertain	4	3	3
Disagree/strongly disagree	0	1	2

Table 3.37. Showing subjects answers to the statement “Most of my close friends have not had sex”.

<u>BTIO group</u>			
	<u>Pre BTIO(N=13)</u>	<u>Post BTIO(N=13)</u>	<u>Follow-up (N=12)</u>
Strongly agree/agree	13	11	10
Don't know/uncertain	0	2	4
Disagree/strongly disagree	0	0	1
<u>Control group</u>			
	<u>Pre BTIO(N=16)</u>	<u>Post BTIO(N=16)</u>	<u>Follow-up (N=16)</u>
Strongly agree/agree	11	13	10
Don't know/uncertain	2	1	3
Disagree/strongly disagree	3	2	3

Table 3.38. Showing subjects answers to the statement “People should refuse to have sex with someone who objects to using a condom”.

<u>BTIO group</u>			
	<u>Pre BTIO(N=13)</u>	<u>Post BTIO(N=13)</u>	<u>Follow-up (N=12)</u>
Strongly agree/agree	9	10	9
Don't know/uncertain	3	3	1
Disagree/strongly disagree	1	0	2
<u>Control group</u>			
	<u>Pre BTIO(N=16)</u>	<u>Post BTIO(N=16)</u>	<u>Follow-up (N=16)</u>
Strongly agree/agree	11	8	7
Don't know/uncertain	4	7	8
Disagree/strongly disagree	1	1	1

Table 3.39. Showing subjects answers to the statement “I feel I could insist that a condom was used during sex”.

<u>BTIO group</u>	<u>Pre BTIO(N=13)</u>	<u>Post BTIO(N=13)</u>	<u>Follow-up (N=12)</u>
Strongly agree/agree	11	12	11
Don't know/uncertain	2	1	1
Disagree/strongly disagree	0	0	0

<u>Control group</u>	<u>Pre BTIO(N=16)</u>	<u>Post BTIO(N=16)</u>	<u>Follow-up (N=16)</u>
Strongly agree/agree	12	12	13
Don't know/uncertain	4	4	3
Disagree/strongly disagree	0	0	0

Table 3.40. Showing subjects answers to the statement “I intend to discuss using condoms before having sexual intercourse with my first/next sexual partner.

<u>BTIO group</u>	<u>Pre BTIO(N=13)</u>	<u>Post BTIO(N=13)</u>	<u>Follow-up (N=12)</u>
Strongly agree/agree	6	8	9
Don't know/uncertain	5	4	2
Disagree/strongly disagree	2	1	1

<u>Control group</u>	<u>Pre BTIO(N=16)</u>	<u>Post BTIO(N=16)</u>	<u>Follow-up (N=16)</u>
Strongly agree/agree	11	12	9
Don't know/uncertain	4	4	5
Disagree/strongly disagree	1	0	2

APPENDIX 11

**TABLES SHOWING THE RESULTS OF
QUESTIONS ABOUT KNOWLEDGE
OF SEX AND CONTRACEPTION**

(Tables 3.41 – 3.47)

Table 3.41. Showing subjects answers to the statement “You can’t buy condoms if you’re under 16”.

<u>BTIO group</u>	<u>Pre BTIO(N=13)</u>	<u>Post BTIO(N=13)</u>	<u>Follow-up (N=12)</u>
Strongly agree/agree	4	0	1
Don’t know/uncertain	4	2	2
Disagree/strongly disagree	5	11	9

<u>Control group</u>	<u>Pre BTIO(N=16)</u>	<u>Post BTIO(N=16)</u>	<u>Follow-up (N=16)</u>
Strongly agree/agree	3	2	0
Don’t know/uncertain	3	3	3
Disagree/strongly disagree	10	11	13

Table 3.42. Showing subjects answers to the statement “If a woman is under 16 and is on the pill, her doctor must tell her parents”.

<u>BTIO group</u>	<u>Pre BTIO(N=13)</u>	<u>Post BTIO(N=13)</u>	<u>Follow-up (N=12)</u>
Strongly agree/agree	1	0	1
Don’t know/uncertain	2	0	2
Disagree/strongly disagree	10	13	9

<u>Control group</u>	<u>Pre BTIO(N=16)</u>	<u>Post BTIO(N=16)</u>	<u>Follow-up (N=16)</u>
Strongly agree/agree	1	0	2
Don’t know/uncertain	3	2	3
Disagree/strongly disagree	12	14	11

Table 3.43. Showing subjects answers to the statement “Even if contraception is used correctly, there is still a chance that a woman can become pregnant”.

<u>BTIO group</u>	<u>Pre BTIO(N=13)</u>	<u>Post BTIO(N=13)</u>	<u>Follow-up (N=12)</u>
Strongly agree/agree	9	11	11
Don't know/uncertain	2	1	1
Disagree/strongly disagree	2	1	0

<u>Control group</u>	<u>Pre BTIO(N=16)</u>	<u>Post BTIO(N=16)</u>	<u>Follow-up (N=16)</u>
Strongly agree/agree	12	12	14
Don't know/uncertain	2	1	2
Disagree/strongly disagree	2	3	0

Table 3.44. Showing subjects answers to the statement “It's against the law to have sexual intercourse with a girl who is under 16”.

<u>BTIO group</u>	<u>Pre BTIO(N=13)</u>	<u>Post BTIO(N=13)</u>	<u>Follow-up (N=12)</u>
Strongly agree/agree	13	13	12
Don't know/uncertain	0	0	0
Disagree/strongly disagree	1	1	0

<u>Control group</u>	<u>Pre BTIO(N=16)</u>	<u>Post BTIO(N=16)</u>	<u>Follow-up (N=16)</u>
Strongly agree/agree	14	16	14
Don't know/uncertain	1	0	1
Disagree/strongly disagree	1	0	1

Table 3.45. Showing subjects answers to the statement “The pill does not protect against sexually transmitted diseases (e.g. AIDS)”.

<u>BTIO group</u>			
	<u>Pre BTIO(N=13)</u>	<u>Post BTIO(N=13)</u>	<u>Follow-up (N=12)</u>
Strongly agree/agree	11	9	11
Don't know/uncertain	2	2	1
Disagree/strongly disagree	0	2	0

<u>Control group</u>			
	<u>Pre BTIO(N=16)</u>	<u>Post BTIO(N=16)</u>	<u>Follow-up (N=16)</u>
Strongly agree/agree	13	13	13
Don't know/uncertain	2	2	2
Disagree/strongly disagree	1	1	1

Table 3.46. Showing subjects answers to the statement “It's against the law to have sexual intercourse with a boy who is under 16”.

<u>BTIO group</u>			
	<u>Pre BTIO(N=13)</u>	<u>Post BTIO(N=13)</u>	<u>Follow-up (N=12)</u>
Strongly agree/agree	5	3	5
Don't know/uncertain	2	1	2
Disagree/strongly disagree	6	9	5

<u>Control group</u>			
	<u>Pre BTIO(N=16)</u>	<u>Post BTIO(N=16)</u>	<u>Follow-up (N=16)</u>
Strongly agree/agree	11	4	6
Don't know/uncertain	3	8	3
Disagree/strongly disagree	2	4	7

Table 3.47. Showing subjects answers to the statement "A girl cannot become pregnant the first time she has sexual intercourse".

<u>BTIO group</u>	<u>Pre BTIO(N=13)</u>	<u>Post BTIO(N=13)</u>	<u>Follow-up (N=12)</u>
Strongly agree/agree	1	0	1
Don't know/uncertain	0	1	0
Disagree/strongly disagree	12	12	11

<u>Control group</u>	<u>Pre BTIO(N=16)</u>	<u>Post BTIO(N=16)</u>	<u>Follow-up (N=16)</u>
Strongly agree/agree	0	0	1
Don't know/uncertain	1	0	0
Disagree/strongly disagree	15	16	15

APPENDIX 12

**TABLES SHOWING THE RESULTS OF
QUESTIONS ABOUT HONESTY AND ACCURACY**

(Table 3.48 and Table 3.49)

Table 3.48. Showing subjects answers when asked whether their answers to the questionnaire had been honest.

<u>BTIO group</u>		<u>Control group</u>	
Pre BTIO (N=13):	9 Completely honest 4 Very honest	Pre BTIO (N=16):	10 Completely honest 6 Very honest
Post BTIO (N=13):	9 Completely honest 3 Very honest 1 Fairly honest	Post BTIO(N=16):	8 Completely honest 8 Very honest
Follow-up (N=12):	7 Completely honest 5 Very honest	Follow-up (N=16):	15 Completely honest 1 Very honest

Table 3.49. Showing subjects answers when asked whether their answers to the questionnaire had been accurate.

<u>BTIO group</u>		<u>Control group</u>	
Pre BTIO (N=13):	3 Completely accurate 10 Very accurate	Pre BTIO (N=16):	3 Completely accurate 12 Very accurate 1 Fairly accurate
Post BTIO (N=13):	5 Completely accurate 7 Very accurate 1 Fairly accurate	Post BTIO(N=16):	3 Completely accurate 12 Very accurate 1 Fairly accurate
Follow-up (N=12):	3 Completely accurate 9 Very accurate	Follow-up (N=16):	8 Completely accurate 8 Very accurate

APPENDIX 13

**RESPONSES TO QUESTIONS FROM
THE BABY THINK IT OVER QUESTIONNAIRE:
THOUGHTS ABOUT CARING FOR THE BTIO**

(1) In what ways was do you think caring for Baby Think It Over was like caring for a real baby?

(2) In what ways was caring for Baby Think It Over not like caring for a real baby?

(One subject made no comments at all; one subject commented on (2) only.

(1) "The care needed came at frequent intervals and when you had to care for it you had to stop everything you were doing."

(2) "I was very aware of the fact that it was just a doll and if it were a real baby the bond formed between you would make you more likely to enjoy it more."

(1) "It cried at unpredictable times. You can't let it's head fall back all the time. You can take it for walks in the pram. You can put it in the car seat and take it out with you.

(2) "You just had to put a key in its back and you never had to change nappies, wash or bath it, feed it, give it medicine, and over all you didn't have as much responsibility."

(1) "The way you handled it and cared for it."

(2) "Putting the key in its back."

(1) "It really showed how much time it takes up and how it changes where you can and can't go."

(2) "Well, it cried about the same amount of times every day, and I think that's a bit unrealistic, because babies have good and bad days."

(1) "It wasn't. Apart from at night time."

(2) "It cried constantly, a real baby you can comfort and get some response from."

(1) "It stopped me from doing things I wanted to do and definitely affected my life in the way a baby would e.g. I couldn't go out at night and into town and I found it hard to do my papers."

(2) "All it did was cry every now and again and when it wasn't crying you could just leave it for an hour or so knowing it wouldn't cry. Also because the only thing you did was put a key in its back."

(1) "When it cried you had to get to it in time."

(2) When it cried it didn't have to cry all the time that it did. Doesn't cry every 2 hours (real baby doesn't)."

(1) "It was disruptive at meal times, whilst watching the telly etc. It woke me up in the middle of the night. It stopped me from going out to places such as the cinema and swimming pool."

(2) "It doesn't need as much care as a baby would need."

(1) "It was like taking care of a real baby because you could push it in the buggy and put it in the car seat and when it wakes up in the middle of the night you have to see to it."

(2) "It wasn't like taking care of a real baby because you couldn't change it's nappy, feed it or give it a bath. And when it cried we didn't know what was wrong with it we just put the key in its back."

(2) "It does not cry as often and you don't feed or change it."

(1) "In the way that you had to hold it, and the way you need to help stop crying."

(2) "It's not like caring for a real baby because you don't need to feed it, or change it, or bath it."

APPENDIX 14

**RESPONSES TO QUESTIONS FROM
THE BABY THINK IT OVER QUESTIONNAIRE:
WHETHER OPINIONS CHANGED DUE TO USING THE BTIO**

**Has using Baby Think It Over changed your opinions about parenthood?
If yes, how? If no, please explain.**

(Only 11 people commented, the other two said that there was no change in their opinions)

“Yes. It made me realise that parenting is a full-time job with lots of commitments.”

“No. It didn’t change anything as I am experienced around babies.”

“No. I still want a baby, you never got to do anything with the baby..”

“No. Because I know how much work is involved and I would still like to have children.”

“Yes. I realised how hard it is in the middle of the night.”

“No. Well I still want to become a parent but BTIO has shown me not in the near future.”

“Yes. It made me think!”

“No. Because I knew that at my age caring for a child would be hard work and the Baby Think It Over confirmed this for me.”

“No. I have always wanted to have a baby in the house and when I had Baby Think It Over in my house I really enjoyed it. It didn’t hassle me and I didn’t mind not going to my Youth Club on Saturday night. I really enjoyed the experience. It would probably be different if I’d had to change it’s nappy.”

“No. It’s just as hard as I thought it would be.”

“Yes. Because you need to get up in the middle of the night etc.”

APPENDIX 15

**RESPONSES TO QUESTIONS FROM
THE BABY THINK IT OVER QUESTIONNAIRE:
PARENTS' THOUGHTS**

What do you think your child learned from this experience?

“The responsibility involved in taking care of a baby.”

“The constant tie of a baby.”

“That a baby takes up most of your time.”

“Being completely responsible for the baby.”

“Having her sleep disturbed at night time.”

“That being a mum is more than having a baby i.e. almost couldn't do her paper round without help.”

“How demanding a baby can be.”

“Baby comes first whatever you're doing.”

“Caring for a baby and getting up during the night.”

“Without extensive support bringing up a baby is a stressful and difficult experience and a responsibility not to be entered into lightly.”

(only ten parents filled out their questionnaires.)

What do you think is an appropriate length of time for the student to use Baby?

4 parents = 1 week

3 parents = 3 days

2 parents = 4 days

1 parent = 2 weeks

APPENDIX 16

EXCERPTS FROM INTERVIEWS WITH PUPILS

POST BTIO

Interview with subjects post BTIO

Thank you for coming today. I know that you've taken the Baby Think It Over home with you for a weekend and I want to ask you a few questions about it.

1. First of all can you tell me whether you had the boy or the girl?

Were you allowed to choose which you had?

"No reason. Well the other girl wanted the boy and so I said I'd have the girl."

"Yes. Not too sure, it's just that the other girl wanted the boy, so I just had the girl. I wasn't really bothered."

"Yes. If I have a baby when I am older I'd like a boy."

"We kind of discussed it. I don't know. I just wanted a little girl."

If yes..... why did you choose that?

If no..... would you have liked a choice?..... If yes..... which would you have chosen and why?

And what did you call the baby?

Why did you choose that name?

2. What was the most enjoyable bit or bits about having..... home with you?

"Just to hold her and put her in the pram."

"I liked it when I first had him home, people asking questions about him and stuff."

"Got to push it in the buggy."

"Not sure."

3. What was the most difficult bit or bits about having home with you?

"Having to hold the key in for ages."

"Waking up in the middle of the night. I managed to wake up as soon as I heard him cry, it's just hard to stay awake 'cos you get tired straight away."

"Probably during the night."

"Getting up in the middle of the night."

4. What were your thoughts before taking home about having babies... did you think about having one quite soon, for instance in the next few years, or did you think you wanted to wait until you were older?

"The next few years. I don't know, I just like holding them. I just like babies."

"I hoped to wait until I'm older as I want a good job first. Go to university."

"Definitely wait until I was older and been to college and had my life first before even thinking about it."

"Wait until I was older. Cos I'd be older and have a better view of parenthood and then I'd be with a husband or something."

5. *Has having home changed those thoughts at all?*

If yes..... how?

If no.... why not?

"A bit, but not really. Cos all you had to do was hold the key in. You didn't have to feed it or anything. It wasn't the same as a baby. You get to feed babies, change their nappies and take them out for walks and stuff."

"No. Not really. Because I realised before that babies are a lot of hard work and stuff, cos I have young cousins that I look after, but I'd still like a baby when I'm older."

"No. Because I know it will be difficult. I just know I wouldn't be able to handle it."

"No. I'd still like to have them when I'm older. If I had a baby when I was young it would take away part of my life."

6. *I don't want to know if you are in a sexual relationship, but I wanted to ask you if you were, do you think that this experience of having had..... home would have made you think differently about using contraception?*

If yes... in what way?

If no.... why not?

"No. Because you can catch different things so I'd still use it. *(What would you use?)* I don't know.

"No. Because I'd use contraception anyway. *(What kind of contraception)* I'd prefer my boyfriend or whatever to use a condom, or maybe I'd go on the pill.

"No. Because if I was ever going to be in a sexual relationship, I would be using contraception. Probably condoms."

"Yes. If I got pregnant, it would be a burden, so I'd definitely use contraception."

APPENDIX 17

EXCERPTS FROM INTERVIEWS WITH PUPILS

AT FOLLOW-UP

Interview with subjects at follow-up

1. *In retrospect do you think that taking the BTIO home with you has helped you think about parenting?*

yes... in what way?

no... why not?

"Yes. Like it makes you think about taking care of babies and that, and realising that I'm not ready, because it would get in the way of what I wanted to do, I'm thinking I'd like go to college."

"Yes. I think it shows what a responsibility it is, having a baby."

"Yes. I've realised how difficult it is to have a baby at my age, how hard it would be with all the things I want to do. I have been thinking about it a bit."

"Yes, it made me think that it was a lot of responsibility and I wouldn't want to have a baby so young. I kind of realised afterwards and while we were talking in class about it that it had been a lot of work, and a lot of responsibility."

2. *I don't want to know if you are in a sexual relationship, but I wanted to ask you if you were, do you think that this experience of having had the BTIO home has made you think differently about using contraception?*

yes... in what way?

no... why not?

"Yes, because I just don't want a baby now."

"No, because I think I'd have used it (contraception) anyway."

"Yes. I suppose its made me think. So I'd always use it. I'm just not ready to have a baby. I just don't want to have one."

"Yes it has. We're too young to have a child. It affects your personal life so much, so you'd have to be really sure to use contraception."

3. *Why did you decide to do the BTIO project?*

"I thought it would be good. I thought it would be like a real baby and I thought it would be fun."

"I thought it would be fun, cos I'd seen it on a TV programme and it looked like fun."

"Because I thought it would be interesting."

"Because I thought it was going to be fun and I'd enjoy it."

4. *Why do you think the people who didn't want to do the project didn't want to do it?*

"They weren't ready for it or maybe didn't want the responsibility."

"Because they were embarrassed, the boys were anyway."

"Most of those that wanted to do it were girls, the boys couldn't be bothered with it."

"I think they were scared of people thinking differently of them with a doll, and having the responsibility."

5. *Did it live up to your expectations?*

"No. It's not the same as a real baby."

"Yes, more or less. You knew it was going to be hard work and it was, but it was still fun to do."

"Yes, it did. It was interesting to see ... you know the crying and everything at night and that, and how I managed."

"Yes, I really enjoyed it. It was fun to do."

6. *Do you have any suggestions for making the experience more meaningful?*

"To have it more like a real baby."

"Well, you have to put the key in its' back and it would be better if it was more realistic, because babies cry for different reasons not just one thing, but this one only cried."

"No not really."

"Yes, I think you'd need to do more than just put a key in, have it more like a real baby."

7. *Would you recommend it as an experience for other people of your age group?*

"Yes, because it does give you some kind of an idea."

"Yes, just for the experience of knowing what it's like to have to look after something like that, that cries and stuff, looking after a baby. So it gives you some idea."

"Yes, definitely. I think it makes you think more about having children and the responsibility, and that you can't do the things you want to do because you have to look after it."

"Yes. It makes you think."

8. *Do you think that you were the right age when you took it home?*

If yes.... why?

If no.... what age would be better?

"Yes. I don't know."

"Yes, because when you're 14 you have ideas about things, but as you go through the programme you get more educated about things, like the sex education. I don't think it would be taken as seriously when you're younger. So the experience is more meaningful at 14."

"Yes. I think if you were younger you wouldn't take it as seriously. When I was younger I didn't think as much about having babies in 1st or 2nd year."

"I'm not too sure, it helped me understand what it would be like. But maybe it would be good to have it earlier, because people are having sex much earlier, so maybe have it before. Sort of 1st or 2nd year might be better."

APPENDIX 18

EXCERPTS FROM INTERVIEWS WITH TEACHERS

POST BTIO

Excerpts from the transcript of the interview with Teacher 1 post BTIO

How do you think the project went as part of your healthy relationships course?

I would say it served its function which was to raise awareness of the implications of parenting, and we haven't done the whole healthy relationships course yet, but it will be discussed in groups then, after the Easter holidays, and the financial implications and all that sort of stuff will be discussed. So its definitely served its purpose.

The people who have taken the BTIO's home, do you think they've changed in any way?

Yes. Not many though only a couple have found it a shock. I think most of them knew what to expect. I don't think any of them found it a surprise, having to get up, and found it tiring, taking them down the town and stuff like that. They knew what to expect, a lot of them. I think only a couple of them perhaps were shocked, but mind you it reinforces what they thought.

I think they felt quite proud to have been the ones that were chosen to take the baby home over the weekend, and so on, and I think it was a feather in their cap. Amongst their peers they felt they were sort of special, so it was "when I had the baby" and was something to discuss.

Do you think the doll has been a good addition to the course?

Oh definitely. There's a lot about relationships, starting off very gently about relationships with our family, who's important to you, who could you talk to, this sort of thing, leading in to sexual relationships, and then again that leads on to contraception, and then we had a gap really as we didn't have anything about parenting, and then we went on to STD's and AIDs, that was one of the main aims, sexually transmitted diseases, and AIDs is still one of the main things. One thing it has done is made us realise that there's a gap in the 2nd year teaching. They don't get anything, and we need to address that, so I think that what will probably happen is that the first bit about relationships will be moved to 2nd year and then we'll have more time for the detail in 3rd year. The 3rd year course is only short and it's difficult to cover everything. The BTIO is good because apart from anything else it gets discussion going and it fits in very well.

So what difficulties have there been?

The practical difficulties are that you've got to be there physically to hand it over, and you've got to be there to collect it in again, which is all time, at the start of the day, at the end of the day. You've also got to make sure that all the photocopied material is there in a folder ready for them, show them how to use the BTIO. So the practical side was a wee bit of a hassle.

Do you think if someone outwith the school system took overall control would that have made your life easier, or do you think it's an important part of the process for you to do that?

I think it's an important part of the process.

Why?

Because, apart from anything else, you get some feedback when they take the babies back, you know informal feedback, you know one kid said "oh it started crying while I was on my paper round" and all this sort of thing. What is important I think is that we weren't able to do, is that we should have had one person in total control of it. I should have come in on a Monday morning to collect them, rather than me putting them out on a Friday and **** taking them in on a Monday. But this has been really a catalyst for discussion and it brings out all sorts of things. You know some of them come and say that they have a sister who has a baby that cries all night, and that sort of stuff.

What about problems?

The batteries were a problems, I didn't expect them to last such a short time, it seemed to be 4 or 5 nights and that's about it. It's not the expense, it's the hassle, something you could do well without, but if you know beforehand, it's not, because then you're prepared. Some of the girls commented on the clothing, things like "I can't take it home because it hasn't got any socks on" or "it needs a blanket". Changes of clothes and so on would be good. It needs to be as realistic as possible. Even though the dolls were broken, I think that could be such a useful platform to start a discussion about how careful you have to be with a real baby. It can be used in a positive way, about how delicate babies are. But all in all in spite of the problems and the time it all took the BTIO worked well for our purposes.

Excerpts from the transcript of the interview with Teacher 2 post BTIO

How do you think the project went as part of your Healthy Relationships course?

I think it will be good background for when they come round to the discussion about parenting, it will give the kids something to reflect on. You hope it's going to be a learning experience, in some way you hope that it's going to postpone their experience of sexual encounter. We're working towards a goal, and that goal is to make kids more aware of what some of the responsibilities of parenthood might be. It's also made us aware that there is a gap in the 2nd year teaching and *** and I have been talking about what we can do about that.

Have you noticed any changes in the people who have taken the BTIO home?

The morning they come back, yes. It's very interesting the different reactions there have been when the kids have come back. Some of them have been pleased with themselves, in that they've managed to get through the weekend, and they perhaps felt that they coped quite well, although they've had a bit of sleep deprivation. Others have looked as if they're glad to have it off their hands and found it a far greater responsibility than they thought it would be.

Was that what you were expecting?

From previous experiences of it with the kids when we've just been using it ourselves and it's only been for one night, I hadn't experienced the "I want to get it off my hands" type of reaction so much, because they hadn't had it for the longer time. I do think that although the overnight experience is good, in that it gives them a taste of it, they begin to think what they can and cannot do, but when it comes to the experience of being very tired and it being a continuous responsibility, it's only brought out in the longer period.

What difficulties have there been?

I think just because we're so busy anyway the actual giving out and taking in of it, you know it does take time. And I think also, if the kids are taking it back on a Monday morning and there are 20 other things you've got to be doing. I think one person should have overall responsibility and oversees the giving out and taking back and then they can have a lot tighter control.

APPENDIX 19

EXCERPTS FROM INTERVIEWS WITH TEACHERS

AT FOLLOW-UP

Excerpts from the transcript of the interview with Teacher 1 at follow-up

Have you noticed any changes with those that did the project, in the respect of self esteem or confidence?

Yes, people did put each other right during the course, those that had had the baby put their friends right about things, I can't think about an exact instance, and I would say in the terms of self confidence it did give them that. Not to forget that as they go from 3rd year into 4th year, there's a huge maturing process that goes on, both for the girls and the boys too. They change.

Do you think that it would be a good idea to try the baby with a younger age group?

I would have thought not. I don't think they're ready for it in 1st or 2nd year. I think they'd be a wee bit silly with it. I think 3rd year is quite an appropriate time to use this resource.

Is there anything else that you want to add?

I just want to add about the whole school thing. Even the senior pupils were talking about it. It certainly encouraged discussion. Which is the whole thing about the course that we run. I think that we weren't doing enough about parenting in the course, mainly because it's quite a short course, only about 8 or 9 weeks, and the issues we try to cover, it's just ridiculous. We cover all types of relationships, starting from those with family and then through friends and onto parenting, and end up with HIV and AIDs, a huge amount we have to cover in a short period of time, and parenting wasn't anywhere identified really until we started doing the BTIO. There was only one unit in the course that we have about parenting, which was very good, but the baby gets the discussion going more. All the implications of having a baby.

I suppose it's value is that it promotes discussion between people, and because they're able to listen to their peers, the message gets home better. There was tremendous discussion about it, not just among the pupils, but also the teachers, and it even got on the front page of the local rag. It was quite sensational. But it really makes you think, even if it makes one person think about not becoming pregnant then it really has been worthwhile.

I think that it made them think about having a baby, not about not wanting one but why they didn't want one.

And I suppose with the early relationships being discussed in 2nd year will give you more scope in 3rd year to discuss parenting.

Yes, and we do get to get a good discussion going. It's very difficult in this course, you can't be prescriptive, and you have to cover such a lot. They do learn a lot from it though. We spend a lot

of time discussing how relationships change, through age, through moving about, things like that, falling out with friends and getting back with them again, that sort of thing.

I would say that the baby is now an integral part of the course. It's been a good tool. Although I think it would have been better, I mean the new ones I think are supposed to wet themselves and the like, and that makes it more realistic which might have been better. I think that when the new ones come out I'll be pushing for the school to get it's own one, rather than taking it to and fro from Health Promotion. We'd know where it was, how they're looking after it, which would be good. Making sure that they really take care of it well.

I also think that 3rd year is the right time. Any earlier and I don't think they would have been responsible enough, they'd treat it badly, be silly with it. So maybe talking about relationships earlier and then introducing the baby is the best way. So that we catch them before they're getting too much into sexual relationships. Because of the whole thing the relationship part of the course has been moved forward and I think that's a good thing. If they get the idea of the rights and wrongs in relationships in 2nd year then it may have the result that everyone hopes for. The fact that we had the programme in the school highlighted the fact that we needed to have the healthy relationship part earlier in the school, and so that might have an effect. Using the BTIO, it's not just an opportunity for experience it's also a catalyst for discussion. It's also peer-peer learning and that's important.

Excerpts from the transcript of the interview with Teacher 2 at follow-up

Have you noticed if there was any difference between those that did the BTIO than those that didn't in the time you had them?

The ones in my class who had taken the baby home were definitely a bit more mature and realistic about, and they were able to speak from experience in the class. I remember one lassie in particular saying "no, no you can't do that". Some topic had come up in class and she had corrected another pupil about an idea about what it might be like and she corrected them. The other thing is that if it promotes discussion, a starting point for discussion, that 's such a valuable goal. It doesn't really matter particularly if there's no real change for everyone, but a change for one kid then it's worked and worked well.

And that might be more powerful coming from her than coming from you?

Yes definitely. The peer pressure holds a lot of weight. It's also changed something in the school, with our thoughts about 2nd year.

You said at the last interview that sex education needed to be addressed with the 2nd years because you felt there was a gap, do you still think that?

Yes and we're planning changing it. We haven't done it for this particular session because the PSE courses are evaluated in a three year cycle, so we do S5 and 6 one year, S3 and 4 the next and S1 and 2 the following year and then we go back to S5 and 6, and last year was 5 and 6, this year is 3 and 4 and next year is 1 and 2 and one of the things that we are going to do is put in a lot more about love and relationships in the S2 course module. Revision about what we did in 1st year plus a look at HIV and AIDS, without looking in too great a depth at contraception or at any other type of sexual diseases, but there's definitely been an identified gap, there's a definite need for something about love, relationships and caring, and that's definitely something that we're going to change.

It's made us realise that there's a need for more continuity. That we take them on in 1st year, and then we do the baby in 3rd year and there's definitely a gap in 2nd year, and we feel that there's alot more work could be done on the relationship side of it, which would lead in better to the 3rd year.

Would you think that using the BTIO for younger age groups would be valuable or not?

My feeling is that the age we're using it with just now is right, especially in the context of the course, the Healthy Relationships course. It's very difficult as all the kids that come to us, come from different schools and have different sex education, different experiences and different thoughts, they come from home situations, home backgrounds that are different from what you'd

expect, so I think we've got it just about right, the timing of things as they are just now, and its place in the course. It's only part of the course, I think its place in the course is right, I don't think it would be right any sooner. I think that the stage for the majority of them, their friendships and relationships that they're having, well that's the most appropriate time for them to be introduced to it. I think that if it was offered any sooner, say in 2nd year, I think it would be too far removed from the reality of where they are at.

Is there anything else you would like to add?

I feel that some kids took the baby home and they didn't treat it properly, like they didn't treat it as well as they could have, and it was badly mistreated on a couple of occasions when it was actually broken, and it would be interesting to see whether there's any correlation between the academic ability of those kids and when they chose to become parents.

Something else interesting for us, is because we took a far greater sample last year because of your research, a lot more information has filtered through, down to the year groups below, and we've a lot more questions this year, things like, when are we getting the baby, so there are high expectations of the present 3rd year group.

There are high expectations because they have heard so much about it, and it's expected now, there's no way we can't do the baby. It's good though because it means that they're looking forward to it. What other classes do they do that in, or part of any other course, so it's definitely, at least we get the impression that they definitely think it's relevant, and think it's exciting to have the experience. And it gives them something to talk about and it's relevant to their experience.