THE UNIVERSITY OF HULL

An Exploration of Future Orientation in Adolescents' Decisions to Continue or Terminate a Pregnancy

Being submitted in partial fulfillment of the requirements for the degree of Doctor of Clinical Psychology

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By

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Overview

The portfolio has three parts. Part one is a systematic literature review, in which the empirical literature relating to psychological factors related to adolescents' pregnancy resolution decisions is reviewed. Part two is an empirical paper, which explores future orientation in adolescents' decisions to continue or terminate a pregnancy. Part three comprises the appendices.

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Adolescent Childbearing or Abortion?: A Systematic Literature Review of Psychological Factors Related to the Decision to Continue or Terminate a Teenage Pregnancy.

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This paper is written in the format ready for submission to the Journal of Adolescent Health. Please see Appendix 3 for the Guidelines for Authors

Abstract

Teenagers often need support deciding whether to terminate pregnancy. To offer effective support professionals need a clear picture of the evidence base. Therefore this review aimed to identify psychological factors related to teenagers' decisions to continue or terminate pregnancy. Future research focus, methodology, and complexity of the issue are discussed.

Keywords: Teenage Pregnancy, Termination of Pregnancy, Pregnancy Resolution Decision, Psychological Factors.

Adolescent Childbearing or Abortion?: A Systematic Literature Review of Psychological Factors Related to the Decision to Continue or Terminate a Teenage Pregnancy.

Introduction

The Teenage Pregnancy Report [1] highlighted teenage pregnancy as a significant 'problem' in Britain. The Government outlined plans for tackling the causes and consequences of teenage pregnancy, with the aim of halving the under-18 conception rate by 2010. Little attention was paid to termination of teenage pregnancies in The Teenage Pregnancy Report [1] or Government policy.

Teenage conception statistics for England in 2006 [2] showed that for both under-18s and under-16s the conception rate had fallen by 13% since 1998. Interestingly, over this same time period the percentage of teenagers of all ages choosing to terminate their pregnancies increased (from 42% to 49% in 15 to17 year-olds, and from 53% to 60% in 13 to 15 year-olds).

It has been widely highlighted by researchers such as Benson [3] that there is a series of decisions that culminates in adolescent parenting. Some choices in this series (e.g. whether to use contraception) have received much more attention than others (e.g. whether to terminate a pregnancy) in research and policy.

A better understanding of teenagers' pregnancy resolution decisions, meaning their decisions to resolve pregnancy with birth or termination of pregnancy (TOP), is required. In order to understand why some teenagers become adolescent parents, it seems important to consider all of the choices they have to make to arrive at the point of being a parent.

Psychologists and counsellors are sometimes asked to support teenagers finding the process of deciding whether to terminate their pregnancy difficult. While some teenagers find the decision easy to make, other adolescents struggle to arrive at a decision, which can cause much distress for the young person. It has been highlighted that counseling adolescents around this decision-making process requires expertise in the areas of adolescent development, teenage motherhood, and abortion [4]. Therefore these professionals need a clear picture of the current psychological understanding of the factors involved in this decision for teenagers, in order to use the evidence to guide their practice. Psychologists and counsellors could use this knowledge to help young people consider possible important factors relating to their decision.

Secondly, in order for pregnant adolescents under the age of 16 to obtain a TOP, a professional 'Gillick' assessment[1] of their competence to make the decision to terminate the pregnancy must take place [5]. Therefore it is necessary that these practitioners have knowledge about the decision-making involved in this choice and psychological factors that are related to this decision for teenagers.

Research has been conducted investigating adolescents' decisions about TOP since the 1970's [6]. Some factors that research has shown are important in pregnancy resolution decisions are: socio-economic status [7], family and partner influence [8], educational factors [9], aspirations [10], drug-taking [11], religiosity [12], psychiatric characteristics [13], and psychological factors e.g. locus of control, self-esteem, and adolescents perceptions of factors involved [14]. There does not appear to have been a

[1]Young people under 16 years of age are not deemed to be automatically legally competent to give consent. However these young people can be legally competent if they are able to fully understand all aspects of the decision. 'Gillick' competence assessment requires the professional to ascertain that the adolescent has understood the situation she is in, the options open to her, and the consequences of these options [5].

recent attempt to systematically review this body of literature in order to consider the evidence and assess which psychological factors seem to be related to the pregnancy resolution decision in adolescence.

Therefore the author conducted a systematic review to address this need. It was decided that this review would focus on psychological factors related to the pregnancy resolution decision. Investigation of psychological factors seems a good starting point for reviewing the literature, as there is a good understanding of the influence of psychological factors on decision-making.

Objectives

The main objective of the review was to identify which psychological factors relate to a teenagers decision to continue or terminate their pregnancy.

For the purpose of this review a psychological factor was considered to be one which relates to mental activity i.e. cognition, emotion, motivation, attitudes, mental state, personality, perception, or personal narrative. Other social, economic, and biological factors may be mentioned in the review but only in relation to these psychological factors.

Method

Identification of Studies

Databases covering a range of disciplines that may conduct research on teenage pregnancy were searched for relevant articles. These databases included: PsycInfo, PsycARTICLES, Social Services Abstracts, Sociological Abstracts, MEDLINE, Social Care Online, CINAHL, EMBASE, and NHS Libraries (including: Biomed Central, Dialog Datastar, MyIlibrary, NLH Specialist Libraries, Proquest, and Pubmed). The

search terms used were: (Teen* OR Adolescen*) AND (Terminat* OR Abort*) AND Pregnan* AND (Decision* OR Decid* OR Choice*).

The researcher chose to search in the abstract and title, or abstract only, depending on options given. Abstracts were searched, when possible, rather than the title alone, to increase the chance of identifying all relevant articles. Where possible the option to limit the search to English language articles was selected because some studies involved qualitative data, and translation of this could perhaps be misleading. No limit was specified for the date of publication of studies.

Selection of Studies

A scoping search was conducted before beginning the systematic literature review, in which the researcher tested the search strategy and terms, and read abstracts of many papers identified. This scoping search helped to identify important element of studies to consider when addressing the review question. The identification of important elements led to the creation of inclusion and exclusion criteria.

Articles had to meet all inclusion criteria and none of the exclusion criteria in order to be selected for inclusion in the review. The inclusion and exclusion criteria are shown in figure 1. The procedure for study selection is shown in figure 2. This process resulted in 17 studies that met the inclusion and exclusion criteria.

Figure 1. Inclusion and Exclusion Criteria

Inclusion criteria:

- Studies that focused on the decision to continue or terminate a pregnancy.
- Studies that included female participants who became pregnant as teenagers (aged between 12 and 20). The teenage participant group had to be clearly defined and findings from teenage participants had to be separately reported.
- Studies that included both teenagers who chose to continue pregnancy (COP) and those who chose to have a termination of pregnancy (TOP).
- Studies that investigated or explored how psychological factors relate to a teenager's pregnancy resolution decision.

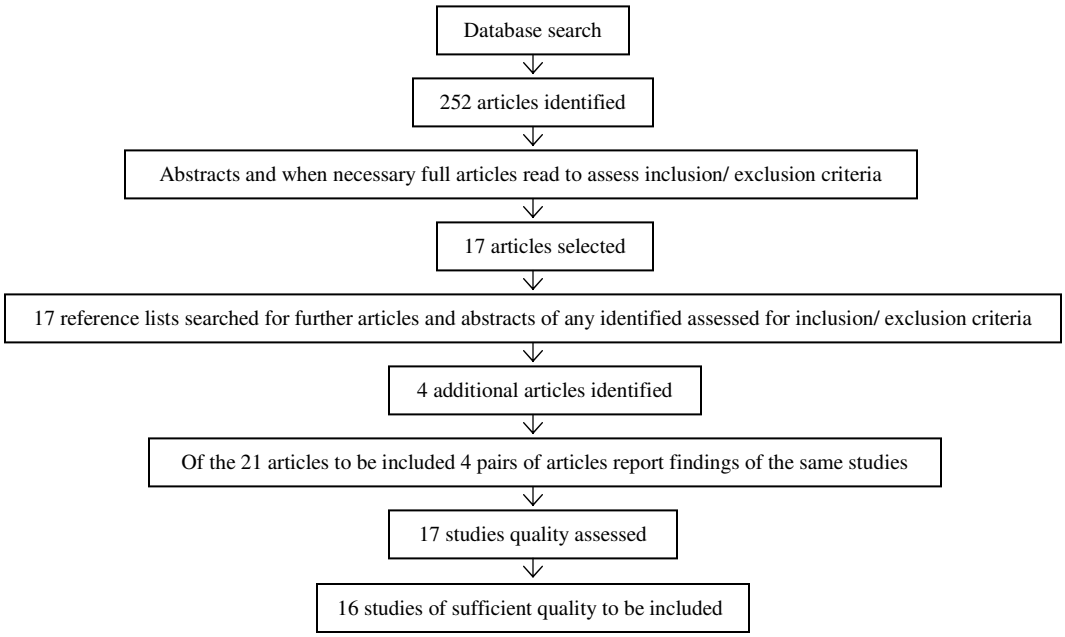
Exclusion criteria:

- Studies that focused on the decision to continue or terminate a pregnancy due to fetal abnormalities or genetic factors.
- Studies conducted within a population where 'unsafe' TOP was prevalent.
- Studies that primarily focused on competence to make the pregnancy resolution decision, including legal stipulations for parental involvement.
- Studies that primarily focused on policy, services, interventions, or professional factors.
- Studies that primarily focused on pregnancy prevention and contraception
- Studies that primarily focused on pregnancy resolution outcomes e.g. satisfaction with decision
- Studies that only reported demographics or prevalence of childbirth and/or termination of pregnancy.
- Literature reviews or other non-empirical papers, as these would not present new evidence and the report of previous studies may be incomplete or biased.
- Case studies due to limited generalisability.
- Unpublished works and Dissertations, as these may not have been reviewed to the same standard as published works.

Quality Assessment

The 17 studies were assessed for quality using National Institute for Health Clinical Excellence methodological checklists and guidance, for both quantitative and qualitative studies [15]. Studies were given a quality rating (++, +, -). Quality ratings allowed the reviewer to make informed judgements as to how strong findings from studies were during the analysis. Quality assessment was not used to exclude studies, but studies were excluded when insufficient details were reported to allow for quality assessment or data extraction.

Figure 2. Process of Study selection



Results

Quality Assessment

The results of the quality assessment are presented in Tables 1 and 2.

Quantitative studies. The main limitations in quality of quantitative studies were a lack of consideration of confounding factors and an absence of reporting inclusion and exclusion criteria. Another difficulty was the limited applicability of many of the studies. The strongest study (++) in the review was the Resnick and Blum study [16/17]. There were 6 quantitative studies receiving + ratings [8/9, 13, 14, 18/19, 20, 21], and 7 receiving – ratings [12, 22/23, 24-28].

Qualitative studies. One of the 3 qualitative studies included in the quality assessment was excluded as insufficient details were reported [29]. Of the other 2 qualitative studies Lee and colleagues (2004) study was assessed to be of highest quality (+) [30], with the other receiving a lower rating (-) [31], mainly due to the lack of clarity in reporting data collection and data analysis.

Studies Reviewed

The process of study selection, shown in figure 2, led to 16 studies being included in the review. Of these, 14 used quantitative methods and 2 used qualitative methods. These 16 studies and the data collected from these are displayed in Table 3.

Table 1. Quality Assessment of Quantitative Studies.

Criteria	Berger, DK et al. (1991)	Eisen, M et al. (1983)/ Evans, J et al. (1976)	Evans, A (2004)/ Evans, A (2001)	Fischman, SH (1977)/ Fischman, SH (1975)	Freeman, EW et al. (1993)	Kane, FJ et al. (1973)	Landry, E et al. (1986)
Appropriate & clearly focused question	Adequately addressed	Adequately addressed	Well covered	Well covered	Adequately addressed	Adequately addressed	Adequately addressed
Groups taken from comparable populations	Well covered	Adequately addressed	Well covered	Well covered	Well covered	Adequately addressed	Adequately addressed
Same exclusion criteria used for all groups	Well covered	Adequately addressed	Adequately addresed	Adequately addressed	Not reported. (Groups matched)	Not addressed	Poorly addressed
Participation rate	100%	Estimate: 80%- 90%	Del: 37% TOP: 34% (records from only one clinic) 2 TOP clinic did not participate	TOP: 100% Del: 100%	Not reported	TOP: 80% Del: not reported	Not reported
Comparison of participants and non-participants	Not applicable	Not addressed	Not addressed	Not applicable	Not reported	Not addressed	Not reported
Groups differentiated & clearly defined	Adequately addressed	Adequately addressed	Adequately addressed	Well covered	Adequately addressed	Poorly addressed	Adequately addressed
Takes into account main potential confounders	Not addressed	Well covered	Well covered	Adequately addressed	Adequately addressed	Poorly addressed	Adequately addressed
Confidence intervals and/or p values provided	Few p values reported	P values reported	P values reported	No. Only %s	P values reported	A few p values	P values reported
The effects appear to be due to factors under investigation.	No significant differences, but TOP group only small (might not be able to identify differences).	Likely correlations. Confident in methodology	Quite likely correlations. Generally confident in methodology, but does not consider impact of sampling point (different time periods before data collected in each group)	Uncertain as no tests of significance, and no info on non-participants.	Quite Likely correlation. However different sampling points for each group could have an impact.	Uncertain. Few values reported or tests of significance. Not enough info on delivery group.	Likely correlation, but may be bias in sample as don't know participation rate.
Applicability of findings	Limited applicability	Somewhat applicable	Somewhat applicable	Limited applicability	Limited applicability	Somewhat applicable	Limited applicability
Overall quality rating (++/ +/ -/ Exclude)	+	+	+	-	-	-	-

Table 1. Continued Quality Assessment of Quantitative Studies.

Criteria	Maskey, S (1991)	Morin-Gonthier, M et al. (1984)	Ortiz, CG et al.(1987)	Plotnick, RD (1992)	Rasanen, E (1985)	Resnick, MD et al. (1985)/ Blum RW et al. (1982)	Rosen, RH (1980)
Appropriate & clearly focused question	Well covered	Well covered	Well covered	Adequately addressed	Adequately addressed	Well covered	Adequately addressed
Groups taken from comparable populations	Well covered	Well covered	Adequately addressed	Well covered	Adequately addressed	Adequately addressed	Adequately addressed
Same exclusion criteria used for all groups	Adequately addressed	Adequately addressed	Poorly addressed	Well covered	Not addressed	Adequately addressed	Poorly addressed
Participation rate	Total: 73% TOP: 67% Del: 76%	Not reported	Participants: 43/44 (group of 1 that declined unknown)	Not reported	TOP: 60% Del: 30%	Self-selected sample. Researchers unable to obtain this information	Organisations: 84%, Participants: 93% (group %s not given)
Comparison of participants and non-participants	Not addressed	Not reported	Not addressed	Not reported	Well covered	Researchers unable to obtain this information	Not addressed
Groups differentiated & clearly defined	Adequately addressed	Adequately addressed	Adequately addressed	Adequately addressed	Adequately addressed	Adequately addressed	Adequately addressed
Takes into account main potential confounders	Poorly addressed	Adequately addressed	Not addressed	Adequately addressed	Poorly addressed	Well covered	Poorly addressed
Confidence intervals and/or p values provided	P values reported	P values reported	No. Only %s reported.	P values reported	No. Only frequencies.	P values reported	P values reported
The effects appear to be due to factors under investigation.	Quite Likely correlation. However other confounders need consideration	Likely correlation. Confident in methodology.	Uncertain. No tests of significance. Need to consider confounders.	Likely correlation, confident in methodology. LOC measure not as reliable as others though	Uncertain. No tests of significance. Other confounders need to be considered.	Likely correlation. Recognises causal determinations cannot be made due to design.	Quite Likely correlation. However other confounders need consideration
Applicability	Somewhat applicable	Somewhat applicable	Limited applicability	Somewhat applicable	Somewhat applicable	Somewhat applicable	Somewhat applicable
Overall quality rating (++/ +/ -/ Exclude)	+	+	-	+	-	++	-

Table 2. Quality Assessment of Qualitative Studies.

Criteria	Lamur, H.E. (1995)	Lee, E, et al. (2004)	Tabberer, S, et al. (2000)
Aims clear	Unclear	Clear	Clear
Appropriate qualitative approach	Unclear	Appropriate	Unclear
Defined and focused research questions	Not focused & Not Defined	Focused & Defined	Focused & Defined
Appropriate methodology	Unclear	Appropriate	Unclear
Appropriate recruitment strategy	Unclear	Appropriate	Unclear
Adequate data collection methods	Not reported	Adequate	Not Reported
Clear researcher roles	Not reported	Not reported	Not Reported
Adequately addressed ethical issues	Unclear	Unclear	Adequate
Rigorous data analysis	Not Rigorous	Rigorous	Unclear
Findings internally coherent and credible	Unclear	Valid	Potential for bias
Relevant findings	Limited Relevance	Relevant	Relevant
Clear implications	Unclear	Clear	Clear
Discusses limitations	Inadequate	Adequate	Inadequate
Applicability of findings	Not applicable	Yes	Yes
Overall quality rating (++/ +/ -/ Exclude)	Excluded as insufficient details reported to quality assess and extract data.	+	-

Table 3. Data from the studies included in the review

Author & date	Study Design	Number of participants	Characteristics of participants	When is data collected	Psychological Factors Investigated	Data collection methods	Design & Analysis	Main Findings	Comments
Berger, DK et al. (1991)	Quantitative, Cross-sectional	Total: 56, (36 positive testers, 20 negative testers) COP:29 TOP: 7	Hispanic, US females from NY, 14-19 yrs, registered in clinic.	01/1988 to 12/1988, attending for preg test, first interviewed before preg test result, then also after decision	Self-esteem (SE), Locus of control (LOC), educational goals, perceived influences on pregnancy resolution.	Interview, Abbreviated Rosenberg Self-Esteem Scale, Rotter Locus of Control Scale	TOP vs COP (Neg and Pos preg testers) Analyses: Student's t-test, Chi-square or Fisher's exact test	COP greater high SE than TOP (not sig). Similar: LOC, plans to finish school, feeling of support, and perception of influence on decision (themselves strongest, then partner, then mother).	Did not see whether they carried out their planned resolution so cannot be sure of group assignment. Small TOP group so analysis may not show up group differences
Eisen, M et al. (1983)/ Evans, J et al. (1976)	Quantitative, Cross-sectional, Longitudinal	Total: 299, Marry + COP: 45, Single + COP: 68, TOP: 184	Anglo (238) or Mexican (61) Americans, residents of Ventura county, 13-19 yrs, TOP older than COP group, (M age= 17yrs)	1972 to 1974, All asked before decision carried through & in 1st trimester	TOP opinion, perceived opinion of others, and perceived influences on pregnancy resolution	Interview with schedule of questions	TOP vs Marry + COP vs Single + COP Bivariate Analysis: Chi square test, Multivariate Analysis: Stepwise discriminant function analysis	Most powerful discriminating factor of preg resolution decision was attitude to TOP. Boyfriend & Mothers perceived opinion also discriminated between TOP & COP. TOP felt significantly more favourably. Perceived girlfriend opinion most powerful predictor of TOP attitude. Therefore perceived girlfriend opinion= indirect influence, and perceived mother & boyfriend opinion= direct influences. Discrepancy between preg resolution preference and choice. >1/3 had a TOP despite definite agreement with Delivery.	Methodology strong. Decision making model used to guide analysis assumes decision reached to further certain important goals. Recognises post-decisional distortion & attempts to minimise its impact. Limitation of relevance as conducted 30 yrs ago.
Evans, A (2004)/ Evans, A (2001)	Quantitative, case- control study	Total:1324 COP: 1122 TOP: 202	Australian teenagers from New South Wales & The Australian Capital Territory, Younger than 20yr 7month & had given birth in the last year, or had terminated before 20th birthday.	1998, After birth or TOP sent a questionnaire. COP group had much longer before completing questionnaires; TOP group participated within days of TOP.	Pregnancy histories, options considered for preg resolution, perceived personal control over decision, perceptions the influence of others on the decision.	National survey: Young Women's Pregnancy Survey (YWPS)	TOP vs COP Analysis not clear for some aspects. 3 logistic regression models controlling for confounding factors.	Significantly more of COP group: planned preg, experienced being preg before & previously chosen delivery, happy about preg resolution. Significantly more of TOP group: mixed feelings & glad or relieved about preg resolution, considered other options for preg resolution. The majority in both groups perceive they came to the decision independently. More in TOP group perceived a direct influence towards abortion. There is a significant association between perceived direct influence towards TOP or COP from the partner & the resolution decision made.	COP group had longer after birth before completing questionnaires. Does acknowledge this is likely to effect perspective, & may have led to more TOP mixed feelings. Sometimes unclear when 1st preg is considered & when most recent preg is considered.
Fischman, SH (1977)/ Fischman, SH (1975)	Quantitative, Cross-sectional	Total: 229, COP: 151 TOP: 78	US women from Baltimore, 13-18 years (M= 16), black urban women, never married, 1st preg (66 early TOP, 12 late TOP)	10/1972 to 01/1973. Before TOP or COP.	Personal & social characteristics. Desire to have a baby with a 2nd preg, motivating factor for Delivery, misinformation or fear about TOP.	Structured Interview & 10 item Self-Esteem (SE) scale (Rosenberg)	TOP vs COP (late vs early TOP). Comments about significance but does not mention analysis or give values. Percentages reported.	80% had medium to high SE. TOP group were more likely to have low SE. 2 most common reasons for COP: desire to have a baby (45%), feeling that TOP is unacceptable since it represents taking life or destroying own flesh and blood (32%). Many in COP group report preg was planned, and the majority were happy. Main reasons for having an abortion: too young, can't afford baby, baby would interfere with school (71%), & pressure from family or boyfriend for TOP (25%). COP group more likely to report perceiving positive relationship with mother and a stable relationship with a partner. Over ½ perceived they alone had made the decision. COP group more likely to perceive an influence from boyfriend, whereas TOP perceived more influenced from family. >60% of deliverers perceived that their boyfriend would support them. Attitudes to TOP were consistent with resolution decision. The majority of teenagers expressed some approval of TOP. ½ of COP group would consider TOP in the future if they became preg before they were ready. The majority of teenagers wanted to have 1, 2, or 3 children.	Limited by analysis and lack of tests of significance. Also is not generalisable as sample is very specific (black urban). 19 girls, who registered for COP after 20th week screened to verify that they wanted to deliver & had not registered too late for TOP, so can be more confident in group status.

Notes: TOP= Termination of Pregnancy, COP= Continuation of Pregnancy

Table 3. Continued. Data from the studies included in the review

Author & date	Study Design	Number of participants	Characteristics of participants	When is data collected	Psychological Factors Investigated	Data collection methods	Design & Analysis	Main Findings	Comments
Freeman, EW et al. (1993)	Quantitative, longitudinal, case-control	Not reported	Unmarried US women, black, 1st pregnancy, 13 – 17yrs (M= 15.6 for both groups).	COP: early- mid preg, TOP: shortly after TOP	Attitudes & perceptions of childbearing, educational & occupational goals, perceived support for childbearing, psychological factors e.g. emotional distress, perceived attitudes of others.	Interview & Questionnaire SCL-90 measure of emotional distress and Self-Esteem measure.	TOP vs COP. Unspecified tests of significance, frequencies & percentages.	There were no significant differences in Self-esteem between the groups (self-acceptance, assertiveness, family relations), or emotional distress. TOP group more likely to have educational goals beyond school. Significantly more in TOP group expected education or training beyond school and saw these goals as consistent with families' expectations. Significantly more of TOP than COP group thought a baby would alter educational goals. TOP group more likely to have vocational goals. TOP group aspired to specific occupations outside the home, and more likely to believe they would be employed in these. Significantly more of TOP group thought they had a very high likelihood of achieving their work goals. TOP group were unhappy about preg, but COP group were very happy. Scores for wantedness fell in the midrange for both groups (perhaps indicating ambivalence or uncertainty). Overall TOP group perceived significantly less acceptance of teenage maternity. Both groups perceived their boyfriends to be most supportive. Significantly more in COP group perceived others to be supportive of Delivery, and significantly more of TOP group perceived opposition to Delivery. Significantly more of TOP group believed they had someone close to them who supported TOP. ¾ of both groups reported making the decision independently, but of those who didn't significantly more of the TOP group reported their mother decided. Significantly, COP group were closer to their mothers than boyfriends, whereas TOP group were equally close to mothers and boyfriends. Significantly more in COP group than TOP group had seriously considered marriage.	Positively groups are matched. Did not see whether COP group carried out their planned resolution so cannot be sure of group assignment. Interviewed at different points (after TOP but before birth) and the likelihood of this affecting perception and report is not addressed.
Kane, FJ et al. (1973)	Quantitative, case-control	Total: 132 TOP: 99 COP: 33	American from North Carolina. TOP: white, unmarried, seeking TOP, adolescents M= 18.9 COP: single girls continuing pregnancy, from maternity home, age M= 18.	06/1970 to 01/1971. TOP: Interviewed the afternoon before TOP. COP: Interviewed at a maternity home.	Neuroticism	Structured Interview, Neuroticism Scale Questionnaire (Scheier & Cattell, 1961).	TOP vs COP. Analyses: T-tests, means, percentages	Differences between groups on 4 of 5 sub-factors of NSQ (? significance as no p values reported): Sensitivity vs insensitivity- COP group tended to polarise on either end of the spectrum Inhibitition vs impulsivity- COP group rated themselves as more impulsive Dominance vs submissiveness- little difference but both groups exceeded norms, rating themselves as dominant and tending to externalise aggression Anxiety- significantly more anxiety in COP group Total neuroticism factor- twice the number of scores in pathological range in the COP group than TOP group. TOP group did not exceed norms for test.	Not enough details given about COP group (e.g. when interviewed, gestation, participation rate) to allow comparison of likeness of groups. Could COP group still choose TOP? If yes may have a different perspective, if no could still change their minds (not certain of allocation then). No exclusion criteria for age are reported. Limitation of relevance as conducted 30 yrs ago.
Landry, E et al. (1986)	Quantitative, cross-sectional	Total: 379 COP: 136, TOP: 92, (151 never pregnant but sexually active)	Black US girls, from New Orleans, 12-18yrs, M age= 17yrs. Significant differences in age between COP & contraceptors compared to TOP group who were slightly younger, level of education also differed significantly among the three groups, with COP group having least.	06/1983 to 11/1983. COP group interviewed 24- 48 hours postpartum. TOP group interviewed prior to TOP. (Never preg group interviewed at family planning clinic)	Experiences of the teens who became pregnant, reactions when they learned they were pregnant, perceived reactions of others, & attitudes towards school.	Interviews	TOP vs COP (vs contraceptors). Bivariate analysis and logistic regression	Logistic regression showed one factor that most differentiates TOP and a COP group is planning to attend college. Significantly less in COP group than TOP group planned to go to college. 3 groups similar in attitude to school. Significantly more of TOP group than COP group tried to deny preg when they found out (but those in TOP group told someone else significantly sooner). In both groups the most common reaction to preg was surprise for over ¾ of teens. 1/5 feared their boyfriend's reaction. COP group were significantly more happy and proud about preg. TOP group were significantly more angry and fearful of parents' reactions. Over ¾ of both groups perceived their parents to be surprised. COP group perceived their parents to be significantly more proud & happy than TOP group. Both groups perceived their boyfriends to be surprised. COP group perceived their boyfriends to be significantly more happy and proud than TOP group.	Not reported how many did not participate. Differences in age and education have not been controlled for in the bivariate analysis but were controlled for in logistic regression. COP group interviewed after birth but TOP group interviewed before TOP. COP group have carried out their decision and cannot change their minds. This may alter perspective and report. TOP group could still change their minds (so cannot be certain of group allocation). Only Black US participants.

Notes: TOP= Termination of Pregnancy, COP= Continuation of Pregnancy

Table 3. Continued. Data from the studies included in the review

Author & date	Study Design	Number of participants	Characteristics of participants	When is data collected	Psychological Factors Investigated	Data collection methods	Design & Analysis	Main Findings	Comments
Lee, E, et al. (2004)	Qualitative	COP: 52 TOP: 51	UK Women (from areas varying in abortion rate), 17 years old or younger at first pregnancy, (A number of teenagers had been pregnant again since the preg of interest. Some teenagers in both groups had resolved these pregnancies with an alternative resolution: TOP group continued 14 pregnancies before interview, COP group aborted 2 pregnancies before interview)	Teenagers interviewed up to 9yrs after their pregnancy of interest. Some teenagers had had further pregnancies since and chose alternative resolutions: TOP group continued 14 pregnancies before interview, Maternity group aborted 2 pregnancies before interview	Perceptions of abortion, perceived influences on preg resolution decision.	Interviews	Thematic Analysis	Confirmation of pregnancy: both groups report shock/horror, 13% of COP group pleased but less of TOP group. In TOP group reasons for shock were: wrong time to have a baby (80%), impact on education/employment (63%), cannot afford baby (48%). In the COP group the reasons for shock were: wrong time to have a baby (66%), impact on education/employment (42%), fear of losing partner (24%). In both groups immediate reactions of partners perceived as 'very negative' by ¼, & 'very pleased' by 10% of TOP group & 1/3 of COP group. In both groups Mothers reactions were perceived as 'very negative' by ¼. Subsequent perceived reactions changed: only 4% TOP group perceived mothers to be 'very positive' but nearly ½ of COP group. More of the COP group perceived partner to be 'strongly for maternity'. More in the TOP group perceived partner to be 'strongly for termination'. Of the mothers in the TOP group who knew about the pregnancy, the majority were perceived to be 'somewhat' or 'strongly' in favour of abortion. The mothers of COP group were perceived to be ambivalent, 1/3 in support of TOP, 1/7 clearly supported Delivery. 2/3 of both groups felt they had the final choice and their own views were very important. ½ TOP group and ¼ COP group perceived that they were influenced in their choice by their partner. Both groups sometimes mentioned other people when they discussed their decision (e.g. friends) and talked about common views, expectations and experiences. TOP group: Frequently seemed ambivalent so they followed their partner's preference. The main theme in their narratives was aspects of their future life e.g. education. Most did not seem to think their relationship would be lasting or important. Anxiety over parents finding out and being angry or disappointed was particularly strong for teenagers from religious backgrounds. Teenagers from non-religious backgrounds perceived that parents would be upset or disappointed, more than opposed to abortion. When teenagers had mixed feelings (1/4) parents were perceived as influential in the decision. Younger teenagers perceived this influence to be more welcome. In a few cases it was the teenager's perception of their parents' experience that they reported influenced them. Most indicated that it was their decision but they perceived parents agreed with them. They did want parental support. COP group: Majority did not perceive there to have been much influence from their partner. Those who did not tell others until a late gestation often reported knowing they wouldn't have a TOP anyway, and by the time others knew they couldn't. The pregnancy was largely perceived as 'hers'. Acceptance of the pregnancy by the partner was desired but not the determining factor. Their own wish to have the baby was most important. It was most likely that parents influenced teenagers towards pregnancy. For those who were ambivalent and continued preg, parental non-directiveness made a difference. Most reported that they disagreed with abortion or they perceived their parents disagreed with it.	Recent study. Does comment on some limitations e.g. relying on young women's reports of others reactions, and small sample that is unrepresentative. Does not comment on timing of sampling (up to 9yrs later) and subsequent pregnancy resolutions, which are very likely to alter perceptions. Not enough recognition of the possible sample bias-who says yes when so many do not participate?

TOP= Termination of Pregnancy, COP= Continuation of Pregnancy

Table 3. Continued. Data from the studies included in the review

Author & date	Study Design	Number of participants	Characteristics of participants	When is data collected	Psychological Factors Investigated	Data collection methods	Design & Analysis	Main Findings	Comments
Maskey, S (1991)	Quantitative, case-control	Total: 52, TOP:14, COP: 38	UK women, aged under 20, and pregnant.	When they attend Termination and Antenatal clinics.	Psychiatric morbidity/ dysphoria common in mental illness (scales: somatic, anxiety and insomnia, social dysfunction, depression), internal or external locus of control, and attitude to pregnancy	General Health Questionnaire (GHQ), Nowicki and Strickland Locus of Control (LOC) Scale for children (modified for an English Population and excluding school related items), & 5 visual analogue scales on attitude to pregnancy.	TOP vs COP. Analyses: Between group differences for GHQ, LOC, and attitude scale using Kruskal-Wallis Analysis of variance. Correlations between measures were calculated on pooled data from the two groups using Pearson's Product Moment Correlation Coefficient (Pearson's Rho).	TOP group have a significantly higher probability of psychiatric disorder on total GHQ and subtests: somatic, anxiety and insomnia, and depression, but not social dysfunction. 8/38 COP and 5/14 of TOP were above 50% probability cut off for caseness (significant). No significant differences in LOC. TOP group significantly less certain on chosen course of action. LOC scale correlated significantly with sureness about making right or wrong decision and with the depression scale of the GHQ.	Did not follow up whether COP or TOP participants changed their mind. Did not look at non-participants. Mentions that gestation may affect somatic scale of GHQ and says it will control for it. Does not mention gestation affect on perceptions of self and attitude. Doesn't mention other confounders.
Morin-Gonthier, M et al. (1984)	Quantitative, case-control	Total: 100, TOP: 50 COP: 50	Sample homogenous, nonindignent, French Canadian, from Montreal, Roman Catholic, 13-19yrs (M= 16.4, SD= 1.4), TOP 90% primigravid & COP 95% primigravid. Educational levels similar: TOP 9.8 yrs, COP 9.6 yrs	At abortion clinic for abortion sample, and hospital and maternity homes for control sample. Sampled before abortion or birth, after they had made a final decision.	Ambivalence and anxiety in the decision making process, perceived attitudes of partners, family & friends to pregnancy, and patients attitudes to pregnancy.	Interview about ambivalence and anxiety in the decision making process. Gynaecologic and Social Questionnaire administered after final decision	TOP vs COP. Analyses: Frequency and descriptive statistics, Chi-square test for discrete variables to compare 2 groups, & Students t-test for continuous variables.	COP significantly higher on: wish to be pregnant, want someone to love and to love me in return, family encourages me to keep my child, partner opposed to TOP, family opposed to TOP, I am opposed to TOP, TOP significantly higher on: I am too young to have a child, I am unable to bring up a child, I cannot provide for the child, There is no one to help me, & I do not want to prejudice my future. Perception of partner's attitude was significant. Perceptions that the family advised keeping child, placing for adoption, were indifferent, did not assist, rejected her, or were suggesting professional advice, were significantly higher in COP group. Perceptions that the family advised TOP, or assisted in TOP arrangements were significantly higher in TOP group. Concluded TOP group seemed more independent and self-assured, largely made their decisions by themselves, & had a more realistic view of pregnancy. COP group appeared more submissive and less capable of integrating various elements of reality into their decision making. Also concludes that COP group choices are strongly influenced by partner, family and friends. However differences in attitude do not mean these influenced the teenager.	Inclusion and exclusion criteria not reported but COP group matched to TOP group on age and parity, and background characteristics considered. Other factors not commented on e.g. gestational age. Does not report if any changed mind, so if group assignment is accurate. Should be noted for partner and family attitudes this is the teenagers perception. Does not ask how this influenced decision though.
Ortiz, CG et al.(1987)	Quantitative, Case-control	Total: 43 COP: 21, TOP: 22	Puerto Rican women, aged 14 - 19 yrs, 98% unemployed, from low income families	6 weeks in 1982. Interviewed when teenagers were still pregnant and when they had decided on COP or TOP.	Perceived influence of family relationships, support, and education.	34 item interview schedule	TOP vs COP. Percentage Analyses only, no tests of significance.	Teens report others influence on their decision: More girls in COP group perceive a strong influence from family and friends. Most girls in both groups relied strongly on themselves most in decision making. Mother more of an influence than father. COP group more strongly influenced by mother and father. Boyfriends and best-friends also seem more influential in the COP group (*). Anticipated changes in education based on chosen course of action: TOP higher level of interest in continuing school. Authors conclude TOP girls have more specific plans for education/career. More of COP group said not sure of their educational plans.	Limited by analysis and lack of tests of significance. Also is not generalisable as sample is very specific. Gestational age not mentioned which could be considered a confounding factor. Cannot be certain of group assignment as do not know if they would change their minds re birth or termination. Also participation rate unclear and no info on non-participants. * Cannot claim influence only correlation, as design does not allow causal relationships to be identified.

Notes: TOP= Termination of Pregnancy, COP= Continuation of Pregnancy

Table 3. Continued Data from the studies included in the review

Author & date	Study Design	Number of participants	Characteristics of participants	When is data collected	Psychological Factors Investigated	Data collection methods	Design & Analysis	Main Findings	Comments
Plotnick, RD (1992)	Quantitative, Cohort study	Total sample: 1142 - 20% teenage pregnancy rate of which 9% ended in miscarriage or stillbirth. Of the remaining pregnancies 39% were aborted, 29% were born to unmarried women, 32% were born to teenagers who married between conception and birth. So 5% of sample became unwed teenage mothers.	US women, aged 14 - 16 yrs (when surveyed in 1979), never married, never had a child, only first pregnancies are studied. Non-Hispanic white females. (Blacks excluded due to more under-reporting of pregnancy and abortion. Small no of Hispanics also excluded).	1979. Before they became pregnant.	Attitudes, self-esteem, locus of control, family/gender role attitude, and educational expectations.	National survey- National Longitudinal Survey of Youth (NLSY). The Rotter scale for locus of control (LOC). The Rosenberg self-esteem (SE) scale. Scale measuring: attitudes toward family and gender roles, educational expectations, satisfaction with schooling experience, religiosity, and family background characteristics. Alpha values given for measures used.	TOP vs Married + COP vs Not Married + COP. Analysis: Two-stage nested logit framework.	Strong internal LOC, positive attitudes towards school, high educational expectations, all have significant negative effects on the likelihood of premarital preg. More egalitarian attitudes on women's family roles show a significant positive relationship with the likelihood of premarital preg. Likelihood of resolving a premarital preg by TOP is significantly positively related to high self-esteem and high educational expectations. A strong internal locus of control has a significant negative effect on the likelihood of abortion. Positive attitudes towards school and more egalitarian attitudes on family roles are not significantly related to abortion, although the signs are positive. Authors summarise that "the substantive effects of self-esteem, attitudes toward school, and educational expectations are large, while the effects of attitudes toward women's family roles are moderate. The substantive impact of locus of control, in contrast is minor. Attitudes are important paths through which family background characteristics transmit their influence on adolescent sexual and marriage behaviour."	Strong methodology and hypotheses made. Clear about sample selected, except participation rate. Limited applicability perhaps as only white Americans. Low reliability of LOC scale on NLSY, raises questions about the reliability of the results for this variable. Limitation of relevance as conducted nearly 30 yrs ago.
Rasanen, E (1985)	Quantitative, case- control study.	COP: 54 TOP: 57	Women from Kuopio. COP: Under 18, TOP: Under 17, (M age= 16)	1977-1979. TOP group interviewed 1 year after TOP, COP group interviewed 2 months after birth.	Attitudes to pregnancy and childbearing, relationship and family factors, fears, mental symptoms and somatic symptoms.	Semi-structured interview (with 56 TOP & 50 COP), Questionnaires (human relationships of families, fears, sentence completion).	TOP vs COP. No test of significance only Frequencies & percentages	Reasons for TOP: too immature for motherhood, nothing to offer the child with unfinished school, & financially dependent on parents. Most planned to have a child in later life. 35/56 independent abortion decision, 19/56 decided with partner and supported by parents, 3/56 felt pressured into abortion by parents/partner Reasons for COP: TOP unethical, & someone to love them.	Limited as no tests of significance, and lack of consideration of other confounders. TOP group interviewed 12 months after event compared to 2 months in COP group. This is likely to change their perspective and report. Asking after the event is likely to alter report of decision anyway. Confounders: considered adolescent crisis as a possible explanation of mental disturbance. One of COP group previously had an abortion which might affect their decision-making.

Notes: TOP= Termination of Pregnancy, COP= Continuation of Pregnancy

Table 3. Continued. Data from the studies included in the review

Author & date	Study Design	Number of participants	Characteristics of participants	When is data collected	Psychological Factors Investigated	Data collection methods	Design & Analysis	Main Findings	Comments
Resnick, MD et al. (1985)/ Blum RW et al. (1982)	Quantitative, Cross-sectional, comparative, post-hoc	Total: 206 TOP: 49 Mothers: 48 Pregnant: 50 Contraceptors: 59	US Women from St Paul & Minneapolis, Self-selected sample, 14 – 19 yrs (M=17.1 yrs). No sig diffs in age across groups, but sig diff in educational attainment. 2/3 white, <1/3 black, 12 Native American, 2 Mexican American, 1 Chinese. TOP group: No previous TOPs, and not currently using contraception. Mother group: ≥1 child Pregnant group: At least 2nd trimester, & intention to continue pregnancy. Contraceptors: sexually active, nonparents, using birth control for ≥1 yr.	1981. TOP participants interviewed within 24 of TOP. Pregnant participants interviewed in at least 2nd trimester. Recruited when attending one of 35 clinics and social services.	Developmental and personalogical characteristics: ego development, future time perspective, sex role identity, locus of control, and social competence and contextual information (e.g. career and work aspirations, and sexual decision making).	Questionnaires assessing psychological development & self-concept. Semi-structured interview for contextual info. The Future Events test for future time perspective (FTP). The Nowicki-Strickland Personal Reaction Survey for locus of control (LOC). The Loevinger Sentence Completion Form, for ego development & cognitive complexity. The Bem Sex role Inventory. The Irrational Beliefs Test for cognitive style relative to social decision making & behaviour. Blum (1982) article mentions Rest's Defining Issues Test- for moral development, and social & interpersonal decision-making.	Mothers vs TOPs, TOPs vs pregnant teenagers, (mothers vs contraceptors, contraceptors vs TOPs). Analyses: Correlation, contingency/ analysis, ANOVA, & discriminant function analysis. 6 pair-wise comparisons to differentiate 4 groups.	Sig group differences in: LOC, FTP, 3 subscales of Irrational Beliefs test (Anxiety, Dependency & Helplessness). Sig subgroup differences in: Sex Role Orient & ego dev. Sig after controlling for age, education, & ethnicity. Mothers vs TOPs sig differences: Most powerful differentiator was FTP. TOPs: more developed sense of the future, more capacity to anticipate future consequences, less anxiety, more internal LOC, and a sense of helplessness. Mothers: heightened sense of dependency, low sense of personal control, need for others approval, identified with traditional sex roles, characterised by problem avoidance. Pregnant vs TOPs sig differences: Similar discriminators as the Mothers vs TOPs. TOPs: more developed FTP, more non-traditional sex role, more helplessness. Pregnant: more likely to have external LOC, to engage in denial, and exhibit dependency. Factors most characteristic of each group overall: TOPs: highly developed FTP, non-traditional sex role orientation, helplessness. Many saw pregnancy as something they fell into despite future goals & employment aspirations. Saw pregnancy as decision juncture with decision to terminate cast in language of future. Believed that ultimately the TOP decision was their own. Mothers: least developed FTP and sense of personal efficacy (external LOC). There was no decision to be made. Inability to project self into future. Higher anxiety. Traditional sex role. Raising a family was a central aspiration and component of self-concept prior to pregnancy. No alternative aspirations for education or career. Traits reinforcing inaction: avoidance as problem-solving style, denial and dependence on others. Pregnant: like mothers but higher ambiguity (could be due to the transitional nature of pregnancy).	Confident in methodology. Well described sample and controls for differences in educational attainment. Good exploration of psychological factors. Acknowledges limitations and considers confounding factors in analysis incl. hindsight. Self-selected sample means cannot compare participants with non-participants to assess potential bias.
Rosen, RH (1980)	Quantitative, Case control	Total sample for overall study, COP: 561, TOP: 1185. The group reported in this paper (under 18 unmarried when became preg): Total: 432 (250 white, 182 black)	US females, from Michigan, aged 12 -18 yrs, unmarried when became preg.	1974 – 1975, Prior to abortion or Delivery.	Perceived influence of family, friends & partner on preg resolution decision, conflict in decision making, perception of own competence, and attitudes towards traditional & feminist female roles.	Questionnaire. Scales measuring: conflict in decision making, perception of own competence, & attitudes towards female roles.	COP vs TOP (Black vs White). 5 groups compared: Black COP, Black TOP, White COP, White TOP, White Adopt (no Black Adopt). Analyses: Percentages, sig differences between continuous variables determined by Students t test. For nominal variables Chi square was used. Relationships determined by Pearsonian zero order correlations.	Similar proportions of TOP & COP groups made the decision without telling parents. Mother perceived to have least influence on WCOP group. Mothers perceived influence was greater than girlfriends for all groups except WCOP. WCOP were the only group to perceive most influence from partner. Perception of Mothers influence significantly & positively associated with fathers influence. Perception of Mothers influence significantly and positively associated with conflict in decision making. Independent decision making significantly negatively associated with conflict in decision making (except BTOP). Perception of Mothers influence negatively associated with perceived competence among white groups. Independence in decision making significantly positively associated with perceptions of competence. COP groups did not feel guilty or ashamed to be a single parent; they did not have to be one. Comments emphasised their choice to take on the responsibility.	Does control for cultural background but other confounders need consideration e.g. gestational age. Does not follow-up final resolution to check group assignment.

Notes: TOP= Termination of Pregnancy, COP= Continuation of Pregnancy

Table 3. Continued Data from the studies included in the review

Author & date	Study Design	Number of participants	Characteristics of participants	When is data collected	Psychological Factors Investigated	Data collection methods	Design & Analysis	Main Findings	Comments
Tabberer, S, et al. (2000)	Qualitative	Total: 41 TOP: 11 COP: 30	UK participants, from Doncaster, who had been or were pregnant. Average age just under 16. TOP: 16 – 18. COP: 18 or under at time of birth. Participants had a range of pregnancy and motherhood experiences.	COP group via education, social services, & midwives. TOP group via TOP clinic	Perceived influences on the pregnancy resolution decision (including perceived influence of parents & boyfriends), their response to any future pregnancy, any advice to others facing a similar choice.	Interviews	Does not report	Almost all teenagers were shocked at pregnancy. Similar process of decision making for both groups. Process of decision-making: rehearsing different outcomes then final choice. Draw on existing assumptions, knowledge, experiences, & those of family. Key period of time during for exploring options and deciding. COP: Often decision made very quickly based upon their views. Often anti-abortion, especially young women who had not been a parent. Anti-abortion views linked to ideas of the baby as a source of love, of a need to take responsibility, & to avoid baby suffering. Dislike of TOP & fear of medical procedures instrumental in some decisions to Deliver. Thought about family members perceived opinions of TOP and motherhood when deciding on COP. Many perceived parents wanted them to make own decision & would support regardless of decision. Perceived support often influential in COP decision. 'Capture' of the preg within family important in COP decision. Boyfriends perceived opinion sometimes influential in COP decision. COP was sometimes an impetus to sort life out & focus on future. Little evidence of seeking pregnancy as a route to adulthood (in fact COP often reintegrates them into family). Many in COP group stated they would choose abortion if it happened again (1st motherhood as a watershed in thinking about TOP). TOP: Most initially thought they would choose COP. Knowing someone who had a TOP allowed consideration of TOP. Having someone to talk to proved decisive in thinking. Perceived views of mother, especially about responsibilities, instrumental in TOP decisions, although still reported she had made decision. When boyfriend involved, most perceived TOP to be a joint decision. Felt they had to cover up TOP. Reasons for TOP: family, relationships, plans for future, conception context. (COP group considered similar factors but were often unwilling to consider TOP). Both groups had similar educational backgrounds and hopes for future. Anxiety was expressed about the impact of pregnancy on schooling and work. Many TOPs already working (but could not interview TOPs under 16 due to ethics). Suggest that once school ended might consider TOP more (but could not interview TOPs under 16!). But some young mothers working when became pregnant, & intended to return to work/ college. For both groups sometimes parental intervention led to adverse outcomes. Indecision could result from boyfriends being happy to let their partner decide without him. For some young women the boyfriends were perceived to be peripheral to the decision and to any support. Both groups experienced the enormity of decision. Enormity of decision may mean avoiding choosing themselves by following preferences of others. May not acknowledge preg, which can remove choice of TOP. Responsibility of decision can lead to anxiety & stress. Decision making can be traumatic. Little evidence that TOP option is discussed in communities.	Does not report methodology or analysis sufficiently, no comment on researcher involvement/perspective, difficulties with sample. Recruited a very heterogeneous sample: pregnant any number of times, any combination of resolutions as a teenager, & some over 18 at interview. Only 6 pregnant at the time, so not often addressing the time point that the research question asks about. Asking afterwards and after other resolutions will change perception and report. Makes conclusions about age when have not sampled below 16 in TOP group due to consent issues.

Notes: TOP= Termination of Pregnancy, COP= Continuation of Pregnancy

Main Findings

Initial reactions. Studies consistently found that both teenagers who chose COP and TOP reported shock when they discovered were pregnant [26, 30, 31], but adolescents that chose COP expressed more positive feelings e.g. being happy, pleased, and proud, and TOP teenagers expressed more negative feelings e.g. being unhappy, angry, and fearful [20, 22/23, 24, 26, 30]. Two studies [26, 30] found TOP participants were more fearful about parents finding out about pregnancy and being angry or disappointed, particularly teenagers from religious backgrounds [30].

Considering the options. The strongest study reviewed, conducted by Resnick and Blum [16/17], took a cross-sectional sample of 206 women and compared 4 groups (TOP, mothers, pregnant, and successful contraceptors). They found that women in the TOP group saw pregnancy as a decision juncture, whereas mothers considered that there was no decision to be made [16/17]. Evans' study [8/9] showed significantly more teenagers choosing TOP than COP considered other options for pregnancy resolution, and Tabberer and colleagues reported most TOP participants initially thought they would choose COP [31].

TOP attitudes. Many studies asked about attitude to TOP, and consistently the COP group expressed significantly more opposition to TOP than TOP participants [18/19, 20, 22/23, 27, 30, 31]. One study reported that attitude to TOP was the most powerful discriminating factor of pregnancy resolution decision [18/19]. Reasons given for this opposition by COP teenagers included: a belief that it is unethical [27], perception that their parents disagreed with it [30], it represents taking life or destroying own flesh

and blood [22/23], ideas of the baby as a source of love, a need to take responsibility, and to avoid baby suffering [31].

Tabberer and colleagues commented that often the strongest anti-abortion views were held by younger women who had not experienced pregnancy or parenting [31]. However once they had experienced motherhood 2 studies suggest they would choose TOP, or consider it, if they became pregnant again [22/23, 31]. Tabberer and colleagues therefore suggested that first motherhood is a watershed in thinking about TOP [31].

Certainty about pregnancy resolution choice. Three of the stronger studies in the review, [8/9, 13, 18/19] highlighted that TOP teenagers were significantly less certain and had more mixed feelings about their chosen resolution decision. In two of these studies teenagers were asked about feelings about their choice before birth or TOP [13, 18/19]. In the other study they were asked after birth or TOP, but the TOP group were asked much sooner after resolution than COP group, and significantly more of the COP group had been pregnant previously and chosen COP [8/9]. In this later study, responses could have been affected by adjustment to TOP or COP.

Independent decision making. A number of studies reported that the majority of teenagers in both TOP and COP groups believed that they made the pregnancy resolution decision independently [8/9, 12, 22/23, 24, 30]. Teenagers in the Lee and colleagues study [30] expressed that they made the final decision, as their own views were very important, but they perceived their parents agreed with them. These researchers reported that the COP group thought their own wish to have the baby was most important [30]. Resnick and Blum [16/17] reported that teenagers choosing TOP also believed that ultimately they should make the decision for themselves. Findings of independent

decision making in TOP participants was echoed by Morin-Gonthier and colleagues [20] and Rasanen [27]. Although Rosen's study [28] had some limitations and may not be widely generalisable, interestingly it reported that independent decision making was generally significantly negatively associated with conflict in decision making.

Others attitudes and influence. Landry and colleagues [26] and Lee and colleagues [30] reported that COP teenagers perceived more positive reactions from parents than TOP teenagers. Findings from Freeman and colleagues study [24] showed that overall the TOP group perceived significantly less acceptance of teenage maternity than the COP group, confirming findings of the other two studies.

Studies found that more teenagers choosing TOP perceived their parents were in favour of TOP [20, 24, 30]. Some studies found that more teenagers in the COP group perceived their parents to be in favour of birth [20, 24], but researchers also found they were perceived to be more ambivalent, indifferent, and lacking in opinion [20, 30, 31]. Tabberer and colleagues stated that many COP teenagers perceived parents wanted them to make their own decision and would support them regardless of their decision [31]. Three studies [18/19, 20, 30] reported that teenagers perceived that their boyfriends held pregnancy resolution opinions that were in line with the decision made.

Perceived support. There were mixed findings regarding support. In a well designed and conducted quantitative study Berger and colleagues [14] identified that both TOP and COP groups had similar feelings of support. In another strong quantitative study [20] it was found that more of the TOP group felt there was no one to help them if they had a baby, but significantly more teenagers in the COP group perceived that their family did not assist them or rejected them during decision making.

Tabberer and colleagues suggested that perceived support is often influential in decision to deliver. Particularly they argued that 'Capture' of the pregnancy within family, and having someone to talk to proved decisive in COP participants thinking [31]. Freeman and colleagues [24] reported that both groups perceived their boyfriends to be most supportive. In-keeping with this finding Fischman found that over 60% of deliverers perceived that their boyfriend would support them [22/23].

Berger and colleagues [14] described similar perceptions of influences on the decision for both groups, with themselves as the strongest perceived influence, then partner, and then their mother. Some studies indicated that TOP teenagers perceived more influence from parents and family, particularly when teenagers had mixed feelings or did not consider they had made the decision independently [22/23, 24, 30, 31]. A few studies also reported that COP participants were influenced by parents and family [12, 28, 30]. Interestingly Lee and colleagues [30] found that for COP teenagers in this study who were ambivalent, parental non-directiveness made a difference in this choice.

There were mixed findings regarding the influence of the partner. Evans [8/9] found a significant association between perceived direct influence towards TOP or COP from the partner and the resolution decision made. A few studies reported that partners influenced TOP teenagers pregnancy resolution choices [8/9, 30, 31]. Lee and colleagues [30] found less participants in the delivery group than in the TOP group, perceived that they were influenced in their choice by their partner. Acceptance of the pregnancy by the partner was desired by COP teenagers, but not the determining factor [30]. This finding was contradicted by two studies [12, 22/23] that report the COP group were more likely to perceive an influence from their boyfriend. However these 2 studies had limitations

and were not generalisable. Additionally studies indicated that TOP teenagers perceived more direct influence and sometimes pressure towards TOP [8/9, 22/23, 27].

Other people's experience. Lee and colleagues [30] described that both groups sometimes mentioned other peoples' experiences. In a few cases it was the teenager's perception of their parents' experience e.g. of parenting, that they reported influenced them. [30]. Tabberer and colleagues [31] also found that knowing someone who had experienced TOP allowed consideration of abortion for the teenagers who chose TOP.

Quality of relationships. Both Lee and colleagues [30] and Fischman [22/23] reported that more TOP participants did not think their relationship with their partner was stable, important, or would be lasting. Fischman [22/23] and Freeman and colleagues [24] indicated that the COP group were more likely to report perceiving a positive and close relationship with their mother. Resnick and Blum [16/17] also reported that teenage mothers compared to TOP participants more frequently expressed a need for the approval of others.

Future factors. Resnick and Blum [16/17] used the Future Events Test to investigate future time perspective (FTP). They determined that the most powerful differentiator between COPs and TOPs was FTP. TOPs had a more developed sense of the future, and more capacity to anticipate future consequences than mothers and pregnant teenagers.

Lee and colleagues [30] also found the main theme in the narratives of TOP participants was aspects of their future life e.g. education. Further support for these findings is found in Morin-Gonthier and colleagues study [20], which reported that TOP participants agreed with the statement: I do not want to prejudice my future, significantly

more frequently than the COP group. Tabberer and colleagues [31] also found that TOP teenagers reported that having plans for the future was a reason they decided to end the pregnancy. They discussed how the choice to deliver might be linked to future thinking. These researchers explained that delivery was sometimes an impetus for teenage girls to sort their lives out, and to focus on the future [31].

The research suggested that TOP teenagers were more likely to have specific plans for education after school and careers [12, 24, 26]. Freeman and colleagues [24] reported that more of the TOP group thought it was likely they would achieve their career goals. TOP teenagers often mentioned education and careers as a reason for their reaction to pregnancy or their pregnancy resolution decision [22/23, 24, 30]. Findings were mixed regarding whether attitude to school differentiated between COP and TOP teenagers. Landry and colleagues [26] found TOP and COP teenagers had similar attitudes to school, whereas in a stronger study, Plotnick [21] indicated that the TOP group might have a more positive attitude to school and higher educational aspirations. Resnick and Blum [16/17] found that, unlike TOP teenagers, COP participants did not tend to have aspirations for education and careers.

Fischman [22/23] reported that most teenagers in both groups wanted to have children. Resnick and Blum [16/17] found that mothers reported that raising a family was a more central aspiration prior to pregnancy. However it is possible that having had a child may have altered their recollection of their previous aspirations. Rasanen [27] explained that most TOP teenagers in their study planned to have their children later in life.

Age. One of the main reasons teenagers gave for choosing TOP was that they believed they were too young [20, 22/23, 27]. Lee and colleagues [30] however, found that in both groups a high proportion (TOP= 80%, Del= 66%) reported that the initial shock about confirmation of pregnancy was due to the fact that they considered it to be the wrong time to have a baby.

Wanting love. Morin-Gonthier and colleagues [20] found that more COP teenagers wanted someone to love and to love them in return, and Rasanen [27] reported that this was a factor involved in their pregnancy resolution decisions.

Psychological concepts. Teenagers choosing TOP were found to have a more non-traditional sex-role orientation [16/17, 21].

There seemed to be mixed findings regarding self-esteem (SE) and locus of control (LOC). One study found no difference in SE between the COP and TOP groups [24]. Only Plotnick [21] found a significant difference between the groups, showing TOP participants have significantly higher SE . Two studies indicated that COP teenagers had higher SE than the TOP participants, but differences were not found to be significant [14, 22/23].

Maskey [13] found no significant differences in LOC between the groups. Plotnick [21] found that a strong internal LOC had a significant negative effect on the likelihood of TOP. However the strongest study in the review found that TOP participants were significantly more likely to have an internal LOC [16/17].

The TOP group were found be less anxious than the COP group [16/17, 25]. Resnick and Blum [16/17] report that pregnant teenagers and mothers were higher in traits reinforcing inaction: avoidance, denial, and dependency. However they also found

that TOP participants were characterised by 'helplessness', the idea that their history determines their behaviour [16/17].

Maskey [13] found that the TOP group had a significantly higher probability of psychiatric disorder based on total GHQ scores. Kane [25] reported that twice as many of the COP group had neuroticism scores in the pathological range.

Summary of Main Findings. The few studies in the review reported mixed findings. Many of the studies had limitations and generally the methodologies employed mean causal influence cannot be ascertained. Despite these difficulties there seemed to be different psychological elements involved in choosing TOP as opposed to COP. TOP teenagers perceived that there was a decision to be made and considered different resolution options. They thought about the future, specifically plans for education and career, and were aware of others reactions and opinions. It seemed that perceived family ambivalence alongside support and 'capture of pregnancy' were important in the decision for COP teenagers. Traditional sex role orientation and traits reinforcing inaction also seemed to be related to the decision to continue pregnancy.

Discussion

Overview of Research Methodology

This review highlighted that there are few well designed studies that investigate psychological factors in relation to teenagers' pregnancy resolution decisions. The studies reviewed were of mixed quality, and it is recognised that many have limitations and are not widely generalisable when taken individually.

There were studies in this review of good quality that revealed some interesting findings. The Resnick and Blum study [16/17] was the strongest. It was well designed

and reported, and investigated a range of psychological factors. The authors were able to comment on more complex aspects of pregnancy resolution decision making, such as how perspectives (e.g. on pregnancy resolution decision) and psychological characteristics alter at different stages of pregnancy decision making, as they included groups of teenagers at different stages in their decision making [16/17].

Future Research Methodology

There is a need for researchers to recognise the complexity of the teenage pregnancy resolution issue, and employ methodologies that can help clarify the findings. Researchers could do this by using methodologies that allow causal links to be made. Longitudinal and cohort designs would allow researchers to establish whether important psychological characteristics precede pregnancy and influence decision making, or whether psychological factors are influenced by pregnancy and decision making. Two longitudinal studies conducted in America were reviewed [18/19, 24]. Unfortunately neither appeared to have a data collection point before pregnancy. One cohort study [21] was included, which analysed data from the American National Longitudinal Survey of Youth. This survey collected some data before pregnancy, but was conducted nearly 30 years ago. The evidence base needs more current longitudinal research beginning before pregnancy.

There is also a need for more qualitative methods to be employed that ask for teenagers' opinions and perspectives. There were only 2 qualitative studies included in this review [30, 31], both conducted in the UK. Both studies brought different perspectives and new findings to the evidence base. Schinke [32] expressed a need for research to focus on young women's own accounts of their thoughts, feelings, and

behaviours, due to the complex multidimensional nature of teenage pregnancy. Qualitative methods should help researchers better understand this complex field, as they allow new themes to emerge and links between various factors to be explored.

Overview of Research Findings

Although causal influence cannot be ascertained due to the methodology and mixed quality of studies, there do seem to be different psychological elements involved in choosing TOP as opposed to COP.

Findings suggest that upon confirmation of pregnancy a number of factors come into play for TOP teenagers. Plans for education and career are important, probably because pregnancy at this stage of life is not desired, and would hinder future plans that they consider are likely to be realised. TOP teenagers are also aware of family reactions and opinions supporting TOP. These factors perhaps lead the teenager to perceive that they have a decision to make regarding the resolution of the pregnancy, and influence them towards choosing TOP.

For the COP group it appears that often less factors come into play to cause them to question whether to continue or terminate pregnancy. In fact, factors such as perceived family ambivalence alongside support, traditional sex role orientation, and traits reinforcing inaction may lead to them continuing pregnancy without consideration of TOP as an option. Also, if the family perceives that the teenager is not considering TOP, then family adjustment or 'capture of pregnancy' [31] may begin. This reinforces the idea for the teenager that there is no decision to be made.

The Focus of Future Research

Studies to date have made some interesting, but sometimes mixed, findings about psychological factors related to the decision to continue or terminate a teenage pregnancy. However it is apparent that this is a very complex issue, and the evidence base is small. As there is currently a significant focus in society on reducing teenage pregnancy and parenting, it seems important that researchers make considerable efforts to advance the evidence base.

More research needs to focus on investigating factors where findings are mixed (e.g. self-esteem, locus of control, and support), as well as exploring emerging areas of interest. The scenario of second pregnancies to teenage mothers is an example of an interesting emerging area. Previous research [31] suggests that experience of first motherhood leads to teenagers considering TOP as an option. Possible reasons for this change are that the reality of motherhood is less desirable than the fantasy, or that having a child limits their resources, or changes their perspectives, attitudes, and priorities. There is a need for further investigation of factors involved.

Findings from a number of studies seem to indicate that systemic factors are very important, even if teenagers feel they make the decision independently. Therefore it would be interesting if future research was able to investigate the processes that occur within families upon confirmation of the pregnancy.

It may be beneficial to ask teenagers' opinions about the current focus on reducing teenage motherhood. Their perspective on this issue could inform interventions, and give researchers and policy makers a greater understanding of the impact of societal messages about teenage pregnancy on these teenagers' thoughts, feelings and behaviour.

Drawing on relevant psychological models may help make sense of diverse findings, and guide future investigation in this complex field. Various models of decision-making, future thinking, adolescent development, reproduction or maternity, and many others, may be of use in future research.

Summary and Implications

Teenage pregnancy decision making is a complex area of research. It is clear from reviewing research on psychological influences on the decision to continue or terminate a teenage pregnancy, that there are some interesting initial findings for factors such as: consideration of options, future factors, opinions and influence of others, and second pregnancy.

Given that the government gives such a high priority to achieving a reduction in teenage pregnancy and parenting, it is interesting that the evidence base of psychological empirical studies regarding pregnancy resolution is so small and lacking in clarity. It is important that researchers make attempts to advance the evidence base in order to inform teenage pregnancy and parenting interventions, and inform the practice of professionals working with teenagers making this decision. To make these advances researchers need to be able to recognise the complexity of the issue under investigation, and use appropriate methodologies and models to assist in making links between findings.

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Part Two.

An Exploration of Future Orientation in Adolescents' Decisions to Continue or Terminate a Pregnancy

Running head:

FUTURE ORIENTATION IN TEENAGE PREGNANCY RESOLUTION

An Exploration of Future Orientation in Adolescents' Decisions to Continue or Terminate a Pregnancy

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This paper is written in the format ready for submission to the Journal of .Adolescent Research. Please see Appendix 4 for the Guidelines for Authors

Abstract

This study explores aspects of the future in adolescents' choices to continue or terminate pregnancy. Future orientation (FO) (e.g. Seginer, 2005) and reasons for pregnancy resolution were investigated using a researcher constructed and administered questionnaire. Three groups were included: termination of pregnancy (ToP) (n = 19), ante natal (AN) (n = 9), and never pregnant (NP) (n = 23). Participants were 13-18 years-old. Statistical and content analyses reveal groups differ in aspects of FO and reasons for pregnancy resolution choice. Future factors are shown to be important in teenagers' pregnancy resolution decisions. The impact of negative discourses about teenage pregnancy and parenting is discussed. Suggestions are made for conducting research that can advance understanding of this complex issue.

An Exploration of Future Orientation in Adolescents' Decisions to Continue or Terminate a Pregnancy

Introduction

Termination of Pregnancy in Adolescence

Teenage pregnancy is currently viewed by society as a 'problem'. Hence policy has focused on reducing teenage pregnancy e.g. The Teenage Pregnancy Report (Social Exclusion Unit, 1999). It has been widely highlighted that there is a series of decisions that culminates in adolescent parenting (e.g. Benson, 2004). Some choices in this sequence (e.g. whether to use contraception) have received much more attention in research and policy than the decision to continue or terminate a pregnancy.

Teenage conception statistics for England in 2006 (Office of National Statistics, 2008), showed that for both under-18s and under-16s the conception rate had fallen by 13% since 1998. Interestingly, over this same time period the percentage of teenagers of all ages choosing to terminate their pregnancies increased (from 42% to 49% in 15 to17 year-olds and from 53% to 60% in 13 to 15 year-olds).

Considering the large number of young women making this decision each year, it seems important to understand more about the reasons for adolescents' choosing to continue or terminate a pregnancy in order to best support this group of young people.

Considering the Future in the Decision to Terminate or Continue Pregnancy

There has been some research into the reasons teenagers decide to choose birth or a termination of pregnancy (ToP) (e.g. Resnick & Blum, 1985; Lee, Clements, Ingham & Stone, 2004). Future considerations seem to play an important part in the decision.

Research found that adolescents choosing ToP had higher future time perspective than those choosing birth, indicating that they had more mental representations about the future (Resnick & Blum, 1985). ToP participants also had a greater ability to conceptualise and anticipate the future, than those choosing birth (Resnick & Blum, 1985). In a study of adolescents choosing ToP it was found that the main reason teenagers chose ToP was so that they can achieve other goals first. For teenagers choosing ToP having a child was usually a goal for the future, when they can provide for a baby (Hallden, Christensson, & Olsson, 2005).

Findings indicated that both teenagers choosing ToP and birth considered the future but may do so in different ways (Lee et al., 2004; Tabberer, Hall, Prendergast, & Webster, 2000). Motherhood may be more central to the future lives of those who continue their pregnancies, whereas teenagers choosing ToP may want other things to be in place before becoming a mother. Ideas about the future maybe more extensive in those choosing ToP (Lee et al., 2004). Research suggests that as well as considering the future adolescents reflected on their values and experience, and experience of others within their locality when choosing ToP or birth (Tabberer et al, 2000). Other research has considered aspirations in teenage pregnancy (e.g. Brazzell & Acock, 1988) and has highlighted that aspirations may influence the decisions made.

Many of the studies on teenage pregnancy decision making were conducted in America. As research indicated an important role of local discourses and circumstances in decision making regarding motherhood or abortion (e.g. Greene, 2006; Tabberer et al., 2000), it seems important to conduct research locally in order for support and policy to meet the needs of the population. Schinke (1998) expressed a need for research to focus

on young women's own accounts of their thoughts, feelings, and behaviours, due to the complex multidimensional nature of teenage pregnancy.

A number of studies indicated that aspects of the future may be important in the decision to continue or terminate an adolescent pregnancy. However conclusions drawn about the differences between the groups varied, so understanding of the influence of the future is not clear. It was also difficult to be confident in the findings of a number of key studies (e.g. Lee et al., 2004; Tabberer et al, 2000) because teenagers were asked about the reasons for the decision retrospectively. Already having acted upon the decision and continued their lives could have changed their perspective on and memories about the decision. Karniol and Ross (1996) explained that current goals can affect how people retrieve, construct and interpret their memories.

Future Orientation

A number of theorists suggested that peoples' conceptualisations of the future, along with thoughts of the past and present, are a major influence on their motivation and behaviour (e.g. Bell & Mau, 1971; Lewin, 1943). Seginer and Lilach (2004) explained that future orientation (FO) is a subjective construction of one's future, which provides the basis for goal setting and planning, exploring options and making commitments that guide the person's development. Seginer outlined a multi-dimensional model of FO made up of motivational, cognitive, and behavioural aspects (e.g. Seginer, 2005). The concept is thematic in nature so it can be applied to prospective domains (e.g., work and career). Domains can be classified according to: their theme (relational or instrumental) and distance (near or distant).

Seginer described three motivational variables (i) value of a prospective domain, (ii) expectance, i.e., the domain-specific subjective probability of hopes, wishes, plans and general positive feelings materializing, and (iii) sense of internal control (ability and effort) regarding domain-specific goals and plans and their materialization. The cognitive representation of FO consists of domain-specific hopes and fears. The two behavioural variables are: (i) exploration of future options by seeking advice, collecting information, and assessing their suitability, and (ii) commitment to pursue one specific option (e.g. Seginer, 2005; Seginer & Lilach, 2004).

It has been indicated (Trommsdorff, 1983) that research has tended to focus on just one aspect of this multi-dimensional concept e.g. only extension of time perspective. However consideration of all elements is required in order to understand the influence of the future on peoples' decision making and behaviour.

Future Orientation and Pregnancy Resolution Decision

The FO model, as a multidimensional construct, has not been investigated or applied in this area by researchers. It is unlikely that research will be able to facilitate understanding of the influence of the future on the thinking involved in this decision unless all aspects of FO are considered. Investigation of FO will allow in depth exploration of 'the future' and will further understanding about teenagers' motivation, decision making, and behaviour regarding their pregnancy. This knowledge is needed in order to best support pregnant adolescents and inform teenage pregnancy prevention strategies. This study therefore attempted to explore future orientation in teenagers' decisions to continue or terminate pregnancy.

Comparison with Never Pregnant Teenagers

It also seemed important to compare the future orientation of teenagers making the decision to continue or terminate pregnancy to teenagers who have never made that decision. It may be useful to include a never pregnant comparison group to allow researchers to explore whether teenagers who choose ToP are more similar in future orientation to those who have also become pregnant but continue pregnancy, or whether they are more similar to teenagers who have not become pregnant.

Research Questions

The overall aim of the study was to explore aspects of the future in adolescents' choices to continue or terminate pregnancy. Specific research questions were: (i) What reasons do teenagers give for choosing to continue or terminate their pregnancy? (ii) How does the Future Orientation of adolescents who choose to continue or to terminate their pregnancy differ? (iii) How does the Future Orientation of pregnant and never pregnant adolescents differ?

Method

Design

This was a cross-sectional, mixed methods study, with a between subjects design.

Participants

To be included in the study in the Ante Natal (AN) or Termination of Pregnancy (ToP) group, teenage girls had to be aged 13-18, and pregnant. Pregnant teenagers over 14 weeks gestation were excluded, because young women could not have a ToP in this geographical area after this point. Never Pregnant (NP) participants had to be teenage girls aged 13-18, and never pregnant.

The researcher was not able to conduct a sample size calculation based on the research hypotheses before recruiting participants. This is because it was not possible to quantify how those teenagers who choose to terminate, those who choose to continue pregnancy, and those who have never been pregnant might differ. Therefore as many participants as possible were recruited during the recruitment period.

The sample consisted of 19 ToP participants, 9 AN participants, and 23 NP teenagers. The participation rate for ToP participants was 70.37% of those approached, but only 34.62% of those approached for AN participants. The NP group were self-selected, so no participation rate could be calculated. Six participants had previous pregnancies. Of these all 3 in the ToP group had one child, one of the AN group had one child, one had a ToP, and one had miscarried. Follow-up at the point that participants would have exceeded 14 weeks gestation, revealed that no participants changed their pregnancy resolution decision.

Measures

FO questionnaires constructed and validated by Seginer and colleagues were selected, as these were the only multidimensional FO measures available. They were not appropriate for the adolescents in this study though due to complexity of language and length. So the researcher constructed a questionnaire, based closely on questionnaires by Seginer and colleagues, with additional items to obtain demographic details and reasons for pregnancy resolution choice (see Appendix 6).

The questionnaire first asked for demographic information and reasons for pregnancy resolution choice. This section was different for the NP group (see Appendix 7). Then there were two open-ended questions based on The Hopes and Fears

Questionnaire (e.g. Seginer, 1988). The rest of the questions were adapted from The Prospective Life Course Questionnaire (Seginer, Nurmi, & Poole, 1994). Most items required ratings on a Likert scale, as in the original questionnaire, but there were also open-ended questions asking for further details. The questionnaire was piloted and as a result changes were made, before data collection began. These changes gave the questionnaire more fidelity to the original questionnaire, gave it a clearer format, and made the language more appropriate for the adolescent population (See Pilot Report in Appendix 8).

The questionnaire was based closely on Seginer and colleagues validated questionnaire, but was not validated itself due to time and resource constraints. It was recognised that this was a limitation, so after data collection was complete attempts were made to ascertain whether items of the questionnaire relating to each component of the FO model correlated. Spearman's correlations showed that there were significant correlations between the items of all FO components except Behavioural Commitment and Motivational Control. Therefore these 2 components were not compared across groups in the analysis. Internal and External Motivational Control were considered as separate components. (See Appendix 9 for details of this analysis).

Procedure

Approval to carry out the study was gained from the local research ethics committee and local NHS Trust. Young women in the AN group were recruited when attending Ante Natal booking or scan appointments. Teenagers in the ToP group were recruited before the ToP procedure when attending for surgical or medical ToPs. Teenagers were approached initially by professionals at the services, and informed

consent was gained (with Gillick assessment for under 16 year-olds). Consent was sought to obtain information on the outcome of pregnancy at a later date to confirm group assignment. The NP group were a self selected sample recruited by sending out information packs in the local area to teenagers, often via adults. Participants could request further packs if they knew other teenagers who wanted to participate.

The researcher asked the questions verbally and responses were audio-recorded when consent was given for this. The NP group was recruited by distributing research packs (See Appendix 7) with instructions for how to return the questionnaire if the teenager was willing to participate.

Data Analysis

After data collection quantitative responses were entered in to a Statistical Package for the Social Sciences database (SPSS v16). Non-parametric tests were used because the sample size is small and an assumption of normal distribution may be invalid. Non-parametric tests are more robust to outliers in small samples. Statistical analyses included: Chi-squared, Mann- Whitney, Kruskal-Wallis, and Spearman's correlation tests. When Chi–squared tests were used exact p-values are reported, as cells frequently had lower than expected counts. It was recognised that the use of multiple Chi-squared tests increases the likelihood of type 1 error, however these were still considered the most appropriate tests to use for much of the data obtained. Open ended questions were transcribed from recordings or researcher notes where consent for recording was not given. A thematic approach to content analysis was used to analyse transcripts, using deductive and inductive coding to consider themes on manifest and latent levels (Joffe & Yardley 2004). Quotes come from responses to the reasons for pregnancy resolution

choice question or from additional comments that teenagers wanted to make at the end of the questionnaire.

Results

Description of the Sample

Table 1 shows mean age and gestations of the groups at the time of data collection. To identify differences in gestation between groups the Mann- Whitney test was used, and exact p-values are reported. There was no significant difference between ToP and AN groups in gestation (U= 68.000, N_1= 18, N_2=9, exact p= 0.527, 2-tailed). To identify differences in age between the groups the Kruskal-Wallis test was used. Age of participants was significantly different across the three groups (χ^2 approximation to Kruskal-Wallis statistic = 9.827, df=2, p=0.006). As can be seen in Table 1 the NP group were younger than the ToP and AN groups. Due to this significant difference and possibility of confounding, when any significant associations between pregnancy resolution and another variable were found correlations were conducted between age and the other variable. This was done to determine if the association may have arisen because of a link between that variable and age. These analyses revealed no factors were significantly correlated with age.

Table 1. *Average age and gestation across groups*

	ToP		AN		NP	
	Mean	S.D	Mean	S.D	Mean	S.D
Age (years)	17	1.25	16.56	1.01	15.73	1.32
Gestation (weeks)	9.67	1.71	10.22	2.17	N/A	N/A

Reasons for choosing ToP or Birth

Content Analysis highlighted 7 *themes* in teenagers' accounts of their pregnancy resolution decision and up to 4 *'sub-themes'* within these.

Theme 1 'Being a teenager'. The majority (79.0%) of women choosing ToP mentioned *'stage of life'* as a reason for choosing this option. All of these suggested they were too young e.g.: "What is the point in having a baby when you have your whole life in front of you?" (ToP018, 15yrs). Only 1 person in the AN group mentioned age, saying: "I'd rather go through it now I'm older" (AN025, 17yrs). Two teenagers in the ToP group also mentioned a desire to be *'doing what teenagers do'* and commented that this contributed to their decision.

Theme 2 'The future'. Similar proportions of each group (ToP 36.8%, AN 22.2%) explained that *'educational plans'* were considered in their pregnancy resolution decision. More in the ToP group (36.8%) than AN group (11.1%) mentioned *'career plans'* as a factor. ToP teenagers were very specific about their career plans e.g.: "I am working towards a career as a solicitor" (ToP009, 18yrs), "I am going into the forces" (ToP016, 16yrs). *'Family plans'* were considered in the decision in both groups (ToP 26.3%, AN 11.1%). However almost all comments from the ToP group indicated that a baby now is not in line with their family plans e.g.: "I am not the type of person who wants a family now, it's in my ideas for the future." (ToP002, 18yrs). Participants in both ToP (42.1%) and AN (22.2%) groups made comments indicating their *'willingness to give up plans'*. Of these, all those in the ToP group were unwilling to give up their plans e.g.: "I am doing really well on the course at the minute, and I don't want to give it up… If I carried on with this pregnancy I would have to give everything up." (ToP001,

16yrs).Teenagers in the AN group would be willing to give up their plans e.g.: "I'll wait a bit longer for a full time job." (AN026, 17yrs).

Theme 3 'Resources'. Both groups suggested that they considered their *'own resources'* in the decision (ToP 36.8%, AN 33.3%). Interestingly, only one participant in each group thought they might be able to cope with a baby. Participants in both groups considered *'financial resources'* (ToP 47.4%, AN 66.6%). Half of those AN participants and all ToP participants who mentioned this suggested they would have difficulties financially. More AN participants (44.4%) than ToP participants (21.1%) mentioned *'support resources'*. Those in the AN group either suggested they would have support or they did not want to rely on others e.g.: "I have support of friends, family, and hospital midwives… I will try and get support off me mam." (AN004, 17yrs), "You should buy your own stuff for the baine and not rely on others" (AN025, 17yrs). Those in the ToP group explained they would not have enough support, and the absence of the father was usually important in this e.g.: "I am not with the dad. It would be hard, I'd have less support." (ToP008, 18yrs). *'Housing'* was also considered in the decision by a small proportion of teenagers in both groups (ToP 10.5%, AN 22.2%).

Theme 4 'Attitudes'. Over half of ToP participants (52.6%) compared to 1 participant in the AN group, considered *'What people think'* in their pregnancy resolution decision. The teenager in the AN group expected a negative reaction, as did over a quarter of the ToP group e.g. "Of what my parents would say. Scared in case they went mad. Worried if they wouldn't stand by me." (AN006, 15yrs). Mixed reactions, including the fathers wanting them to continue the pregnancy, were reported by 2 ToP participants, and 2 participants perceived that family agreed with the ToP choice e.g.: "The biggest

issue was my boyfriend… is keen on the idea (having a baby)… mortified they look at you…scared to tell my parents… stared at "she's had an abortion"… Boyfriends mum were like "What are you gonna do? Struggle, not have any money" (ToP012, 17yrs), "My mum agreed. She doesn't agree with abortion, but she does in this situation, it's the best thing." (ToP015, 18yrs). *'Own attitude to ToP'* was a factor suggested to be involved more often in AN group decisions (44.4%) than ToP group decisions (10.5%). Of those expressing their opinion in the AN group, all held anti-abortion views e.g.: "I'd never get rid of the baby, it will affect me if I want to get pregnant. I don't think it is right to get rid of it." (AN017, 15yrs), "I don't believe in abortion. It was since I watched this programme on it the other night. I think if they brought out a kinder abortion more other girls would go for it. But it all seemed pretty awful." (AN026, 17yrs). ToP teenagers who mentioned attitudes to ToP said they didn't think it was nice e.g.: "It's not a nice thing to do but I couldn't help it, I have to have it done, I couldn't cope." (ToP015, 18yrs).

Theme 5 Impact on others. Teenagers in the ToP group thought about how the resolution would *'impact on family'* (21.1%) and *'impact on boyfriend'* (21.1%), but AN participants did not mention these factors. Almost all the ToP group's comments about these factors described perceived negative impact of birth e.g.: "I didn't want to hurt other people either. My family have all got jobs and stuff so it would ruin everything, and my ex, he knew about it but he would be real upset if I kept another lads baby." (ToP028, 18yrs). All 4 teenagers (3 ToP, 1 AN) in the study that already had children, said they considered the negative *'impact on their children'* of birth e.g.: "I thought about my little girl. I don't want to share my love with another baby. It's not fair on (child)… She needs all my attention, as she's 10 months old." (ToP014, 18yrs), "Difficult with 2… not

leaving one out." (AN026, 17yrs). Both the ToP (26.3%) and AN (33.3%) groups considered the *'impact on unborn baby'*. Only 1 participant from the AN group considered a positive impact of birth on the unborn child. Other comments implied a negative impact of birth e.g.: "I don't see why I shouldn't let them have that chance." (AN005, 17yrs), "It wouldn't even be fair on the child" (ToP010, 17yrs).

Theme 6 Experience of pregnancy. Three participants described their *'own previous experience'* of pregnancy contributed to the pregnancy resolution decision. One chose birth as she felt older than when she had a ToP previously, and 2 chose ToP due to not wanting to go through pregnancy again e.g.: "I had loads of problems with pregnancy before, when I was paralysed… Last time I was pregnant my body was telling me I could cope. This time it didn't sink in. My body was saying I am not ready." (ToP014, 18yrs). A small number of each group (ToP 10.5%, AN 22.2%) also mentioned *'others experience'* being involved in their pregnancy resolution decision. Only one teenager, from the ToP group, mentioned an experience that biased them towards ToP.

Theme 7 'The decision process'. Participants in both groups (ToP 31.6%, AN 22.2%) commented on the *'ease of decision making'*. Participants in the AN group said it was hard to make the decision, whereas almost all those in the ToP group found the decision easy to make. Similar proportions of both groups (ToP 36.8%, AN 33.3%) reported *'knowing immediately'* whether they would choose ToP or birth and not considering the other option e.g.: "I kinda thought it's not a choice… it was my only option… I have always known that having a child wasn't an option. I have always said that if I got pregnant this early I would have it aborted." (ToP010, 17yrs), "I were just going to keep it." (AN003, 18yrs). More participants in the ToP group (42.1%) than AN

group (22.2%) described something that *'helped to decide'*. Those in the AN group and over half of those in the ToP group talked to others e.g. family, the father and friends. One ToP participant reported deciding themselves, and 2 considered the pros and cons.

Advice for others. Content analysis showed that a proportion of participants in both groups advised other teenagers facing a pregnancy resolution decision to '*make your own decision*', '*talk to others*', '*consider the future*' and '*think carefully*'. Some ToP participants (21.1%) also mentioned ways of '*coping with pressure from others*'.

Differences in Future Orientation

Chi-squared analysis showed no significant relationships between pregnancy resolution choice and any components of the FO model. However significant differences between pregnancy resolution choice and individual items within the components were identified, and content analysis also highlighted some interesting differences. The findings are displayed in Table 2.

Table 2. *Future Orientation Main Findings*

Aspect of Future Orientation	Quantitative Analysis	Qualitative Analysis
Aspects of Cognitive Representation	No significant differences	*Education*: AN (33.3%), ToP (42.1%), and NP (60.6%) mentioned education plans. ToP (57.9%), AN (55.5%), NP (47.9%) mentioned education as a desire for the future. AN (0%), ToP (31.6%), and NP (60.9%) planned to go to university. *Career*: ToP (73.7%), AN (44.4%), and NP (43.5%) mentioned career/ job plans. ToP (89.5%), NP (87.0%), AN (55.5%) mentioned career as a desire for the future. ToP and NP specific about careers and would dislike not having those careers. *Family*: ToP (57.9%), AN (33.3%), and NP (34.8%) mentioned family plans. AN (55.5%), ToP (79.0%), and NP (91.3%) mentioned family as a desire for the future. AN (66.6%), ToP (36.8%), and NP (56.5%) mentioned family in dislikes for the future. AN focused on expected child. ToP and NP wanted children later in life. NP (13.0%) would dislike an unwanted pregnancy. NP (13.0%) would dislike being a single mum. Some ToP would not want to be stereotype of teenage mum: single, on benefits, in a council house, and with a baby. *Self Concerns*: ToP (42.1%), AN (11.1%), and NP (21.7%) mentioned self-concerns (e.g. being happy settled, having things they want, travelling, and learning to drive) in plans. AN (0%), ToP (42.1%), and NP (34.8%) mentioned self concerns as a dislike for the future. *Others*: ToP (15.8%), AN (44.4%) and NP (34.8%) mentioned others in desires for the future. AN (0%), ToP (31.6%), and NP (34.8%) mentioned others in dislikes for the future.
Aspects of Motivational Expectance	Significant relationship between perceived likelihood of achieving the life they want and pregnancy resolution decision (χ^2=16.349, df=6, p=0.006). Likelihood of getting the life that you want: ToP likely (89%), AN a bit likely (44.4%) and likely (55.5%), and NP likely (34.8%) and a bit likely (39.1%).	*Feelings Towards Future*: AN (11.1%), ToP (42.1%), and NP (47.8%) expressed worry about the future. ToP (31.6%), AN (22.2%), and NP (17.4%) uncertain about the future. AN (33.3%), ToP (15.8%), and NP (0%) expressed negative feelings towards the future.

	No significant differences between groups in feelings about the future.	
Aspects of Motivational Value	No significant differences between groups in how important it was for them to get the life that they want and whether the life that they want is worth their effort.	-
Aspects of Motivational Control	No significant differences between groups in how much getting the life they want depends on luck or other people. Significant relationship between pregnancy resolution decision and belief that getting the life you want depends on how good you are at things (χ^2=14.419, df=6, p=0.015): NP (39.1%), ToP (5.3%), and AN (11.1%) responded 'very much'; ToP (79%), AN (44.4%), and NP (47.8%) responded 'Quite a lot'; AN (33.3%), ToP (15.8%), and NP (13.0%) responded 'a bit'. There was a relationship between pregnancy resolution decision and belief that getting the life you want depends on how hard you try (χ^2= 9.614, df=6, p=0.035): majority of ToP (68.4%) and NP (78.3%) responded 'Very much', majority of AN (66.6%) responded 'quite a lot'.	*External Control*: ToP (63.2%), AN (77.7%), NP (39.1%) mentioned external determinants of the future. *Internal* Control: ToP (100%), AN (77.7%), and NP (69.6%), mentioned internal determinants of the future.
Aspects of Behavioural Exploration.	No significant relationship between pregnancy resolution and teenagers' report of how much they have been imagining different futures for themselves. ToP (21.1%), AN (11.1%), and NP (4.4%) reported they had not explored more than one idea for the future. No significant relationship between how much teenagers perceived they had been trying to	*Alternative Ideas*: AN (44.4%), NP (43.5%), and ToP (26.3%) did not give details of alternative ideas for the future. ToP (21.1%), NP (13.0%), and AN group (0%) explained they had more than one idea for their education. AN (11.1%), ToP (47.4%), and NP (47.8%) had alternative ideas about work or career. AN (33.3%), ToP (10.5%), and NP (13.0%) had alternative ideas about living arrangements. ToP (10.5%), AN (22.2%), and NP (30.4%) had alternative ideas about family. ToP (26.0%), AN (11.1%), and NP (8.7%) mentioned thinking about different ideas because they were asking themselves

	find out information about the life that they want and pregnancy resolution decision, but values approached significance (χ^2= 11.636, df=6, p=0.065). Significant relationship between pregnancy resolution and how much a teenager perceived they had been trying to find out if the ideas they had for the future were right for them (χ^2= 14.970, df=6, p=0.016): ToP responded 'a bit' (42.1%) or 'Quite a lot' (57. 9%), but a wider distribution for AN and NP with some answering 'not at all' AN (33.3%) and NP (18.2%).	'what if?' questions. *Seeking Information*: ToP (68.4%), AN (0%), and NP (17.4%) had been finding out information about work or careers. AN (44.4%), ToP (5.3%), and NP (0%) had been finding out about family matters including pregnancy. AN (33.3%), ToP (10.5%), and NP (0%) had been finding out about living arrangements and housing. More ToP got information from Education (47.4%) and Career Professionals (36.8%), whereas more AN (44.4%) got information from services and agencies e.g. the council and health services. *Confirmation of Ideas*: Of those who did try and find out if their ideas about the future were right for them: AN (66.6%), ToP (15.8%), and NP (26.1%) asked other people, usually family or boyfriends; some ToP went to Education (15.8%) and Career Professionals (26.3%) for advice or experience. AN (11.1%) reported confirmation and disconfirmation of their ideas being right for them as a result of these efforts. ToP (42.1%) and NP (43.5%) reported confirmation of their ideas, but NP (30.4%) and ToP (15.8%) reported disconfirmation or negative feedback.
Aspects of Behavioural Commitment	No significant differences between groups in how certain they are about what they want for future, and how determined they are to get the life that they want. Significant relationship between how much teenagers perceived that they had already done to get the life that they want and pregnancy resolution decision (χ^2= 14.311, df=6, p=0.022).: the majority of ToP (73.7%), AN (44.4%), and NP (56.5%), responded 'a bit', AN (33.3%), ToP (5.3%), and NP (0%) responded 'very much'.	*Determination*: Only teenagers in the ToP group (15%) expressed determination when asked about their feelings about the future. *Done Something*: ToP group (68.4%), AN (44.4%), and NP (47.8%) reported they had done something towards education. TOP (52.6%), AN (33.3%), and NP (30.4%) reported they had done something towards their career. AN (33.3%) ToP (0%), and NP (0%) reported they had done something towards living arrangements.

Negative Discourses

Content analysis highlighted one theme emerging from teenagers accounts was *'Negative Discourses'*. Those choosing ToP did not want to be seen as "a typical teenager who's got pregnant and doesn't care about anything" (ToP001, 16yrs). A number of participants thought that pregnant teenagers are viewed negatively for what is often a mistake, and can feel "attacked by everyone" (ToP010, 17yrs). ToP teenagers viewed teenage motherhood negatively, and wished to avoid it e.g.: "I don't want to be a teenage girl with a baby and a council house, it's not the future for me." (ToP002, 18yrs).

AN participants or teenagers with children sometimes mentioned they did not fit the negative image of a teenage mum. One 17 year-old continuing pregnancy initially thought she should not participate. She said she was not really going to be a 'teenage mum', because she had a partner, house, and job. One teenager with a child commented that she has to prove she can be a good mum, as it is assumed that teenage mums do not do anything with their lives. Interestingly though she was aware that she reacts negatively to teenage mums: "They look at you, and they are thinking "she got that from social" (re. baby items). I know, I would if I saw a teenager with a kid at 15." (ToP014, 18yrs).

Discussion

The main areas of interest covered in this discussion are: FO, usefulness of the FO model, 'what others think', questions of causality, and conducting future research.

Future Orientation

Responses to open-ended questions generated important different information from closed questions. There was overlap in data from questions about FO and about reasons for ToP or birth, as many teenagers considered future factors in the pregnancy

resolution decision. The ToP group mentioned the future and stage of life as reasons for their choice more often than the AN group. These findings are supported by other research (e.g. Resnick & Blum, 1985; Lee et al, 2004; Tabberer et al., 2000; Fischman, 1977). There were differences in aspects of FO between each group in the study.

The ToP and NP groups were focused on similar more distant domains, notably careers. Freeman and Rickels (1993) also found that teenagers choosing ToP are more likely to have specific vocational goals. The ToP group made more plans to attain these goals than NP and AN groups. The AN group were generally less specific about ideas for the future, and focused more on the near future and daily living e.g. accommodation.

It is interesting that more ToP participants gave details of their internal control over their future lives. Maybe if teenagers perceive they have high internal control then they are more likely to exert this control and end an unwanted pregnancy. As more of the ToP group also consider it likely that they will get lives they want, maybe the perceived costs of continuing pregnancy would be higher for them than for those who think their goals are unachievable. However it is also possible that the decision making influences perceptions of likelihood and control, so these findings need further investigation.

Assuming teenagers did not attempt to find out about careers upon discovering they were pregnant, the finding that more of the ToP group had been finding out about careers suggests that this group were perhaps more focused on distant career goals even before pregnancy. The AN group had been finding out more about family plans (including pregnancy) and living arrangements. This suggests they have been actively exploring near future needs or goals perhaps because of the forthcoming pregnancy.

Qualitative findings regarding determination and willingness to give up plans indicate that perhaps ToP teenagers are more committed to their future plans. More AN participants thought they had done 'very much' to get their desired future. This may be because they are focused on near future concerns, often related to the baby, and are therefore closer to this. The ToP group report having done things towards distant goals.

Usefulness of the Future Orientation Model

Use of the FO model has allowed differences to be clearly identified, but if it were applied in a longitudinal study its benefits may be more clearly seen, as causal links between the components could be made. One difficultly with the FO model is there are only 3 specified domains (Education, Career, and Family). This might be because these are the salient domains in the culture where the model was developed and tested. In this study plans for housing and other aspects of daily living were mentioned, which do not correspond to the 3 domains of the model. Therefore it would be beneficial for researchers to develop domains for use in research with other cultures.

It is also important for future research to attempt to develop new future orientation measures and ascertain their reliability and validity. Future researchers would need to use validated measures in order to be confident in findings regarding components of the model. The use of a measure in this study that was not validated means that findings regarding relationships between pregnancy resolution choice and overall components of future orientation can only be regarded as an indication.

Congruence

There appears to be congruence between the teenagers' FO, in terms of the distance and themes of domains, and pregnancy resolution choice at the point where the

decision had been made. The ToP teenagers spoke of distant plans for careers that they were unwilling to give up, which is congruent with their choice to end pregnancy. The AN group were focused on near future family and daily living concerns, which is consistent with their choice to become a mother within the next 9 months. This finding is supported by Smith (1999) who suggests that during pregnancy a woman begins to orient her concerns more towards family and friends and away from the public world of work. Smith (1999) explains this change may be adaptive in preparing her for motherhood and may transform her future plans. This congruence between pregnancy resolution and attitude to the future is beneficial, as people whose behaviour and attitudes are incongruent are likely to feel uncomfortable (Festinger, 1957).

Teenagers with children already mentioned negative impacts on their child, and previous pregnancy experience as reasons for ToP. These findings and those of Tabberer and Colleagues (2000) suggest experience of first motherhood changes attitudes to ToP, pregnancy, and the future. A concern for strategies trying to reduce births to teenagers, is that costs of the choice may only be perceived after the reality is experienced. If after first pregnancy teenagers decide motherhood is not desired, then this attitude would no longer be congruent with the action taken in keeping the first pregnancy. This inconsistency could lead to discomfort, and affect well-being of the teenager and baby.

What Others Think: Negative Discourses

Other peoples opinions of teenage pregnancy, ToP, and teenage parenting appear to be an important factor in teenagers' decision's. ToP participants considered *'What others think'* in pregnancy resolution decisions. Teenagers in all groups referred to a negative discourse surrounding teenage pregnancy and parenting. There were stereotypes

of the ‘pregnant teenager’ who does not care about anything; and the ‘teenage mum’ who lives in a council house, on benefits, single, with a baby, and will not have a good future. This discourse seems strong, as even a teenage mum sees teenage mums in this way.

Negative self-relevant stereotypes are a threat to the self, and activation of these can lead to under-performance in the relevant domain (Steele & Aronson, 1995). Worryingly this means that if teenagers identify with the negative stereotypes this may lead to them caring less or not having a good future. In order to reduce stereotype threat people attempt to distance themselves from stereotypes, and this distancing can negate the effect on performance (Ambady, Paik, Steele, Owen-Smith, & Mitchell, 2004). Pregnant adolescents appear to use distancing to cope with stereotypes. Teenagers in the ToP group distance themselves from the ‘pregnant teenager’ stereotype by explaining they are different, and emphasising they do care and have plans. It seems ToP participants often accept and are influenced in their decision by the ‘teenage mum’ stereotype, as they explain they do not want to be like that. AN participants also distance themselves from the ‘teenage mum’ stereotype by highlighting they are an exception to this. It is positive that teenagers are able to use distancing to cope with negative stereotypes, but this may also impact on help-seeking regarding the pregnancy resolution decision if they will not come forward as a ‘pregnant teenager’.

This discourse makes it difficult for teenagers who become pregnant to make decisions about pregnancy, to the extent that participants wanted to give advice to other pregnant teenagers about coping with these pressures from others. It appears that negative discourses have developed over the decades, at least partly due to concern for the teenagers and their children. However the stereotypes about teenage pregnancy and

parenting, and the discourse about a societal 'problem', appear to be inhibiting teenagers from being supported to make the best decisions individually.

Questions of Causality

This study has highlighted differences between the groups in reasons for pregnancy resolution choice and FO. However it is not possible to comment on causal factors due to the cross-sectional design employed. It is possible that FO and the reasons stated by teenagers influence pregnancy resolution. It is also possible that the process of deciding and the decision itself alters teenagers' accounts of reasons for the choice of ToP or birth and influences aspects of FO. For example: do the ToP group perceive that they have more internal influence over their lives so they choose to end their pregnancy?, or does choosing ToP cause them to consider more ways in which they can influence their own lives? It seems probable that the influence would actually be in both directions, however longitudinal research is needed to shed more light on questions of causality.

Conducting Future Research

This study has highlighted the complexity of the topic under investigation. It is important that in both attempts to understand teenage pregnancy issues and interventions to reduce it we recognise this complexity, and do not take a blunt approach.

Research needs to take a longitudinal approach in order to begin to answer questions of causality. In this study participants were asked about FO and reasons for their pregnancy resolution choice after they had made the decision but before the birth or completion of the ToP procedure. Asking at this time point is likely to give a better indication of influences on the choice, than after birth or ToP as other studies have (Lee, Clements, Ingham, & Stone, 2004; Tabberer et al, 2000). However, longitudinal research

needs to survey a population of teenagers before they become pregnant, then follow-up those who become pregnant.

This study would have benefitted from a measure of socio-economic status (SES). It is acknowledged that research has shown there are relationships between SES and pregnancy resolution choice (King, Myers, & Byrne, 1992), and SES and aspirations (Sewell & Shah, 1968). Therefore if there were differences between groups in SES this could have influenced both pregnancy resolution and FO. However it could be that FO and aspirations influence SES and pregnancy resolution. The direction of influence is unclear so future research attempting to determine causal factors would need to pay particular attention to confounding factors.

Previous research (e.g. Lee et al, 2004) has highlighted difficulties in recruiting participants in teenage pregnancy research. This leads to limitations due to small sample sizes and questions over the representativeness of those who participated. Similar difficulties were experienced with low participation rates in this study, particularly with the AN group. Future researchers might benefit from integrating recruitment procedure into services and individually engaging with teenagers, as this helped recruitment.

Despite these difficulties conducting research investigating pregnancy resolution decisions in teenagers, it is essential that future research follows on from more exploratory studies such as this, in order to highlight causal factors involved. If research can recognise and work with complexity, suggest causal factors (like aspects of FO), and clarify the role of societal influences (like negative discourses), then we will be in a better position to support young people making these decisions.

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Part Three.

Appendices

Appendix 1. Reflective Statement

Reflective Statement

There have been a number of problems to solve during the course of the research process, which caused me much frustration and anxiety at the time, as I had to discard plans that had been made and reconsider things. However I have learnt that re-considering the direction of the study and methods employed, and the uncertainty associated with this, is not research 'going wrong', it is part of the research process. In fact looking back on the project as a whole, I believe that these challenges played an important part in strengthening the rationale and methodology employed, and enhancing my understanding of the context of the research.

When designing, implementing, revising, and analysing this research I have often had to ask myself: "What would it be like to be a pregnant teenager at this time and in this area?". I found asking this question helped me to conduct research within this population more effectively and was useful to consider when attempting to solve problems encountered. This question was also important in ethical considerations.

There were a number of ethical issues that required much thought and planning due to inclusion of teenagers in the 13-16 age range at a potentially sensitive and distressing time. There was concern over whether the study would be granted approval to recruit this age group, but approval was granted. I believe it is important to include younger teenagers in research as well as older teenagers because a 13 year old is developmentally very different to an 18 year old. Emotional, social, cognitive, and moral development may all impact upon the decisions made. Services need information based on research across the teenage age range if they are to meet the needs of all teenagers.

Choosing an upper age limit for the study raised some interesting questions about what is meant by 'teenage pregnancy'. The Office of National Statistics (2008) report teenage pregnancy statistics up to 18 years-old. Many other researchers have also used 18 years as an upper age limit for study inclusion. As 18 was widely considered the upper limit of 'teenage pregnancy' I also chose 18 so that findings could be more easily compared and integrated with other research. However 18 seems an arbitrary cut off point for 'teenage pregnancy'. If 'teenage pregnancy' is defined as pregnancy in the teenage years then 19 year-olds should be included in the age range. If 'teenage pregnancy' is defined as pregnancy before adulthood then the upper limit in the UK should be 17 years-old. There are arguments for choosing 17, 18 or 19 as an upper limit, but it is important to remember that 'teenage pregnancy' as an issue is socially constructed. The current focus in western society is that 'teenage pregnancy' is a 'problem'. It could be useful for research to start to question what makes pregnancy at a certain age 'acceptable' in society and why?

Once it was decided that a multidimensional model of Future Orientation would be a useful area to explore in the research, then I had to consider how best to investigate this. There were concerns about conducting qualitative interviews due to ethical issues in recruiting under 16s to discuss a potentially sensitive topic, and about anticipated low participation rates. The only measure of Future Orientation as a multidimensional concept was considered to be too long, and the language too complex for a teenage population. So I constructed a questionnaire. It was important to consider what it would be like to be a teenager completing this questionnaire, and question whether the questionnaire adequately measures Future Orientation. A pilot was conducted with teenagers and

researchers in order to answer these questions. Changes were made to the questionnaire and methodology as a result of this.

One example of a change after the pilot stage was that the questionnaire would be administered to pregnant teenagers in an audio recorded interview by the researcher. The reasons for this were because teenagers had suggested that this would make them feel more comfortable, and because they did not tend to write much for the open-ended questions. At the beginning of the research process interviews were chosen but considered problematic, so they were ruled out. However attempts to conduct a questionnaire study led to back to selection of an interview methodology, although this was within a structured questionnaire format rather than as a semi-structured interview as initially planned.

The pilot stage was also important in assessing how appropriate the recruitment procedure was. There were difficulties recruiting teenagers planning to continue their pregnancy before scans had taken place using postal questionnaires, as there was a very low response rate. It also proved difficult to recruit teenagers seeking a TOP at the clinic stage because there was not sufficient time between appointments for teenagers to complete questionnaires without causing disruption to the clinic. Finding more appropriate data collection points meant thinking about what teenagers would prefer (e.g. they might be happier to participate if asked at a time when they are waiting and are unoccupied rather than asking them to give up additional time). Compromises had to be made (e.g. it was not possible to ask the teenagers continuing their pregnancy to participate before their scan) and ethical issues had to be re-considered (e.g. issues

associated with interviewing teenagers before the TOP procedure), in order to overcome recruitment difficulties.

There were still difficulties recruiting participants continuing pregnancy despite piloting and carefully considered planning. It was quite demoralising not recruiting any AN participants for weeks, after spending many hours finding out when teenagers were attending, and waiting the for the next possible participant. I continued trying to recruit this way for a couple of months before thinking about factors that might be limiting recruitment, particularly at the scan department. Factors identified when asking them to participate before their scan were: being uncomfortable due to having drunk a large amount of fluid for the scan, anticipation for the outcome of the scan, and the tendency to forget about the research and leave straight after the scan. So the main attempt to engage with teenagers and give them information on the research was moved to after the scan. Changes were also made so that the research was mentioned by the professional conducting the scan at the end of their appointment. By making this change teenagers could consider the research to be an optional part of the process, and may have perceived it to have more credibility. These changes did result in a slight increase in participation. In future research I would think about what could be limiting recruitment and make changes sooner if there were difficulties with participation.

I wonder whether the particularly low participation rate in the ante natal group, despite these efforts, was due to negative discourses associated with becoming a teenage mum? They may not wish to step forward as an expectant 'teenage mum' due to the stereotype and stigma. If this is the case this poses problems in recruiting representative, unbiased, samples of ante natal teenagers in future studies. If some teenagers decline to

participate due to the stereotype, this raises the question how are those who are willing to participate different? The low participation rate in the ante natal group in this study may have meant the sample recruited was biased in someway. In future research projects I would attempt to obtain more information on those who did not participate, subject to ethical approval.

A limitation of previous research was that participants were asked about the pregnancy resolution choice years later, which could alter their recollections. Attempts were made in this study to recruit pregnant participants as close to the point of decision making as possible. Asking before the pregnancy resolution has been carried out is likely to give a more accurate indication of factors leading to pregnancy resolution decision than asking retrospectively. However it is possible that having definitely made the decision, their reported reasons change to justify their decision, and their future orientation may also change as a result of the experience of pregnancy resolution decision making. It might be possible in services in other areas to sample at an earlier point e.g. after pregnancy testing. There are difficulties with data collection at this point too though as teenagers might be in shock, some teenagers might know immediately what they will do, whereas others would not have had time to consider the decision, the initial decision may change at a later date, and the process of asking questions e.g. about the future may affect their decision making. There does not seem to be a single ideal point to collect data. In order to be able to comment on causality a longitudinal methodology, with first sampling before pregnancy would have to be employed. Using this methodology it would be interesting to investigate how factors such as future orientation influence pregnancy

resolution decision making, and also how the experience of pregnancy and decision making influences these factors.

Difficulties with recruitment procedure meant I turned to professionals at the services involved to help me answer questions about the best way to do things in that service for those teenagers. Certainly the cooperation, assistance, and support I received from professionals were essential in successfully conducting the research with this population. Their awareness of the system they work in and their extensive knowledge of the patients were invaluable in designing and adapting procedure, and considering the implications of the findings. Conducting this research has underlined how important it is to integrate research into services and draw on the expertise of other professions, in order to make research more successful and of higher quality. This would be especially important in conducting much needed longitudinal studies, as the logistics of this methodology would be more complex. There would need to be more co-ordination between services e.g. Education or General Practitioners pre-pregnancy, and TOP and AN services during pregnancy.

Conducting this research has highlighted to me how complex the issue of 'teenage pregnancy' and particularly decision making related to this is. It seems that there many factors related to teenage pregnancy from cultural and societal discourses through various external influences on different levels, to complicated individual factors e.g. emotions, goals, motivation etc., based on belief systems. I consider there is a need for researchers and policy makers to recognise complexity, individual differences, and the shades of grey.

I think the mixed methodology employed in this study was very appropriate for considering this complexity. Quantitative aspects allowed me to look for trends in future orientation, and look at differences in age and gestational age that could potentially be confounding factors. I think the quantitative analysis would have benefitted from a measure of socio- economic status (SES), e.g. postcode analysis, as another possible confounding factor. There are many factors that could be considered confounding factors e.g. previous pregnancies, relationship status, mental health etc., due to the complexity. It would be very difficult to control for all of these.

The Qualitative aspect of the study allowed me to more effectively consider complexity, individual differences, and emerging important factors based on the opinions of the pregnant teenagers at the heart of the issue.

One particularly interesting theme from the responses of teenagers was that of the negative discourse and stereotype of being a 'pregnant teenager' or a 'teen mum'. I have struggled with the idea of 'teenage pregnancy' as a 'problem' from the outset. Undoubtedly having a child at a very young age can have an impact on those tasks that society considers important in the teenage years e.g. education, developing economic means, and building relationships. Teenagers are often not in an ideal situation in terms of resources to support children (although neither are all 20 or 30 year olds) and this could impact on their ability to support the child. However having a baby does bring with it positive changes to the individual and family, and many teenagers adapt and become 'good enough' parents.

Pregnancy and child birth is usually seen as a positive personal event that is celebrated in society. It seems that pregnancy in the teenage years has been increasingly

focused on as a societal problem (e.g. Social Exclusion Unit, 1999) and not as a personal event. This focus on teenage pregnancy and parenting as a problem, may have developed due to concern for these teenagers and their children, and been maintained by attempts to reduce it. Those who have intervened attempting to reduce teenage pregnancy do not seem to have considered the complexity of this issue though. Not considering complexity means it is unclear whether interventions will have the desired affect, but importantly it is also unknown if such attempts will impact negatively upon the individuals. This study has indicated that the negative discourse could limit help-seeking. More research needs to consider the impact of such stereotypes.

One of the main things I will take from my experience of conducting this research is that problem solving, changes, and uncertainty are all part of the research process. This flexibility is needed to facilitate high quality research. I have also discovered how important it is to attempt to take the perspective of individuals from the participant group. Thinking in this way has helped me design the procedure, method, and tools involved in the research, solve problems or understand why they are difficult to solve, and allow me to think beyond the societal discourse and consider individual differences and the complexity of this issue.

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Appendix 2. Journal Choice

Journal Choice

I chose to submit the systematic literature review to The Journal of Adolescent Health. I wanted to submit this article to a multidisciplinary journal because it maybe useful for medical professionals as well as psychologists and counsellors to be aware of psychological factors related to the decision to continue or terminate an adolescent pregnancy. An understanding of these factors may assist professionals in improving the wellbeing of these teenagers. I also considered it important that this journal does frequently publish literature reviews. Positively the journal is ranked 12/ 78 of Paediatric titles and reports a 2008 Thompson impact factor of 2.387.

I chose to submit the empirical paper to The Journal of Adolescent Research. This journal seemed very appropriate for my article because of the focus on the adolescent period, and because the journal is especially interested in mixed methodology studies that comment on the cultural context of research. This journal also has a multidisciplinary audience, which I considered important as the findings may be of interest to many professionals working with adolescents. The journal reports the 2006 Thompson impact factor of 1.582.

Appendix 3. Notes or Guideline for authors for the systematic literature review

Journal of Adolescent Health Author Guidelines removed due to copyright.

Appendix 4. Notes or Guideline for authors for the empirical paper

Journal of Adolescent Research Author Guidelines removed due to copyright.

Appendix 5. Ethical approval

Correspondence from Local Research Ethics Committee removed.

Appendix 6. Research Packs for Termination of Pregnancy and Ante Natal groups

answers. Your answers will be kept for 5 years at The University of Hull and then destroyed. Consent forms will be kept on file at the hospital and not destroyed.

I might want to put something you said into the report in the exact words you used. If I do this no personal details will be given, so people will not know who said it. You will be asked on the consent form if this is ok. You do not have to say yes.

The only time your answers or details would have to be told to someone else is if you said or wrote something that made me think you or someone else could be harmed. If this happened I would first tell the person at the service caring for you.

What will happen to the results of this study?

The staff at the services involved in the study will be told about the findings, as they could help them care for teenagers like you in the best way. A summary of the findings could be sent to people in other services that would find the results helpful.

You will also be asked on the consent form if you want to be told in an email what the study found out. If you would like an email give your email address on the 'participant consent form'. Email addresses will be kept at the hospital and will only be used for the

research. They will be destroyed after we have used them to tell people the results. You could also contact me in August 2008 and I will tell you what the study found out.

The findings will go into a report that will be looked at by staff at The University of Hull. The report may also be put into a scientific journal.

Who sponsors the research?

Workforce and Education NHS and the Humber sponsors the research.

Who has looked at this study before it started?

A group of people called a 'Research Ethics Committee' looked at the research to make sure people taking part are protected. They said this study could happen.

Who can I contact?

*For general information or help please contact me (Emily Bell) on 01482 464117. You can also contact me (or Lesley Glover) if you are unhappy with the study.

*For advice from someone outside the study about whether to take part, please contact the Patient Advisory Liaison Service for Hull and East Yorkshire Hospitals NHS Trust on 01482 623065.

Thank you,

Emily Bell (Chief Investigator)

Hull and East Yorkshire Hospitals NHS

NHS Trust

Participant Information Sheet

(V2. 18.01.08)

Study Title: Future Orientation and Adolescents' Decisions' to Continue or Terminate a Pregnancy

PLEASE READ THIS SHEET

You are invited to take part in research being conducted as part of a Doctorate in Clinical Psychology. It is important that you know about the research before you decide whether to take part. You could discuss this information with friends or family to help you decide. If you have any questions please contact me (Emily Bell, Researcher).

Why is the research being done?

We want to find out how pregnant teenagers who are deciding whether to have a baby or end their pregnancy see their futures. We hope the findings of the research will mean better help can be given to pregnant teenagers deciding what to do about their pregnancy and teenagers who have had a termination or a baby.

Can I take part?

You can take part in the research if you are 13- 18 years old and pregnant.

If you are 15 years old or younger you will need to talk to a professional at the hospital about your decision to take part in the research. If they are not sure whether you are able to decide to take part they might ask your parent if they are with you.

Do I have to take part?
You do not have to take part. It is your choice. If you want to take part you will have to sign a 'participant consent form'.

You can change your mind about taking part at any time and do not have to say why. If you change your mind later you can contact me and ask me not to use your answers.
If you do not want to take part this will not affect your care in hospital. If you do not want to take part you can close the envelope and give it back in.

What will happen if I do take part?
You will fill in the questionnaire given to you. The questions are about your future and a few are about the pregnancy. You do not have to answer or write anything that you do not want to. The questionnaire will take about 10- 30 minutes.

If you are given the questionnaire when you come to hospital you may be asked if I (the researcher) can go through the questions

with you. This is because teenagers who were given the questionnaire before said it would be better if they could give spoken answers and give more detail. You might be asked if I can record this so that I can look in more detail at what people say. You will be asked on the consent sheet if this is ok. You can choose not to give spoken answers and can choose not to be recorded.

You then put the questionnaire, and one of the 'participant consent forms' into the envelope. You can then return the envelope (see the envelope for where to return it to). You should keep this information sheet and the second consent form.

The person who cares for you at the service will need to be told that you took part in the research. They may write this in your notes at the service.
You will be asked on the consent form if it is ok for me to ask the staff at the service whether you kept your pregnancy or ended it. This is important information for us to know to answer the research questions, but you do not have to say yes to this either.
To be able to put in your notes that you have taken part and to find out if you kept or ended your pregnancy we need to know your name, date of birth, and your hospital unit number.

Could there be bad points to taking part?
You may want to write or think about bad things as well as good things when you read the questions. Thinking about bad things may make you upset. If you want support from a trained person after filling in the questionnaire please talk to the person you have an appointment with, or contact me.

Could there be good points to taking part?
Your answers could help us better understand how teenagers like yourself see the future. Knowing this could help us give better support to teenagers like you in the future and tell researchers what we need to know more about.

What will happen to my answers?
Everybody's answers will be looked at together and be put into a report.

Will the answers and all the information about me be kept private?
Questionnaires and consent forms with your details on will be kept in a locked cabinet. Your answers will not have your name on, so they will be anonymous. You have your own participant number on the questionnaire. This number is on the consent sheet too so that I can find your answers if you change your mind about taking part. Only my supervisor and I will be able to see your

answers. Their answers will be kept for 5 years at The University of Hull and then destroyed. Consent forms will be kept on file at the hospital and not destroyed.

I might want to put something they said into the report in the exact words they used. If I do this no personal details will be given, so people will not know who said it. You will be asked on the assent form if this is ok. You do not have to say yes.

The only time their answers or details would have to be told to someone else is if they said or wrote something that made me think they or someone else could be harmed. If this happened I would first tell the person at the service caring for them.

What will happen to the results of this study?
The staff at the services involved in the study will be told about the findings, as they could help them care for teenagers in the best way. A summary of the findings could be sent to people in other services that would find the results helpful.
You will also be asked on the assent form if you want to be told in an email what the study found out. If you would like an email give your email address on the 'participant consent form'. Email addresses will be kept at the hospital and will only be used for the

research. They will be destroyed after we have used them to tell people the results. You could also contact me in August 2008 and I will tell you what the study found out.
The findings will go into a report that will be looked at by staff at The University of Hull. The report may also be put into a scientific journal.

Who sponsors the research?
Workforce and Education NHS and the Humber sponsors the research.

Who has looked at this study before it started?
A group of people called a 'Research Ethics Committee' looked at the research to make sure people taking part are protected. They said this study could happen.

Who can I contact?
*For general information or help please contact me (Emily Bell) on 01482 464117. You can also contact me (or Lesley Glover) if you are unhappy with the study.
*For advice from someone outside the study about whether to take part, please contact the Patient Advisory Liaison Service for Hull and East Yorkshire Hospitals NHS Trust on 01482 623065.

Thank you,
Emily Bell (Chief Investigator)

Hull and East Yorkshire Hospitals NHS
NHS Trust

Parental Information Sheet
(V2. 18.01.08)
Study Title: Future Orientation and Adolescents' Decisions' to Continue or Terminate a Pregnancy

PLEASE READ THIS SHEET
You child is invited to take part in research being conducted as part of a Doctorate in Clinical Psychology. It is important that you know about the research before you decide if you want her to take part. You could discuss this information with others to help you decide. If you have any questions please contact me (Emily Bell, Researcher).

Why is the research being done?
We want to find out how pregnant teenagers who are deciding whether to have a baby or end their pregnancy see their futures. We hope the findings of the research will mean better help can be given to pregnant teenagers deciding what to do about their pregnancy and teenagers who have had a termination or a baby.

Can my child take part?
They can take part in the research if they are 13- 18 years old and pregnant.

If your child is 15 years old or younger they will talk to a professional at the hospital about taking part in the research. If you have been asked to think about whether you want them to take part that means the professional is not sure whether they are able to decide to take part on their own.

Does my child have to take part?
They do not have to take part. It is their (and your) choice. If you want them to take part please sign a 'parental assent form'.
You can change your mind about them taking part at any time and do not have to say why. If you change your mind later just contact me and ask me not to use their answers.
If you do not want them to take part this will not affect their care in hospital. If you do not want them to take part you can close the envelope and give it back in.

What will happen if they do take part?
They will fill in the questionnaire given to them. The questions are about their future and a few are about the pregnancy. They do not have to answer or write anything that they do not want to. The questionnaire will take about 10- 30 minutes. Please try not to influence how they answer. It is best if they are given privacy.
If they are given the questionnaire when they come to hospital they may be asked if I (the researcher) can go through the

questions with them. This is because teenagers who were given the questionnaire before said it would be better if they could give spoken answers and give more detail. They might be asked if I can record this so that I can look in more detail at what people say. You will be asked on the assent sheet if this is ok. They (and you) can choose not to give spoken answers and not to be recorded.

They then put the questionnaire, and one of the 'participant consent' and 'parental assent' forms into the envelope. They can then return the envelope (see the envelope for where to return it to). They should keep this information sheet and the second consent and assent forms.

The person who cares for them at the service will need to be told that they took part in the research. They may write this in their notes at the service.
You will be asked on the assent form if it is ok for me to ask the staff at the service whether they kept the pregnancy or ended it. This is important information for us to know to answer the research questions, but you do not have to say yes to this either.
To be able to put in their notes that they have taken part and to find out if they kept or ended the pregnancy we need to know their name, date of birth, and hospital unit number.

Could there be bad points to taking part?
They may want to write or think about bad things as well as good things when they read the questions. Thinking about bad things may make them upset. If they want support from a trained person after filling in the questionnaire please talk to the person they have an appointment with, or contact me.

Could there be good points to taking part?
Their answers could help us better understand how teenagers like them see the future. Knowing this could help us give better support to teenagers like them in the future and tell researchers what we need to know more about.

What will happen to their answers?
Everybody's answers will be looked at together and be put into a report.

Will the answers and all the information about them be kept private?
Questionnaires and consent forms with their details on will be kept in a locked cabinet. The answers will not have names on, so they are anonymous. They have their own participant number on the questionnaire. The number is on the consent sheet too so that I can find their answers if you change your mind about them taking part. Only my supervisor and I will be able to see their

My email address is:

_____

(if you want to be told the results of the study by email)

Participant Identification No:

For Research Team use only
If Gillick Competence Assessed
Outcome: Proceed / Do not proceed

Signature:
Date:

PARTICIPANT CONSENT FORM

Please complete this form if you want to take part in the study

Study Title: Future Orientation and Adolescents' Decisions' to Continue or Terminate a Pregnancy

Name of Researcher: Miss Emily Bell

1. I have read and understood the information sheet (Version 2) for this study and I have been given enough time to think about if I want to take part
   Yes No
2. I have had chance to contact the researcher if there were things I wanted to know about the study
   Yes No
3. I know I do not have to take part in the study and I can withdraw assent at any time until June 2008
   Yes No
4. I agree to take part in the study
   Yes No
5. I agree to staff telling the researcher if I continued with or ended my pregnancy
   Yes No
6. I agree my answers being written as I said them in the report as long as there are no personal details used
   Yes No
7. I agree to giving spoken answers as the researcher goes through the questionnaire with me
   Yes No (if the researcher has asked to do this)
8. I agree for the researcher to audio record my answers to the questionnaire
   Yes No (if the researcher has asked to do this)
9. I want to be told in an email what the study has found out
   Yes No If Yes put email address on the email tear off slip above

_____ _____ _____

Your name Today's date Your signature

Your date of birth: _____ Your Hospital Unit or Patient number is:_____

PUT THIS COPY INTO THE ENVELOPE TO RETURN

Participant Identification No:

My email address is:

(if you want to be told the results of the study by email)

For Research Team use only
If Gillick Competence Assessed
Outcome: Proceed / Do not proceed

Signature:
Date:

PARTICIPANT CONSENT FORM

Please complete this form if you want to take part in the study

Study Title: Future Orientation and Adolescents' Decisions' to Continue or Terminate a Pregnancy

Name of Researcher: Miss Emily Bell

1. I have read and understood the information sheet (Version 2) for this study and I have been given enough time to think about if I want to take part
   Yes No

2. I have had chance to contact the researcher if there were things I wanted to know about the study
   Yes No

3. I know I do not have to take part in the study and I can withdraw assent at any time until June 2008
   Yes No

4. I agree to take part in the study
   Yes No

5. I agree to staff telling the researcher if I continued with or ended my pregnancy
   Yes No

6. I agree my answers being written as I said them in the report as long as there are no personal details used
   Yes No

7. I agree to giving spoken answers as the researcher goes through the questionnaire with me
   Yes No (if the researcher has asked to do this)

8. I agree for the researcher to audio record my answers to the questionnaire
   Yes No (if the researcher has asked to do this)

9. I want to be told in an email what the study has found out
   Yes No If Yes put email address on the email tear off slip above

_____ _____ _____

Your name Today's date Your signature

Your date of birth: _____ Your Hospital Unit or Patient number is:_____

KEEP THIS COPY FOR YOURSELVES

My email address is:

_____

(if you want to be told the results of the study by email)

Participant Identification No:

For Research Team use only
If Gillick Competence Assessed
Outcome: Proceed / Do not proceed

Signature:
Date:

PARENTAL ASSENT FORM

Please complete this form if you want your child to take part in the study

Study Title: Future Orientation and Adolescents' Decisions' to Continue or Terminate a Pregnancy

Name of Researcher: Miss Emily Bell

1. I have read and understood the information sheet (Version 2) for this study and I have been given enough time to think about if I want my child to take part
   Yes No

2. I have had chance to contact the researcher if there were things I wanted to know about the study
   Yes No

3. I know I do not have to agree to my child taking part in the study and I can withdraw assent at any time until June 2008
   Yes No

4. I agree for my child to take part in the study
   Yes No

5. I agree to staff telling the researcher if my child continued with or ended their pregnancy
   Yes No

6. I agree my child's answers being written as they said them in the report as long as there are no personal details used
   Yes No

7. I agree to my child giving spoken answers as the researcher goes through the questionnaire with them
   Yes No (if the researcher has asked to do this)

8. I agree for the researcher to audio record my child's answers to the questionnaire
   Yes No (if the researcher has asked to do this)

9. I want to be told in an email what the study has found out
   Yes No If Yes put email address on the email tear off slip above

_____ _____ _____

Your child's name Today's date Your name & signature

Your child's date of birth: _____ Their Hospital Unit or Patient number is:_____

PUT THIS COPY INTO THE ENVELOPE TO RETURN

Participant Identification No:

My email address is:

(if you want to be told the results of the study by email)

For Research Team use only
If Gillick Competence Assessed
Outcome: Proceed / Do not proceed

Signature:
Date:

PARENTAL ASSENT FORM

Please complete this form if you want your child to take part in the study

Study Title: Future Orientation and Adolescents' Decisions' to Continue or Terminate a Pregnancy

Name of Researcher: Miss Emily Bell

1. I have read and understood the information sheet (Version 2) for this study and I have been given enough time to think about if I want my child to take part
   Yes No

2. I have had chance to contact the researcher if there were things I wanted to know about the study
   Yes No

3. I know I do not have to agree to my child taking part in the study and I can withdraw assent at any time until June 2008
   Yes No

4. I agree for my child to take part in the study
   Yes No

5. I agree to staff telling the researcher if my child continued with or ended their pregnancy
   Yes No

6. I agree my child's answers being written as they said them in the report as long as there are no personal details used
   Yes No

7. I agree to my child giving spoken answers as the researcher goes through the questionnaire with them
   Yes No (if the researcher has asked to do this)

8. I agree for the researcher to audio record my child's answers to the questionnaire
   Yes No (if the researcher has asked to do this)

9. I want to be told in an email what the study has found out
   Yes No If Yes put email address on the email tear off slip above

_____	_____	_____
Your child's name	Today's date	Your name & signature

Your child's date of birth: _____ Their Hospital Unit or Patient number is:_____

KEEP THIS COPY FOR YOURSELVES

Participant Identification no:
Outcome: _____
(For research team use only)

RESEARCH QUESTIONNAIRE

Today's date: ____/____/_____ Your Age: _____

Instructions:

- To answer most of the questions circle the answer that best fits your view
  For example:
  Not at all A bit Quite a lot (Very much)
- Other questions need a written answer. Please feel free to write down anything you want. There are no right or wrong answers. We are interested in what YOU think or feel.

Questions about the Pregnancy

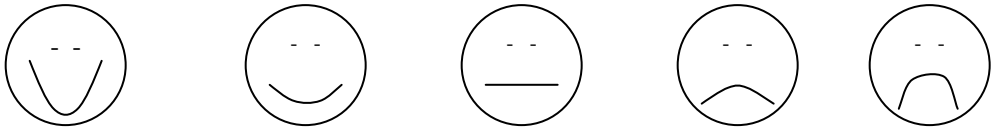
1) **Have you been pregnant before?** Yes No
2) **Do you have children already?** Yes No

3) **Are you planning to continue with your pregnancy?**
   Yes No Not Sure

4) **How many weeks pregnant are you?** (if you know) _____ weeks

5) **What sorts of things did you think about when making the decision to continue or terminate this pregnancy?**

6) **How have you been feeling over the last week?**



Questions about the Future

1) How would you <u>like</u> your future life to be? E.g Thoughts about things you hope will happen in your life; you might have thought about jobs, education, where you will live, money, family, partner, friends, things you will do, how you will feel, and how old you will be when things happen. (Remember your answer to this when answering other questions)

2) How would you <u>dislike</u> your future life to be? E.g. Things that you fear might happen in your life.

3) How much have you been thinking about the life that you want? E.g. You might have daydreamed about it, tried to think of ideas, or have made plans

Not at all *A bit* *Quite a lot* *Very much*

4) How much have you been imagining <u>different</u> futures for yourself? Have you been thinking about more than one idea for your future?

Not at all *A bit* *Quite a lot* *Very much*

Please tell us about the future or different futures for yourself that you have been thinking about or imagining…

5) How certain are you about what you want for the future?

Uncertain A bit uncertain Quite certain Certain

6) How important is it for you to get the life that you want?

Not important A bit important Important Very important

7) Is the life that you want worth your effort?

Not at all A bit Quite a lot Very much

8) How likely do you think it is that you will have the life that you want?

Not at all likely A bit likely Likely Very likely

9) How much do you think that getting the life that you want depends on luck?

Not at all A bit Quite a lot Very much

10) How much do you think that getting the life that you want depends on other people?

Not at all A bit Quite a lot Very much

11) How much do you think that getting the life you want depends on how good you are at things?

Not at all A bit Quite a lot Very much

12) How much do you think that getting the life you want depends on how hard you try?

Not at all A bit Quite a lot Very much

Please tell us what you think will affect whether you get the life that you want… E.g. Things that you or other people do, or things that happen

13) How much have you been trying to find out information about the life that you want? E.g. How to do things, what you might need, if help is available

Not at all *A bit* *Quite a lot* *Very much*

Please tell us what information you found out… E.g. Did you get any information? Where from? Was it helpful?

14) How much have you been trying to find out if the ideas you have about your future are right for you? E.g. Have you been getting others advice/opinions, trying to get some experience, finding out whether it would be possible for you?

Not at all *A bit* *Quite a lot* *Very much*

Please tell us what you found out… E.g. Did you find out your ideas about the future are right for you? Or did you find they are not a good idea or not possible? How did you find this out?

15) How much have you been making plans in your head that will lead to you getting the life that you want? E.g. Have you thought about what will need to be done or need to happen so that you get the life you want?

Not at all *A bit* *Quite a lot* *Very much*

Please tell us about your plans… E.g. You might have thought about what will have to be done or happen, and what order things will happen in

16) How much have you already done to try to get the life that you want? E.g. Have you already done something that means you are closer to getting what you want in the future?

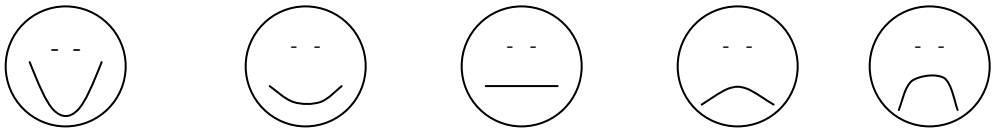
Nothing *A bit* *Quite a lot* *Lots*

Please tell us what you have already done to try to get the life that you want…

17) How determined are you to get the life that you want?

Not at all *A bit* *Quite a lot* *Very much*

18) When you think about the future how do you feel?



Please tell us what feelings you have when you think about the future…

Thank you for completing this questionnaire. Please put this questionnaire and your signed consent form/s into the envelope provided and seal it. Don't forget to keep an information sheet and a consent form.

Appendix 7. Research Packs for Never Pregnant group

Do you know any teenage girls who might be willing to fill in a questionnaire, and possibly win TOPSHOP or AMAZON vouchers for themselves?

Hello,
I am trying to find teenage girls (13 -18 yrs) to fill in a questionnaire about how they see the future.

If you do know any teenage girls I would really appreciate it if you could ask them if they would consider taking part in the research. If they are willing to consider taking part please give them one of the envelopes attached. If you are giving this to someone aged 15 years or below please make sure that you explain what this is about and talk to their parents if necessary. Please make sure that you only hand these out to people that you know.

The envelopes contain the questionnaire, information and consent sheets. Please could you return any completed questionnaires to me by the end of April 2008. If you need more questionnaires please let me know. Thanks.

To show my appreciation to the teenage control participants I will be holding a prize draw after the data collection is complete. One teenager will win a choice of vouchers for either TOPSHOP or AMAZON. To enter the draw they can fill in the prize draw entry slip and return it with the questionnaire.

Thank you for your help, and have a lovely Easter Holiday.

Emily Bell (Researcher) E.R.Bell@psy.hull.ac.uk

Are you a teenage girl aged between 13 and 18yrs?

Would you be interested in filling in a research questionnaire and possibly winning TOPSHOP or AMAZON vouchers?

If yes please read on…

About the research…

You are being invited to take part in some research looking at how pregnant teenagers see the future. As part of this research we are asking a group of non-pregnant teenage girls to fill in a questionnaire, and that is why we are asking you. We hope the research will mean better help can be given to teenagers who become pregnant.

If you take part your answers will be anonymous. Everybody's answers will be looked at together and be put into a report. If you want to know what the study found, put your email address on the consent form (it will only be used by the researcher to tell you the findings).

You do not have to take part. If you want more information before taking part please contact me. You might want to talk to a parent or adult before deciding to take part and if you do that's fine.

If you want to take part, please…

- ✓ Fill in the 'participant consent sheet'
- ✓ Fill in the questionnaire
- ✓ Fill in the prize draw entry slip if you want to enter the prize draw
- ✓ Put everything in the envelope, except this sheet, and seal it
- ✓ Give it back to the person who gave it to you. They will return it for you.

Prize Draw…

To say thank you to the teenagers who complete the questionnaire, we will be holding a prize draw after the data collection is complete. One teenager will win a choice of vouchers for either TOPSHOP or AMAZON. To enter the draw fill in the prize draw entry slip when you have completed the questionnaire.

If you have any questions or comments please contact me.

Thank You,

Emily Bell (Researcher) (E.R.Bell@psy.hull.ac.uk)

Prize Draw Entry

Your Name _____

Name of Person who gave you the questionnaire _____

How should we contact you if you win?

1. Tell the person who gave you the questionnaire
2. By email _____
3. By phone _____

(Contact will only be made if you win. Your contact details will be confidential and will be destroyed after the prize draw)

Would you prefer vouchers for:

- ✓ AMAZON
- ✓ TOPSHOP

Participant Identification No:

Participant Consent Form
Please complete this form if you want to take part in the study

Study Title: Future Orientation and Adolescents' Decisions' to Continue or Terminate Pregnancy
Name of Researcher: Miss Emily Bell

4. I have read and understood the information about the research and I have been given enough time to think about if I want to take part
   Yes No

5. I have had chance to contact the researcher if there were things I wanted to know about the study
   Yes No

6. I know that I do not have to take part in the study
   Yes No

7. I agree to take part in the study
   Yes No

8. I agree to my answers being written as I wrote them in the report as long as there are no personal details used
   Yes No

9. I want to be told in an email what the study has found out
   Yes No If Yes my email address is _____

_____	_____	_____
Your name	Today's date	Your signature

Participant Identification no:
Outcome: _____
(For research team use only)

RESEARCH QUESTIONNAIRE

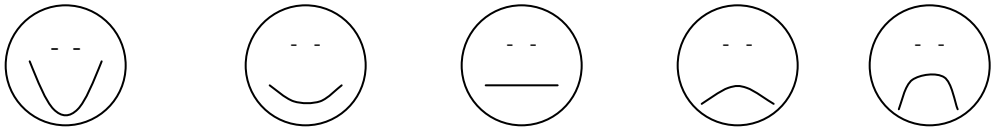
Today's date: ____/____/_____ Your Age: _____

Instructions:

- To answer most of the questions circle the answer that best fits your view
  For example:
  Not at all A bit Quite a lot (Very much)
- Other questions need a written answer. Please feel free to write down anything you want. There are no right or wrong answers. We are interested in what YOU think or feel.

Questions about the Pregnancy

7) How have you been feeling over the last week?



8) Have you ever been pregnant? Yes No

Questions about the Future

1) How would you <u>like</u> your future life to be? E.g Thoughts about things you hope will happen in your life; you might have thought about jobs, education, where you will live, money, family, partner, friends, things you will do, how you will feel, and how old you will be when things happen. (Remember your answer to this when answering other questions)

2) How would you <u>dislike</u> your future life to be? E.g. Things that you fear might happen in your life.

3) How much have you been thinking about the life that you want? E.g. You might have daydreamed about it, tried to think of ideas, or have made plans

Not at all A bit Quite a lot Very much

4) How much have you been imagining <u>different</u> futures for yourself? Have you been thinking about more than one idea for your future?

Not at all *A bit* *Quite a lot* *Very much*

Please tell us about the future or different futures for yourself that you have been thinking about or imagining…

5) How certain are you about what you want for the future?

Uncertain A bit uncertain Quite certain Certain

6) How important is it for you to get the life that you want?

Not important A bit important Important Very important

7) Is the life that you want worth your effort?

Not at all A bit Quite a lot Very much

8) How likely do you think it is that you will have the life that you want?

Not at all likely A bit likely Likely Very likely

9) How much do you think that getting the life that you want depends on luck?

Not at all A bit Quite a lot Very much

10) How much do you think that getting the life that you want depends on other people?

Not at all A bit Quite a lot Very much

11) How much do you think that getting the life you want depends on how good you are at things?

Not at all A bit Quite a lot Very much

12) How much do you think that getting the life you want depends on how hard you try?

Not at all A bit Quite a lot Very much

Please tell us what you think will affect whether you get the life that you want… E.g. Things that you or other people do, or things that happen

13) How much have you been trying to find out information about the life that you want? E.g. How to do things, what you might need, if help is available

Not at all *A bit* *Quite a lot* *Very much*

Please tell us what information you found out… E.g. Did you get any information? Where from? Was it helpful?

14) How much have you been trying to find out if the ideas you have about your future are right for you? E.g. Have you been getting others advice/opinions, trying to get some experience, finding out whether it would be possible for you?

Not at all *A bit* *Quite a lot* *Very much*

Please tell us what you found out… E.g. Did you find out your ideas about the future are right for you? Or did you find they are not a good idea or not possible? How did you find this out?

15) How much have you been making plans in your head that will lead to you getting the life that you want? E.g. Have you thought about what will need to be done or need to happen so that you get the life you want?

Not at all *A bit* *Quite a lot* *Very much*

Please tell us about your plans… E.g. You might have thought about what will have to be done or happen, and what order things will happen in

16) How much have you already done to try to get the life that you want? E.g. Have you already done something that means you are closer to getting what you want in the future?

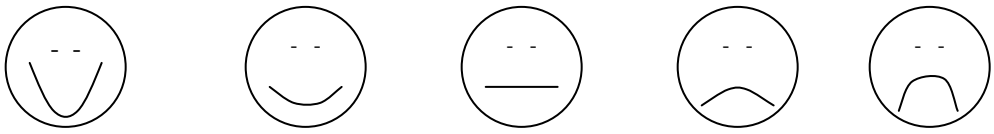
Nothing *A bit* *Quite a lot* *Lots*

Please tell us what you have already done to try to get the life that you want…

17) How determined are you to get the life that you want?

Not at all *A bit* *Quite a lot* *Very much*

18) When you think about the future how do you feel?



Please tell us what feelings you have when you think about the future…

Thank you for completing this questionnaire. Please put this questionnaire and your signed consent form/s into the envelope provided and seal it. Don't forget to keep an information sheet and a consent form.

Appendix 8. Pilot Study

Pilot Study: Future Orientation and Adolescents' Decisions' to Continue or Terminate a Pregnancy

Introduction

Future Orientation

Future Orientation has been described as a complex cognitive motivational system (Trommsdorff, 1983). Both Trommsdorff (1983) and Seginer (e.g. 2005) have outlined multi-dimensional models. Seginer's model is focused on here because it is a more developed future orientation model including all elements of Trommsdorff's model.

Seginer and Lilach (2004) explained that future orientation is a subjective construction of one's future, which provides the basis for goal setting and planning, exploring options and making commitments that guide the person's development. Seginer, Nurmi, and Poole constructed a three component model of future orientation (e.g. Seginer, 2005). They conceptualize future orientation as consisting of motivational, cognitive, and behavioural aspects. As in other approaches (e.g. Trommsdorff, 1983), Future Orientation has a thematic nature so these can be applied to each of several prospective domains (e.g., work and career).

Drawing on theoretical analyses of future orientation (Seginer, 1988) and on expectancy by value models (Atkinson, 1964; Eccles & Wigfield, 1995), three motivational variables have been described (Seginer & Lilach, 2004): (a) the value of a prospective domain, (b) expectance, i.e., the domain-specific subjective probability of hopes, wishes and plans and general positive feelings materializing, and (c) sense of internal control (ability and effort) regarding domain-specific goals and plans and their

materialization. The cognitive representation of future orientation consists of domain-specific hopes and fears. The two behavioural variables are: exploration of future options by seeking advice, collecting information, and assessing their suitability, and commitment to pursue one specific option. Domains can be classified according to: their theme and distance. The theme of social relations and marriage and family is relational, and the theme of higher education and work and career is instrumental. Considering distance, social relations and higher education are near future domains to many adolescents, and marriage and family, and work and career are likely to be distant future domains.

It has been indicated (Trommsdorff, 1983) that research has tended to focus on just one aspect of this multi-dimensional concept e.g. only extension of time perspective and coherence of anticipations for the future. However consideration of all elements is required in order to understand the influence of the future on people's decision making and behaviour.

Future Orientation and the Decision to Continue or Terminate Pregnancy

It has been indicated in some of the teenage pregnancy literature that perceptions of the future affect a teenager's decision as to whether to continue or terminate their pregnancy. Some studies suggested that teenagers who terminate their pregnancy have highest future time perspective (as measured by the Future Events Test and questioning about work aspirations) and a greater ability to conceptualise and anticipate the future when compared to teenage mothers and pregnant teenagers (Resnick & Blum, 1985). Other research suggests that both teenagers who choose childbearing and termination consider the future when making the decision, but that their visions for their futures

maybe different in some way (e.g. Hallden, Christensson, & Olsson, 2005; Lee, Clements, Ingham, & Stone; 2004). The literature has highlighted some aspects of the future may be important in the decision to continue or terminate pregnancy; however studies have not considered future orientation as a multidimensional construct. It is unlikely that research will be able to understand the influence of the future on the thinking involved in this decision unless all aspects of future orientation are considered. Many theorists have stressed that peoples' conceptualisations of the future have an influence on their motivation, decision making, and behaviour. It is important to understand more about pregnant teenagers' motivation, decision making, and behaviour regarding their pregnancy in order to support them and inform teenage pregnancy prevention strategies. Therefore it seems vital to fully investigate their future orientation.

Development of the Questionnaire

In order to investigate future orientation we needed to find an appropriate measure to use with teenagers. The only measure we could find that is based on a multidimensional model of future orientation is a questionnaire constructed by Seginer. The Future Orientation Questionnaire consists of two parts: The Prospective Life Course Questionnaire (Seginer, Nurmi, & Poole, 1994) and the Hopes and Fears Questionnaire (Seginer, 1988). The Prospective Life Course has been used in a number of studies (e.g. Seginer & Mahajna, 2004; Seginer, Vermulst, & Shoyer, 2004). Several studies have demonstrated the questionnaires construct validity (e.g. Seginer, 2000; Seginer & Mahajna, 2003), and convergent validity has been indicated by moderate correlations (Seginer, Vermulst, & Shoyer, 2004).

However when we looked at this questionnaire it did not seem appropriate for a teenage population because it was very long and adolescents would probably have difficulty understanding the language used. Therefore we constructed a questionnaire, based on The Prospective Life Course Questionnaire (Seginer, Nurmi, & Poole, 1994) and the Hopes and Fears Questionnaire (Seginer, 1988), which we hoped would be more appropriate for use with a teenage population. After constructing this questionnaire, it seemed important to conduct a pilot to test the questionnaire on the target population and get feedback from teenagers and researchers.

Aims of the Pilot

The aims of this pilot were:

1) To get feedback on theoretical composition of questionnaire
2) To observe responses obtained from the questionnaire items
3) To get feedback on appropriateness of the Questionnaire for adolescents and specifically pregnant adolescents

Method

Non-Clinical Population

Participant Recruitment

A convenience sample from the general population of teenage girls was taken. A 'snowballing' method was used, whereby participants were asked if they could ask anyone else they knew if they would like to participate. The sampling took place in August and September 2007. This sample consisted of 11 female girls aged 13 to 18 (M= 16 yrs, SD= 1.25).

Measures and Procedure

Participants were given a copy of the Research Questionnaire. They were asked to answer all questions about the future, and then complete a feedback sheet. They were not asked to complete questions about the pregnancy, as these were not applicable.

Clinical Population

Participant Recruitment

Pregnant teenagers under the care of a local NHS Trust were recruited. Participants were approached within the Gynaecology service, for those teenagers seeking a termination, and within the Ante Natal service, for those wishing to continue their pregnancy.

Recruitment within Gynaecology took place on one occasion at an Outpatient Clinic in December 2007. The teenagers attending the clinic were approached by the first professional they saw. They were invited by them to take part in the research and if they wished to participate they met the researcher who gave them the research envelopes. Of 6 teenagers attending this clinic 3 agreed to take part in the research and completed the questionnaire.

Recruitment within the Ante Natal service took place via postal questionnaires for 16 to 18 year olds, and through attendance at a clinic with a midwife for 13 to 15 years olds. The 16 to 18year olds were sent questionnaires with their appointment letter and asked to return the questionnaires at their scan appointment. The 13-15 year olds were asked to complete the questionnaire whilst attending their appointments.

Only two teenagers aged 13-15 attended booking appointments with the midwife between November 2007 and January 2008, and neither of these young women wanted to complete the questionnaire. From November 2007 to the beginning of January 2008, 17 questionnaires were sent to 16-18 year olds but only 1 complete questionnaire was returned.

Measures and Procedure

Participants were given a copy of the Research Questionnaire. They were asked to answer all questions, and then complete a feedback sheet. The researcher was present when the teenagers attending the clinic were filling in questionnaires so that they could ask any questions that they had about the research.

Clinical Psychology Researcher's

Researcher Recruitment

Two professionals who were members of the Clinical Psychology Department Research Team at the University of Hull were asked to give feedback on the Questions about the future included in the Research Questionnaire. Both of these professionals agreed to give their opinion. Both professionals have had much experience conducting research, and one of them has also had much experience working and teaching within the Clinical Psychology field.

Measures and Procedure

Each professional was given a copy of the questionnaire, an explanation of Seginer's Future Orientation Model, a feedback sheet including a grid to feedback on how the questions may relate to the model, and a space for general feedback.

Results

Professional feedback

Table 1 shows both professionals views as to which construct of Future Orientation each question seems to relate to. The table also shows the view that we took when putting together the questions about the future (based on the questionnaire constructed by Seginer and colleagues).

For 12 of the questions professionals and ourselves took the same view, but there was some disagreement as to which constructs 7 questions were based upon. These questions were 3, 4, 10, 11, 12, 15 and 19.

Questions 3 (How much have you been imagining different futures for yourself?), 11 (How much have you been thinking about the life that you want?), 12 (What have you been thinking about?), and 15 (How much have you been planning the life that you want?) were considered to be asking about Behavioural Exploration by some and Cognitive Representation by others. These two components of the future orientation model seem hard to distinguish from each other. One of the professionals commented on an apparent overlap. They questioned whether thinking about your options and planning is cognitive or whether it is a behavioural exploration?

Question 4 (How certain are you about what you want for the future?) was considered to be asking about Cognitive Representation, and Motivational Expectance by the two professionals asked, and viewed as Behavioural Commitment by ourselves based on Seginer and Colleagues Questionnaire.

Question 19 (How do you feel when you think about the future?) was viewed by both professionals asked as relating to Cognitive Representation but considered to be asking about Motivational Expectance by ourselves.

Question 10 (What do you think you can do to get the life that you want?) was viewed as asking about Behavioural Exploration by one professional, but as Motivational Control by the other professionals and ourselves.

Table 1. Professional Perspective on Questions and Constructs of Future Orientation

Question	Professional 1	Professional 2	Our view
1	CR	CR	CR
2	CR	CR	CR
3	CR	CR	BE
4	CR	ME	BC
5	MV	MV	MV
6	ME	ME	ME
7	MC	MC	MC
8	MC	MC	MC
9	MC	MC	MC
10	BE	MC	MC
11	BE	CR	CR
12	BE	CR	CR
13	BE	BE	BE
14	BE	BE	BE
15	BE	BE	CR
16	BE	BE	BE
17	BC	BC	BC
18	BC	BC	BC
19	CR	CR	ME

Table 1: CR= Cognitive Representation, ME= Motivational Expectance, MV= Motivational Value, MC= Motivational Control, BE= Behavioural Exploration, BC= Behavioural Commitment.

The professionals gave further comments and points for improvement after looking through the questions. One professional thought the questionnaire was 'fairly straightforward and accessible'. Change to the wording of questions was suggested. One professional proposed emphasising that there are no 'right' or 'wrong' answers and that teenagers should write anything they think is relevant for qualitative questions. It was suggested that perhaps 'how much' questions should be preceded by 'In your opinion' as 'how much' implies a measurement. Also it was proposed that more invitational instructions for the qualitative questions could be helpful e.g. Can you describe/tell us/let us know in the space below?

It was recommended that the balance of questions relating to each construct of the questionnaire be considered as the professional thought there might be more questions asking about certain constructs. They suggested going back to the original questionnaire and considering if more questions could be added to give more balance whilst keeping the questions modelled on Seginer's Questionnaire. Also they said it seemed that the questions were grouped according to components. The professional suggested thinking about whether the question order should be mixed up.

Responses obtained

The responses gathered from the 15 participants in the pilot give an indication of the data range that could be expected from the questionnaire.

Quantitative Responses

There seems to be a range of responses given for most quantitative questions. The frequency of scores (1-4) given for each question is shown in Figure 1.

Figure 1.

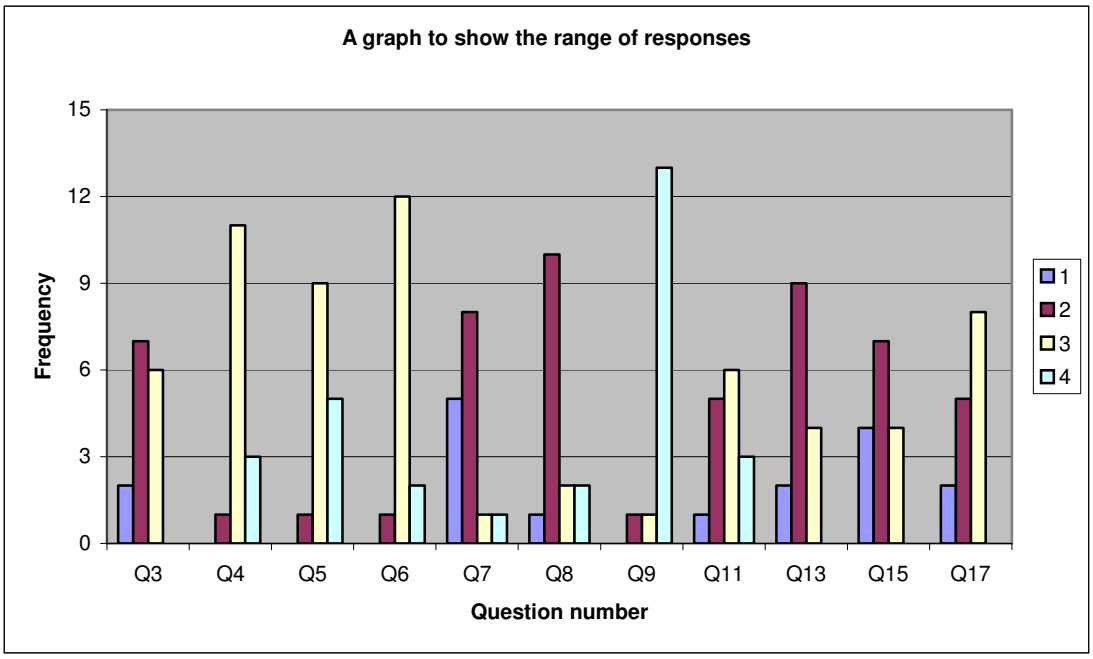


Figure 1 shows the mode for each question is a response of 2 or 3, except question 9. The mode response for question 9 (How much do you think that getting the life you want depends on you?*)* is a score of 4 (very much). Figure 2 shows the mean responses for each question.

Figure 2.

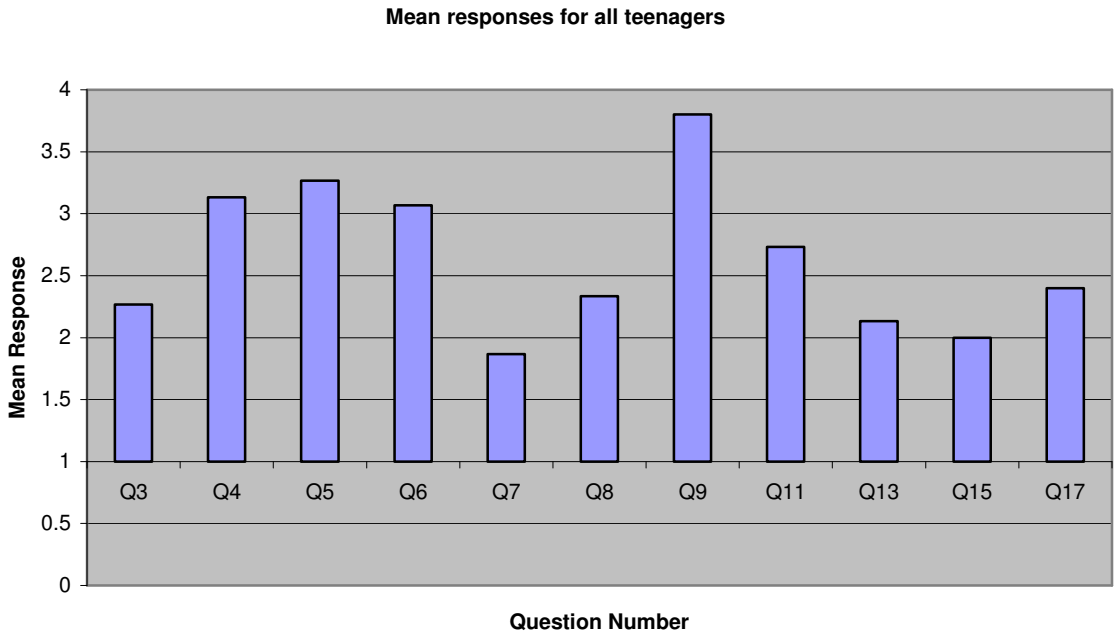
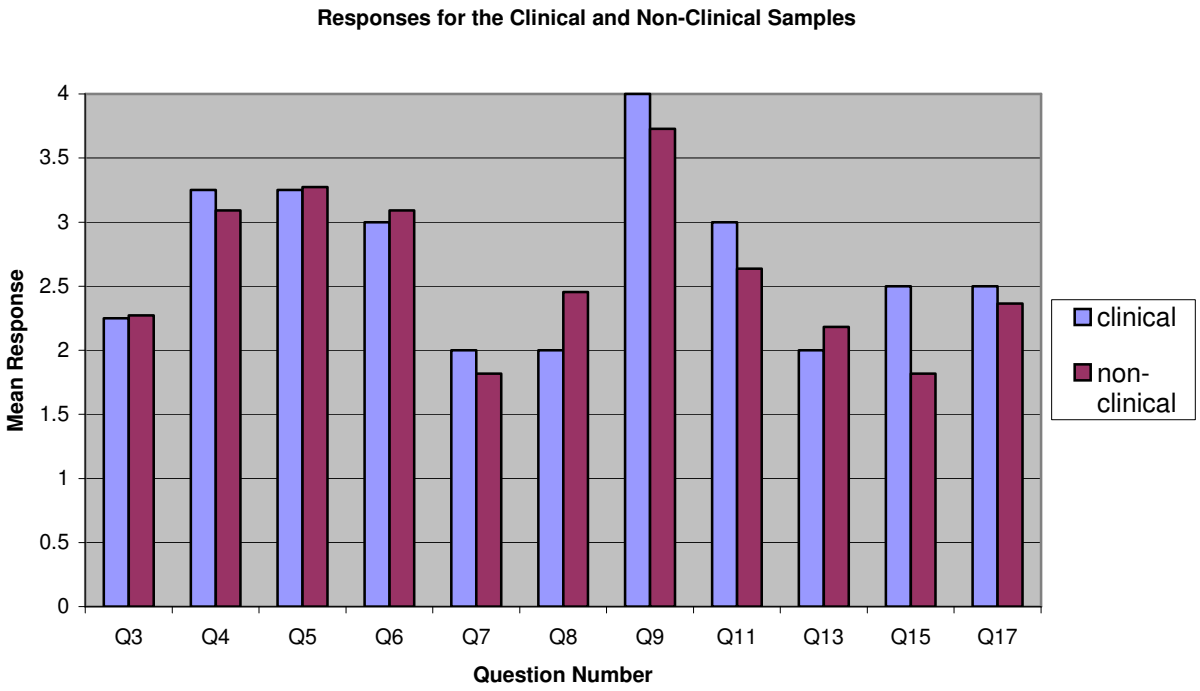


Figure 3 displays the mean responses from the clinical and non-clinical samples. Figure 3 shows that the pilot did not highlight any differences between the responses of the two groups, clinical and non-clinical on quantitative measures. However this is only a very small sample size (clinical N= 4, non-clinical N= 11).

Figure 3.



Qualitative Responses

The teenagers in the pilot wrote something for the majority of qualitative questions. However most teenagers gave very short written responses and a few participants gave one-word answers. It is unclear whether these short responses indicate questions requiring written responses do not suit some teenagers or whether it is not a topic they feel they have a lot to write about.

Appropriateness of Questionnaire for Adolescents

The mean completion time for all 15 teenagers in the pilot was 9min 36sec (sd= 6.96). The clinical sample took less time to complete the questionnaire (M= 5 min 15sec; sd= 3.69) than the non-clinical sample (M= 11 min 11 sec; sd= 7.31), despite having more information to read and more questions to complete. Of all teenagers in the pilot 5

individuals considered that it took too long. Only 1 person in the clinical sample considered the questionnaire too long, but all 3 of the under 16's in the pilot said it took too long.

No one in the pilot found the questionnaire upsetting. However one of the teenagers in the clinical sample suggested that some girls might be a bit upset about having a termination, and that she thought it would be easier to talk to the researcher rather than to write their answers.

A total of 3 out of 15 teenagers did not think the questionnaire was suitable for 13 to 18 year olds. Two of these individuals suggested it would be more suited to 15 to 18 year olds, one explaining they thought "the lexus used is rather mature". The other teenager commented: "13 is a bit young to be thinking into your own future. 13 is still a child". However all 3 of the under 16s thought the questionnaire was suitable for 13 to18 year olds.

Of all the 15 teenagers asked, 5 found the questionnaire confusing. Some of these teenagers' written responses explained that they did not know what to write for some of the questions.

Two teenagers said that the questions were too repetitive, so they did not know what else to write. Specifically, these individuals mentioned questions 12 and 16 as being repetitive, and question 14 was also mentioned by one of them.

Three teenagers did not understand what they were being asked to write or thought questions were not specific enough. One individual wrote, "I didn't understand what some of it meant". Whilst filling out the questionnaire, she verbally expressed that she did not know what types of things to put for written questions. She said she did not

know what thinking about the future meant, so she asked for examples. When the researcher explained that people might think about education, work and family, then she was able to answer the question. Another person wrote "All the 'what have you found out' questions were not very specific", again making reference to the qualitative questions.

One teenager's suggestion for an improvement summarised these difficulties that a few teenagers had with the questions well: "Eliminate questions which are repetitive/ or make them more specific".

The wording 'others' in question 8 confused one person. They suggested, "maybe it could say 'other people' instead".

In the improvements section two individuals indicated that the questions could be made easier to read. Three people suggested more multiple choice questions or making the questionnaire shorter, and one individual suggested a "'what is most important?' circle money etc" question.

A few teenagers wanted more "exciting", "better", or "more interesting" questions. One person said they liked the fact that there were a variety of questions, but another person said the question subject should be more varied as they thought that there was "too much about what you want your future to be like". One of the teenagers from the Clinical sample also requested that participants are asked more about their *current* feelings about their situation.

One participant from the clinical sample suggested the researcher talked through the questions with the teenager, more like an interview. The reasons they gave for this were that: it might make teenagers more relaxed, it would be easier to talk than write

(emotionally and physically), and she added that her hand hurt after writing. Another individual from the clinical sample wrote “It feels slightly vague: more detail needed” suggesting either they wanted to give more details or wanted more detailed instruction.

All 3 of the teenagers that participated in the research whilst the researcher was present seemed overwhelmed when given the information sheet. Two of them commented on its length, one person saying “I can’t read all that”, and both requesting the researcher explained the contents of the sheet verbally. Also the fourth member of the Clinical sample from the Ante natal service circled ‘no’ on the consent sheet when asked if they had ‘read and understood the information sheet (version 1) for this study and I have been given enough time to think about if I want to take part’. She also returned the information sheet and both consent forms, despite the information sheet saying she should keep the information sheet and a consent form. It may be assumed that as the questionnaire was sent to her home and she could fill it in any time up until the appointment, that she did not circle ‘no’ because she did not have enough time to think about it. The information sheet was included, so the difficultly must have been that either she did not wish to read the sheet, or that she did not understand it.

Discussion

There are some points highlighted in the results of the pilot that have implications for the questionnaire design.

Firstly, the pilot showed differences of opinion between the professionals and ourselves on which questions ask about which aspects of the future orientation model. There was most conflict over whether questions relate to Behavioural Exploration or

Cognitive Representation. It was decided that the researcher will continue to consider that questions relate to components as outlined in Seginer's Future Orientation Questionnaire. Seginer's questionnaire has been assessed for reliability and validity and has been used in other research, so it seems important to base our questionnaire as closely as possible upon this. We will need to be aware of potential overlap between Behavioural Exploration and Cognitive Representation however when considering data from the questionnaire.

One professional said the instructions for and wording of some questions, especially the qualitative questions, should emphasise that we are inviting teenagers to give their opinion. The wording of qualitative questions will therefore be changed.

It was suggested that the balance of questions needs to be re-considered. This means going back to Seginer and Colleagues' Future Orientation Questionnaire and considering whether additional questions need to be added.

Other professional feedback said to consider whether the questions should be in a random order. However the questions will remain in a sequential order because it may help teenagers respond. It may be confusing to ask question in a different order e.g. asking how much they have done to get the life that they want, before asking what they want for the future and what they have been thinking about. Also we have tried to follow a similar order to that of Seginer and Colleagues questionnaire.

There was no apparent difference in the quantitative responses from the clinical and non-clinical samples. It might be interesting to collect data from the 'normal population' in the research, to see if the is still no difference with larger numbers in each group.

Most teenagers in the pilot gave short responses for qualitative questions. This highlights a need to include another way for Qualitative responses to be given by teenagers e.g. verbally.

One third of teenagers found the questionnaire too long. The average completion time was 9min 36sec (sd= 6.96). Although some of the teenagers found the questionnaire too long it would not be feasible to reduce the length of the questionnaire and be able to collect the data required to adequately answer the research questions.

No one in the pilot found the questionnaire upsetting. It is good to know that when completing the questionnaire teenagers are not likely to experience distress. However those involved in the research process will remain aware of the possibility that other teenagers could become upset.

Three of the older teenagers did not think the questionnaire would be suitable for the youngest teenagers. The reason two of them gave for this was the complexity of the language. Therefore the language of the questionnaire needs to be simplified as much as possible.

One third of teenagers in the pilot found the questionnaire confusing Participant feedback indicates the questionnaire could be made less confusing by having examples to clarify what questions are asking, and changing some wording.

One participant suggested the researcher talked through the questions with teenagers, as talking to the researcher would be easier, more relaxed, and would be better for girls who may be upset. Therefore having the researcher verbally administer the questionnaire seems appropriate.

A few teenagers in the pilot expressed a desire to give more details. Verbal administration of the questionnaire would also have the advantage of allowing teenagers to say as much as they like in response to questions.

Some of the teenagers in the pilot seemed to find the information sheet that accompanies the questionnaire overwhelming or confusing. The information sheet may need adapting to make it more readable for this age group.

The results obtained in the pilot indicate that a number of alterations to the questionnaire we constructed based on Seginer and Colleagues 'Future Orientation Questionnaire' are required before the main data collection stage of the research begins. If these changes are made the results from the pilot suggest the questionnaire will be appropriate for use in future orientation research with a teenage population.

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Appendix 9. Quantitative Analysis

Quantitative Analysis

SPSS OUTPUT

Descriptives

Age

	Pregnancy Resolution Decision					
	Termination of Pregnancy		Continuing Pregnancy		Not pregnant	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Age	17.00	1.25	16.56	1.01	15.73	1.32

Gestation

	Pregnancy Resolution Decision					
	Termination of Pregnancy		Continuing Pregnancy		Not pregnant	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Gestation	9.67	1.71	10.22	2.17	.	.

Previous Pregnancy

		Pregnancy Resolution Decision		
		Termination of Pregnancy	Continuing Pregnancy	Not pregnant
		Count	Count	Count
Previous Pregnancy	No previous pregnancy	16	6	23
	previous pregnancy	3	3	0

Kruskal-Wallis Test

Ranks

	Pregnancy Resolution Decision	N	Mean Rank
Age	Termination of Pregnancy	19	32.66
	Continuing Pregnancy	9	26.72
	Not pregnant	22	18.82
	Total	50	

Test Statistics(a,b)

	Age
Chi-Square	9.827
df	2
Asymp. Sig.	.007
Exact Sig.	.006
Point Probability	.000

a Kruskal Wallis Test

b Grouping Variable: Pregnancy Resolution Decision

Mann-Whitney Test

Ranks

	Pregnancy Resolution Decision	N	Mean Rank	Sum of Ranks
Gestation	Termination of Pregnancy	18	13.28	239.00
	Continuing Pregnancy	9	15.44	139.00
	Total	27		

Test Statistics(b)

	Gestation
Mann-Whitney U	68.000
Wilcoxon W	239.000
Z	-.680
Asymp. Sig. (2-tailed)	.496
Exact Sig. [2*(1-tailed Sig.)]	.527(a)
Exact Sig. (2-tailed)	.509
Exact Sig. (1-tailed)	.255
Point Probability	.007

a Not corrected for ties.
b Grouping Variable: Pregnancy Resolution Decision

Spearman's (Nonparametric) Correlations (Future Orientation Components)

Correlations

			Question 3: thinking	Question 15: plans
Spearman's rho	Question 3: thinking	Correlation Coefficient	1.000	.505(**)
		Sig. (2-tailed)	.	.000
		N	51	50
	Question 15: plans	Correlation Coefficient	.505(**)	1.000
		Sig. (2-tailed)	.000	.
		N	50	50

** Correlation is significant at the 0.01 level (2-tailed).

Correlations

			Question 8: likelihood	Question 18: feelings re. future
Spearman's rho	Question 8: likelihood	Correlation Coefficient	1.000	.317(*)
		Sig. (2-tailed)	.	.024
		N	51	51
	Question 18: feelings re. future	Correlation Coefficient	.317(*)	1.000
		Sig. (2-tailed)	.024	.
		N	51	51

* Correlation is significant at the 0.05 level (2-tailed).

Correlations

			Question 6: importance	Question 7: effort
Spearman's rho	Question 6: importance	Correlation Coefficient	1.000	.366(**)
		Sig. (2-tailed)	.	.008
		N	51	51
	Question 7: effort	Correlation Coefficient	.366(**)	1.000
		Sig. (2-tailed)	.008	.
		N	51	51

** Correlation is significant at the 0.01 level (2-tailed).

Correlations

			Question 11: good	Question 12: try hard
Spearman's rho	Question 11: good	Correlation Coefficient	1.000	.462(**)
		Sig. (2-tailed)	.	.001
		N	51	51
	Question 12: try hard	Correlation Coefficient	.462(**)	1.000
		Sig. (2-tailed)	.001	.
		N	51	51

** Correlation is significant at the 0.01 level (2-tailed).

Correlations

			Question 9: luck	Question 10: other people
Spearman's rho	Question 9: luck	Correlation Coefficient	1.000	.435(**)
		Sig. (2-tailed)	.	.001
		N	51	51
	Question 10: other people	Correlation Coefficient	.435(**)	1.000
		Sig. (2-tailed)	.001	.
		N	51	51

** Correlation is significant at the 0.01 level (2-tailed).

Correlations

			Question 9: luck	Question 10: other people	Question 11: good	Question 12: try hard
Spearman's rho	Question 9: luck	Correlation Coefficient	1.000	.435(**)	.060	.001
		Sig. (2-tailed)	.	.001	.673	.993
		N	51	51	51	51
	Question 10: other people	Correlation Coefficient	.435(**)	1.000	.109	-.066
		Sig. (2-tailed)	.001	.	.445	.644
		N	51	51	51	51
	Question 11: good	Correlation Coefficient	.060	.109	1.000	.462(**)
		Sig. (2-tailed)	.673	.445	.	.001
		N	51	51	51	51
	Question 12: try hard	Correlation Coefficient	.001	-.066	.462(**)	1.000
		Sig. (2-tailed)	.993	.644	.001	.
		N	51	51	51	51

** Correlation is significant at the 0.01 level (2-tailed).

Correlations

			Question 4: different futures	Question 13: information	Question 14: right
Spearman's rho	Question 4: different futures	Correlation Coefficient	1.000	.309(*)	.288(*)
		Sig. (2-tailed)	.	.029	.042
		N	51	50	50
	Question 13: information	Correlation Coefficient	.309(*)	1.000	.662(**)
		Sig. (2-tailed)	.029	.	.000
		N	50	50	50
	Question 14: right	Correlation Coefficient	.288(*)	.662(**)	1.000
		Sig. (2-tailed)	.042	.000	.
		N	50	50	50

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

Correlations

			Question 5: certainty	Question 16: done	Question 17: determined
Spearman's rho	Question 5: certainty	Correlation Coefficient	1.000	.170	.190
		Sig. (2-tailed)	.	.233	.182
		N	51	51	51
	Question 16: done	Correlation Coefficient	.170	1.000	-.073
		Sig. (2-tailed)	.233	.	.612
		N	51	51	51
	Question 17: determined	Correlation Coefficient	.190	-.073	1.000
		Sig. (2-tailed)	.182	.612	.
		N	51	51	51

Chi Squared (exact) (Differences across groups)

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Question 3: thinking * Pregnancy Resolution Decision	51	100.0%	0	.0%	51	100.0%
Question 15: plans * Pregnancy Resolution Decision	50	98.0%	1	2.0%	51	100.0%

Question 3: thinking * Pregnancy Resolution Decision

Crosstab

Count

		Pregnancy Resolution Decision			Total
		Termination of Pregnancy	Continuing Pregnancy	Not pregnant	
Question 3: thinking	Not at all	1	1	3	5
	A bit	7	3	9	19
	Quite a lot	9	3	7	19
	Very much	2	2	4	8
Total		19	9	23	51

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	2.177(a)	6	.903	.926		
Likelihood Ratio	2.228	6	.898	.935		
Fisher's Exact Test	2.602			.900		
Linear-by-Linear Association	.173(b)	1	.677	.726	.373	.064
N of Valid Cases	51					

a 8 cells (66.7%) have expected count less than 5. The minimum expected count is .88.

b The standardized statistic is -.416.

Question 15: plans * Pregnancy Resolution Decision

Crosstab

Count

		Pregnancy Resolution Decision			
		Termination of Pregnancy	Continuing Pregnancy	Not pregnant	Total
Question 15: plans	Not at all	3	1	4	8
	A bit	7	3	13	23
	Quite a lot	8	5	4	17
	Very much	1	0	1	2
Total		19	9	22	50

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	5.349(a)	6	.500	.527		
Likelihood Ratio	5.813	6	.444	.578		
Fisher's Exact Test	5.553			.460		
Linear-by-Linear Association	1.354(b)	1	.245	.272	.146	.041
N of Valid Cases	50					

a 8 cells (66.7%) have expected count less than 5. The minimum expected count is .36.
b The standardized statistic is -1.164.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Question 8: likelihood * Pregnancy Resolution Decision	51	100.0%	0	.0%	51	100.0%
Question 18: feelings re. future * Pregnancy Resolution Decision	51	100.0%	0	.0%	51	100.0%

Question 8: likelihood * Pregnancy Resolution Decision

Crosstab

Count

		Pregnancy Resolution Decision			
		Termination of Pregnancy	Continuing Pregnancy	Not pregnant	Total
Question 8: likelihood	Not at all likely	0	0	1	1
	A bit likely	2	4	9	15
	Likely	17	5	8	30
	Very likely	0	0	5	5
Total		19	9	23	51

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	16.349(a)	6	.012	.006		
Likelihood Ratio	19.169	6	.004	.003		
Fisher's Exact Test	15.302			.004		
Linear-by-Linear Association	.530(b)	1	.467	.482	.274	.073
N of Valid Cases	51					

a 7 cells (58.3%) have expected count less than 5. The minimum expected count is .18.
b The standardized statistic is -.728.

Question 18: feelings re. future * Pregnancy Resolution Decision

Crosstab

Count

		Pregnancy Resolution Decision			Total
		Termination of Pregnancy	Continuing Pregnancy	Not pregnant	
Question 18: feelings re. future	straight face	2	0	5	7
	happy face	8	4	6	18
	very happy face	9	5	12	26
Total		19	9	23	51

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	3.561(a)	4	.469	.492		
Likelihood Ratio	4.669	4	.323	.388		
Fisher's Exact Test	3.156			.554		
Linear-by-Linear Association	.103(b)	1	.749	.831	.417	.081
N of Valid Cases	51					

a 5 cells (55.6%) have expected count less than 5. The minimum expected count is 1.24.
b The standardized statistic is -.321.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Question 6: importance * Pregnancy Resolution Decision	51	100.0%	0	.0%	51	100.0%
Question 7: effort * Pregnancy Resolution Decision	51	100.0%	0	.0%	51	100.0%

Question 6: importance * Pregnancy Resolution Decision

Crosstab

Count

		Pregnancy Resolution Decision			Total
		Termination of Pregnancy	Continuing Pregnancy	Not pregnant	
Question 6: importance	A bit important	2	1	3	6
	Important	6	4	13	23
	Very important	11	4	7	22
Total		19	9	23	51

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	3.320(a)	4	.506	.524		
Likelihood Ratio	3.366	4	.499	.579		
Fisher's Exact Test	3.520			.468		
Linear-by-Linear Association	2.042(b)	1	.153	.172	.095	.034
N of Valid Cases	51					

a 5 cells (55.6%) have expected count less than 5. The minimum expected count is 1.06.
b The standardized statistic is -1.429.

Question 7: effort * Pregnancy Resolution Decision

Crosstab

Count

		Pregnancy Resolution Decision			Total
		Termination of Pregnancy	Continuing Pregnancy	Not pregnant	
Question 7: effort	A bit	1	0	3	4
	Quite a lot	10	6	5	21
	Very much	8	3	15	26
Total		19	9	23	51

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	7.554(a)	4	.109	.106		
Likelihood Ratio	8.337	4	.080	.118		
Fisher's Exact Test	6.971			.106		
Linear-by-Linear Association	.627(b)	1	.428	.472	.253	.070
N of Valid Cases	51					

a 5 cells (55.6%) have expected count less than 5. The minimum expected count is .71.
b The standardized statistic is .792.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Question 9: luck * Pregnancy Resolution Decision	51	100.0%	0	.0%	51	100.0%
Question 10: other people * Pregnancy Resolution Decision	51	100.0%	0	.0%	51	100.0%
Question 11: good * Pregnancy Resolution Decision	51	100.0%	0	.0%	51	100.0%
Question 12: try hard * Pregnancy Resolution Decision	51	100.0%	0	.0%	51	100.0%

Question 9: luck * Pregnancy Resolution Decision

Crosstab

Count

		Pregnancy Resolution Decision			Total
		Termination of Pregnancy	Continuing Pregnancy	Not pregnant	
Question 9: luck	Not at all	6	4	6	16
	A bit	10	5	10	25
	Quite a lot	3	0	4	7
	Very much	0	0	3	3
Total		19	9	23	51

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	6.140(a)	6	.408	.429		
Likelihood Ratio	8.438	6	.208	.296		
Fisher's Exact Test	4.846			.565		
Linear-by-Linear Association	1.803(b)	1	.179	.197	.107	.031
N of Valid Cases	51					

a 8 cells (66.7%) have expected count less than 5. The minimum expected count is .53.

b The standardized statistic is 1.343.

Question 10: other people * Pregnancy Resolution Decision

Crosstab

Count

		Pregnancy Resolution Decision			Total
		Termination of Pregnancy	Continuing Pregnancy	Not pregnant	
Question 10: other people	Not at all	2	3	5	10
	A bit	11	3	8	22
	Quite a lot	6	2	7	15
	Very much	0	1	3	4
Total		19	9	23	51

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	5.852(a)	6	.440	.464		
Likelihood Ratio	7.169	6	.306	.410		
Fisher's Exact Test	5.953			.416		
Linear-by-Linear Association	.283(b)	1	.595	.659	.331	.062
N of Valid Cases	51					

a 8 cells (66.7%) have expected count less than 5. The minimum expected count is .71.
b The standardized statistic is .532.

Question 11: good * Pregnancy Resolution Decision

Crosstab

Count

		Pregnancy Resolution Decision			Total
		Termination of Pregnancy	Continuing Pregnancy	Not pregnant	
Question 11: good	Not at all	0	1	0	1
	A bit	3	3	3	9
	Quite a lot	15	4	11	30
	Very much	1	1	9	11
Total		19	9	23	51

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	14.419(a)	6	.025	.015		
Likelihood Ratio	13.410	6	.037	.038		
Fisher's Exact Test	12.310			.024		
Linear-by-Linear Association	3.198(b)	1	.074	.093	.047	.019
N of Valid Cases	51					

a 9 cells (75.0%) have expected count less than 5. The minimum expected count is .18.
b The standardized statistic is 1.788.

Question 12: try hard * Pregnancy Resolution Decision

Crosstab

Count

		Pregnancy Resolution Decision			
		Termination of Pregnancy	Continuing Pregnancy	Not pregnant	Total
Question 12: try hard	A bit	1	0	2	3
	Quite a lot	5	6	3	14
	Very much	13	3	18	34
Total		19	9	23	51

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	9.614(a)	4	.047	.035		
Likelihood Ratio	9.390	4	.052	.069		
Fisher's Exact Test	8.398			.041		
Linear-by-Linear Association	.163(b)	1	.687	.705	.392	.093
N of Valid Cases	51					

a 4 cells (44.4%) have expected count less than 5. The minimum expected count is .53.
b The standardized statistic is .403.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Question 4: different futures * Pregnancy Resolution Decision	51	100.0%	0	.0%	51	100.0%
Question 13: information * Pregnancy Resolution Decision	50	98.0%	1	2.0%	51	100.0%
Question 14: right * Pregnancy Resolution Decision	50	98.0%	1	2.0%	51	100.0%

Question 4: different futures * Pregnancy Resolution Decision

Crosstab

Count

		Pregnancy Resolution Decision			
		Termination of Pregnancy	Continuing Pregnancy	Not pregnant	Total
Question 4: different futures	Not at all	4	1	1	6
	A bit	10	5	14	29
	Quite a lot	3	3	7	13
	Very much	2	0	1	3
Total		19	9	23	51

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	5.057(a)	6	.537	.562		
Likelihood Ratio	5.619	6	.467	.606		
Fisher's Exact Test	4.834			.580		
Linear-by-Linear Association	.686(b)	1	.407	.471	.237	.059
N of Valid Cases	51					

a 8 cells (66.7%) have expected count less than 5. The minimum expected count is .53.
b The standardized statistic is .828.

Question 13: information * Pregnancy Resolution Decision

Crosstab

Count

		Pregnancy Resolution Decision			
		Termination of Pregnancy	Continuing Pregnancy	Not pregnant	Total
Question 13: information	Not at all	1	0	7	8
	A bit	8	2	9	19
	Quite a lot	9	6	6	21
	Very much	1	1	0	2
Total		19	9	22	50

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	11.636(a)	6	.071	.065		
Likelihood Ratio	13.344	6	.038	.051		
Fisher's Exact Test	10.648			.059		
Linear-by-Linear Association	5.555(b)	1	.018	.018	.011	.005
N of Valid Cases	50					

a 8 cells (66.7%) have expected count less than 5. The minimum expected count is .36.
b The standardized statistic is -2.357.

Question 14: right * Pregnancy Resolution Decision

Crosstab

Count

		Pregnancy Resolution Decision			
		Termination of Pregnancy	Continuing Pregnancy	Not pregnant	Total
Question 14: right	Not at all	0	3	4	7
	A bit	8	1	13	22
	Quite a lot	11	4	4	19
	Very much	0	1	1	2
Total		19	9	22	50

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	14.970(a)	6	.020	.016		
Likelihood Ratio	18.424	6	.005	.007		
Fisher's Exact Test	15.599			.005		
Linear-by-Linear Association	4.123(b)	1	.042	.052	.026	.011
N of Valid Cases	50					

a 8 cells (66.7%) have expected count less than 5. The minimum expected count is .36.
b The standardized statistic is -2.031.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Question 5: certainty * Pregnancy Resolution Decision	51	100.0%	0	.0%	51	100.0%
Question 16: done * Pregnancy Resolution Decision	51	100.0%	0	.0%	51	100.0%
Question 17: determined * Pregnancy Resolution Decision	51	100.0%	0	.0%	51	100.0%

Question 5: certainty * Pregnancy Resolution Decision

Crosstab

Count

		Pregnancy Resolution Decision			
		Termination of Pregnancy	Continuing Pregnancy	Not pregnant	Total
Question 5: certainty	Uncertain	1	0	4	5
	A bit uncertain	1	1	6	8
	Quite certain	10	5	10	25
	Certain	7	3	3	13
Total		19	9	23	51

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	8.503(a)	6	.203	.210		
Likelihood Ratio	9.592	6	.143	.219		
Fisher's Exact Test	7.597			.238		
Linear-by-Linear Association	6.318(b)	1	.012	.011	.007	.003
N of Valid Cases	51					

a 9 cells (75.0%) have expected count less than 5. The minimum expected count is .88.
b The standardized statistic is -2.514.

Question 16: done * Pregnancy Resolution Decision

Crosstab

Count

		Pregnancy Resolution Decision			Total
		Termination of Pregnancy	Continuing Pregnancy	Not pregnant	
Question 16: done	Nothing	0	1	4	5
	A bit	14	4	13	31
	Quite a lot	4	1	6	11
	Very much	1	3	0	4
Total		19	9	23	51

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	14.311(a)	6	.026	.022		
Likelihood Ratio	14.475	6	.025	.041		
Fisher's Exact Test	11.235			.040		
Linear-by-Linear Association	1.107(b)	1	.293	.308	.174	.048
N of Valid Cases	51					

a 9 cells (75.0%) have expected count less than 5. The minimum expected count is .71.
b The standardized statistic is -1.052.

Question 17: determined * Pregnancy Resolution Decision

Crosstab

Count

		Pregnancy Resolution Decision			Total
		Termination of Pregnancy	Continuing Pregnancy	Not pregnant	
Question 17: determined	Not at all	0	0	1	1
	A bit	0	1	0	1
	Quite a lot	9	5	13	27
	Very much	10	3	9	22
Total		19	9	23	51

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	6.746(a)	6	.345	.375		
Likelihood Ratio	5.920	6	.432	.497		
Fisher's Exact Test	5.562			.493		
Linear-by-Linear Association	1.214(b)	1	.271	.335	.168	.056
N of Valid Cases	51					

a 8 cells (66.7%) have expected count less than 5. The minimum expected count is .18.
b The standardized statistic is -1.102.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Feelings over the last week * Pregnancy Resolution Decision	51	100.0%	0	.0%	51	100.0%

Feelings over the last week * Pregnancy Resolution Decision Crosstabulation

Count

		Pregnancy Resolution Decision			Total
		Termination of Pregnancy	Continuing Pregnancy	Not pregnant	
Feelings over the last week	sad face	4	2	0	6
	straight face	10	2	7	19
	happy face	5	3	8	16
	very happy face	0	2	8	10
Total		19	9	23	51

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	13.684(a)	6	.033	.030		
Likelihood Ratio	19.141	6	.004	.007		
Fisher's Exact Test	15.051			.010		
Linear-by-Linear Association	11.528(b)	1	.001	.000	.000	.000
N of Valid Cases	51					

a 8 cells (66.7%) have expected count less than 5. The minimum expected count is 1.06.
b The standardized statistic is 3.395.

Spearman's (Nonparametric) correlations (items found to be sig or approaching and age)

Correlations

			Age	Question 8: likelihood
Spearman's rho	Age	Correlation Coefficient	1.000	.077
		Sig. (2-tailed)	.	.595
		N	50	50
	Question 8: likelihood	Correlation Coefficient	.077	1.000
		Sig. (2-tailed)	.595	.
		N	50	51

Correlations

			Age	Question 11: good
Spearman's rho	Age	Correlation Coefficient	1.000	-.046
		Sig. (2-tailed)	.	.753
		N	50	50
	Question 11: good	Correlation Coefficient	-.046	1.000
		Sig. (2-tailed)	.753	.
		N	50	51

Correlations

			Age	Question 12: try hard
Spearman's rho	Age	Correlation Coefficient	1.000	-.102
		Sig. (2-tailed)	.	.480
		N	50	50
	Question 12: try hard	Correlation Coefficient	-.102	1.000
		Sig. (2-tailed)	.480	.
		N	50	51

Correlations

			Age	Question 14: right
Spearman's rho	Age	Correlation Coefficient	1.000	.160
		Sig. (2-tailed)	.	.273
		N	50	49
	Question 14: right	Correlation Coefficient	.160	1.000
		Sig. (2-tailed)	.273	.
		N	49	50

Correlations

			Age	Question 16: done
Spearman's rho	Age	Correlation Coefficient	1.000	.214
		Sig. (2-tailed)	.	.135
		N	50	50
	Question 16: done	Correlation Coefficient	.214	1.000
		Sig. (2-tailed)	.135	.
		N	50	51

Correlations

			Feelings over the last week	Age
Spearman's rho	Feelings over the last week	Correlation Coefficient	1.000	-.251
		Sig. (2-tailed)	.	.079
		N	51	50
	Age	Correlation Coefficient	-.251	1.000
		Sig. (2-tailed)	.079	.
		N	50	50

Correlations

			Age	Question 13: information
Spearman's rho	Age	Correlation Coefficient	1.000	.203
		Sig. (2-tailed)	.	.161
		N	50	49
	Question 13: information	Correlation Coefficient	.203	1.000
		Sig. (2-tailed)	.161	.
		N	49	50

Chi Squared (exact) (components of the Future Orientation Model)

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Cognitive Representation * Pregnancy Resolution Decision	50	98.0%	1	2.0%	51	100.0%

Cognitive Representation * Pregnancy Resolution Decision Crosstabulation

Count

		Pregnancy Resolution Decision			
		Termination of Pregnancy	Continuing Pregnancy	Not pregnant	Total
Cognitive Representation	2.00	0	0	2	2
	3.00	4	2	3	9
	4.00	2	1	5	8
	5.00	6	2	7	15
	6.00	5	2	3	10
	7.00	1	2	2	5
	8.00	1	0	0	1
Total		19	9	22	50

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	8.567(a)	12	.739	.802		
Likelihood Ratio	9.391	12	.669	.833		
Fisher's Exact Test	8.144			.847		
Linear-by-Linear Association	1.081(b)	1	.298	.327	.164	.026
N of Valid Cases	50					

a 19 cells (90.5%) have expected count less than 5. The minimum expected count is .18.

b The standardized statistic is -1.040.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Motivational Expectance * Pregnancy Resolution Decision	51	100.0%	0	.0%	51	100.0%

Motivational Expectance * Pregnancy Resolution Decision Crosstabulation

Count

		Pregnancy Resolution Decision			
		Termination of Pregnancy	Continuing Pregnancy	Not pregnant	Total
Motivational Expectance	4.00	0	0	1	1
	5.00	0	0	2	2
	6.00	4	3	6	13
	7.00	6	2	3	11
	8.00	9	4	8	21
	9.00	0	0	3	3
Total		19	9	23	51

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	9.760(a)	10	.462	.490		
Likelihood Ratio	12.022	10	.284	.401		
Fisher's Exact Test	8.327			.608		
Linear-by-Linear Association	.400(b)	1	.527	.537	.290	.045
N of Valid Cases	51					

a 15 cells (83.3%) have expected count less than 5. The minimum expected count is .18.
b The standardized statistic is -.633.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Motivational Value * Pregnancy Resolution Decision	51	100.0%	0	.0%	51	100.0%

Motivational Value * Pregnancy Resolution Decision Crosstabulation

Count

		Pregnancy Resolution Decision			
		Termination of Pregnancy	Continuing Pregnancy	Not pregnant	Total
Motivational Value	4.00	0	0	1	1
	5.00	3	1	3	7
	6.00	3	3	5	11
	7.00	7	3	7	17
	8.00	6	2	7	15
Total		19	9	23	51

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	2.526(a)	8	.961	.990		
Likelihood Ratio	2.862	8	.943	.990		
Fisher's Exact Test	3.111			.991		
Linear-by-Linear Association	.179(b)	1	.673	.726	.365	.051
N of Valid Cases	51					

a 11 cells (73.3%) have expected count less than 5. The minimum expected count is .18.
b The standardized statistic is -.422.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Motivational Control (external) * Pregnancy Resolution Decision	51	100.0%	0	.0%	51	100.0%

Motivational Control (external) * Pregnancy Resolution Decision Crosstabulation

Count

		Pregnancy Resolution Decision			Total
		Termination of Pregnancy	Continuing Pregnancy	Not pregnant	
Motivational Control (external)	2.00	1	1	3	5
	3.00	5	4	4	13
	4.00	6	2	6	14
	5.00	6	1	4	11
	6.00	1	1	1	3
	7.00	0	0	4	4
	8.00	0	0	1	1
Total		19	9	23	51

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	10.885(a)	12	.539	.582		
Likelihood Ratio	12.586	12	.400	.577		
Fisher's Exact Test	10.288			.591		
Linear-by-Linear Association	1.180(b)	1	.277	.292	.153	.024
N of Valid Cases	51					

a 18 cells (85.7%) have expected count less than 5. The minimum expected count is .18.

b The standardized statistic is 1.086.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Motivational Control (internal) * Pregnancy Resolution Decision	51	100.0%	0	.0%	51	100.0%

Motivational Control (internal) * Pregnancy Resolution Decision Crosstabulation

Count

		Pregnancy Resolution Decision			
		Termination of Pregnancy	Continuing Pregnancy	Not pregnant	Total
Motivational Control (internal)	4.00	0	1	1	2
	5.00	4	3	2	9
	6.00	2	1	2	5
	7.00	12	4	10	26
	8.00	1	0	8	9
Total		19	9	23	51

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	12.369(a)	8	.135	.128		
Likelihood Ratio	14.037	8	.081	.130		
Fisher's Exact Test	11.801			.093		
Linear-by-Linear Association	1.826(b)	1	.177	.183	.102	.023
N of Valid Cases	51					

a 13 cells (86.7%) have expected count less than 5. The minimum expected count is .35.

b The standardized statistic is 1.351.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Behavioural Exploration * Pregnancy Resolution Decision	50	98.0%	1	2.0%	51	100.0%

Behavioural Exploration * Pregnancy Resolution Decision Crosstabulation

Count

		Pregnancy Resolution Decision			
		Termination of Pregnancy	Continuing Pregnancy	Not pregnant	Total
Behavioural Exploration	4.00	0	1	2	3
	5.00	4	0	6	10
	6.00	3	2	5	10
	7.00	4	1	2	7
	8.00	3	1	5	9
	9.00	2	4	1	7
	10.00	3	0	0	3
	11.00	0	0	1	1
Total		19	9	22	50

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	19.911(a)	14	.133	.116		
Likelihood Ratio	22.262	14	.073	.140		
Fisher's Exact Test	16.948			.162		
Linear-by-Linear Association	2.166(b)	1	.141	.150	.077	.012
N of Valid Cases	50					

a 24 cells (100.0%) have expected count less than 5. The minimum expected count is .18.
b The standardized statistic is -1.472.

Appendix 10. Qualitative Analysis

Qualitative Analysis

Pregnancy Resolution

	ToP Example Quotes	Number (out of 19)	% of ToP group	AN Example Quotes	Number (out of 9)	% of AN group
Being a teenager						
1) Stage of Life	What is the point in having a baby when you have your whole life in front of you? (TOP018, 15yrs) I am only 16, I am still a child myself, I couldn't handle the responsibility. (TOP001, 16yrs) I am too young (TOP008, 18yrs)	15 (all too young)	79.0	I'd rather go through it now I'm older (AN025, 17yrs)	1 (considers herself to be older)	11.1
2) Doing what Teenagers do	I wouldn't be able to do things that others my age are doing e.g. parties (TOP016, 16yrs) Time for me with my friends and going out. Money for myself for those things, without having to spend it on a baby. I sound real selfish don't I? (TOP021, 18yrs)	2 (both wanted to do things that teenagers do)	10.5	-	0	0
The future						
3) Education Plans	I am going to Uni in September, not in Hull, I am going away… I couldn't go through with the pregnancy, I have exams. (TOP002, 18yrs) I still want to go to college cos I am doing graphic design, and it will take a few years (TOP022, 17yrs)	7 (all want to continue education)	36.8	What would happen in the future? Whether I would still be able to go to school. I want to do my GCSEs (AN017, 15yrs)	2 (want to continue education)	22.2
4) Careers Plans	I am working towards a career as a solicitor (TOP009, 18yrs). I am going into the forces (TOP016, 16yrs). I've just started out in my career, and building it up. I'm a party planner (TOP019, 18yrs)	7 (all want a career)	36.8	I've always wanted a job (AN026, 17yrs)	1 (wanted a job)	11.1
5) Family Plans	I am not the type of person who wants a family now, it's in my ideas for the future. (TOP002, 18yrs) It wouldn't be how you think of it, like when you imagine it in the future you think of being all together and being happy, but it wouldn't be nothing like that. (TOP001, 16yrs)	5 (For 4 the baby is clearly not in line with their plans, 1 simply states she wants a baby)	26.3	If it wasn't going to happen now it would have done in the future anyway (AN005, 17yrs)	1 (planned becoming a mother in the future)	11.1
6) Willingness to give up plans	I am doing really well on the course at the minute, and I don't want to give it up… If I carried on with this pregnancy I would have to give everything up. (TOP001, 16yrs) It would destroy my life at the moment, and take me out of everything I want. (TOP010, 17yrs) A baby would effect that as I would not be able to go	8 (all unwilling to give up plans)	42.1	I wouldn't be able to at the school I'm at now. I don't know what I will do if I am not able to go back to carry on at school. (AN017, 15yrs) I'll wait a bit longer for a full time job. (AN026, 17yrs)	2 (both willing to give up plans)	22.2

	to school (TOP018, 15yrs) I want to do a lot with my life and I really can't if I have a baby. (TOP022, 17yrs)					
Resources						
7) Own resources	I wouldn't be able to do it on my own. (TOP028, 18yrs) I couldn't handle all that at once (TOP012, 17yrs) My son is only 9 months. I can't cope with another… I give my son all my attention, all the time. (TOP015, 18yrs)	7 (only 1 thought she might be good at it, others could not cope)	36.8	Somebody like me who can give them a good start (AN005, 17yrs). Difficult with 2 (children), with a 2yr old already, keeping 2 children entertained (AN026, 17yrs) I were thinking if I'd be able to cope? (AN017, 15yrs)	3 (2 said it would be hard to cope)	33.3
8) Financial resources	I need my money just to pay for me. I would need to get another job. I wouldn't be able to afford it. (TOP023, 18yrs). I only receive £30 a week EMA (education maintenance allowance) at the moment, I can't even bring myself up on that, so there's no way I could bring a baby up by myself. (TOP001, 16yrs)	9 (all 9 could not afford it)	47.4	Conifer House told me about money I'm entitled to, so I won't struggle. (AN020, 17yrs) Got money behind me. (AN025, 17yrs) Benefits. I am at college and only on £30 pound a week. (AN004, 17yrs)	6 (3 had enough money, 3 thought they might not)	66.6
9) Support Resources	All my family have full time jobs. They wouldn't be able to support me. (TOP023, 18yrs) I am not with the dad. It would be hard, I'd have less support. (TOP008, 18yrs)	4 (All 4 would not have enough support, 3 of these due to the father's absence)	21.1	You should buy your own stuff for the baine and not rely on others (AN025, 17yrs) I have support of friends, family, and hospital midwifes… I will try and get support off me mam. (AN004, 17yrs)	4 (1 said does not want to rely on others, 3 said will get support)	44.4
10) Housing	I have moved out so I have no accommodation. (TOP011, 18yrs) It's not the best situation, a 2 bed flat. (TOP019, 18yrs)	2 (both housing difficulties)	10.5	We've got a house (AN005, 17yrs) And housing, as me and my bloke are saying at his brothers at the moment… cos the house we were living at, we had to move out cos all the windows got smashed, every single one (AN004, 17yrs)	2 (1 has a house, 1 does not)	22.2
Attitudes						
11) What others think	The biggest issue was my boyfriend, who I'm still with, is keen on the idea (having a baby)… mortified they look at you…scared to tell my parents… stared at "she's had an abortion"… Boyfriends mum "What are you gonna do? Struggle, not have any money". (TOP012, 17yrs) (When asked what she thought about when deciding:) What my family would think, what people would think? (TOP013, 15yrs) Scared, especially about you (Grandma) finding out. (TOP027, 15yrs) My mum agreed. She doesn't agree with abortion, but she does in this situation, it's the best thing. (TOP015, 18yrs).	10 (2 mixed reactions to pregnancy and resolution, including both fathers of the babies wanting them to keep it, 5 expected negative reaction to pregnancy, 3 family support for TOP)	52.6	Of what my parents would say. Scared in case they went mad. Worried if they wouldn't stand by me. (AN006, 15yrs)	1 (expected negative reaction to pregnancy)	11.1

12) Own Attitude to ToP	I would like to have put it up to adopt, it's nicer. But I couldn't go through with the pregnancy (TOP002, 18yrs) It's not a nice thing to do but I couldn't help it, I have to have it done, I couldn't cope. (TOP015, 18yrs)	2 (both say TOP is not a nice thing to do)	10.5	I am against abortion (AN003, 18yrs) I'd never get rid of the baby, it will affect me if I want to get pregnant. I don't think it is right to get rid of it. (AN017, 15yrs) I don't believe in abortion. It was since I watched this programme on it the other night. I think if they brought out a kinder abortion more other girls would go for it. But it all seemed pretty awful. (AN026, 17yrs)	4 (Against TOP)	44.4
Impact on Others						
13) Family	I didn't want to hurt other people either. My family have all got jobs and stuff so it would ruin everything… (TOP028, 18yrs) (re. family finding out) …would probably fall out with them. (TOP021, 18yrs) Mum and me might be closer (if she had the baby) (TOP023, 18yrs)	4 (3 thought birth would have a negative impact, and 1 considered a possible positive impact)	21.1	-	0	0
14) Boyfriend	And it would probably come between me and my family and boyfriend with all the stress caused (TOP001, 16yrs) …and my ex, he knew about it but he would be real upset if I kept another lads baby. (TOP028, 18yrs)	4 (all 4 mentioned a possible negative impact of birth on partners or ex-partners)	21.1	-	0	0
15) Current Children	I thought about my little girl. I don't want to share my love with another baby. It's not fair on my other child… She needs all my attention, as she's 10 months old. (TOP014, 18yrs)	3 (All of those with children considered there would be a negative impact of birth on them)	15.8	Difficult with 2… not leaving one out. (AN026, 17yrs)	1 (Only 1 with a child considered a possible negative impact of birth on them)	11.1
16) Unborn Baby	I am not with the dad… it would be brought up without a dad. It's better to be brought up into a family. (TOP021, 18yrs) It wouldn't even be fair on the child, because you can't support it. (TOP010, 17yrs)	5 (All 5 suggest negatives of birth for the unborn child)	26.3	(She thought about) Areas, as I don't want my baine to have a bad upbringing. (AN004, 17yrs) I don't see why I shouldn't let them have that chance. (AN005, 17yrs)	3 (2 considered possible negative impact on the unborn child, and 1 suggested positive impact)	33.3
Experiences of Pregnancy						
17) Own Experience	I am determined to get rid of it. I had loads of problems with pregnancy before, when I was paralysed and my heartbeat started to drop… Last time I was pregnant my body was telling me I could cope. This time it didn't sink in. My body was saying I am not ready. (TOP014, 18yrs) I couldn't go through night feeds and all that again… I hated being pregnant (TOP015, 18yrs)	2 (both biased towards TOP as they did not want to go through pregnancy again)	10.5	I were too young before, two year ago I had an abortion (AN025)	1	11.1

18) Others Experience	Other people couldn't have kids. I would like to have put it up to adopt (TOP002, 18yrs) My sisters had babies at my age and at 20. They really can't do anything with their lives unless they've got a babysitter. They said they love them but if they could go back they would of. They are not free to do anything anymore. (TOP022, 17yrs)	2 (1 biased towards birth, and 1 towards TOP)	10.5	My sister was pregnant and had a baby and she got support off my mam and she has had a real good upbringing (AN004, 17yrs) My mam had quite a lot of miscarriages and still births (AN005, 17yrs)	2 (Both comments biased towards birth)	22.2
Decision Process						
19) Ease of Decision	I was shocked at first but it was an easy decision to make (TOP009, 18yrs) My head's all over, don't know what to do (TOP027, 15yrs)	6 (5 said the decision was an easy on to make, but 1 suggested it was hard)	31.6	Wasn't an easy decision to make (did not seem to want to expand on this) (AN017, 15yrs)	2 (Both found it hard)	22.2
20) Knowing Immediately	I kinda thought it's not a choice, it was more that it was my only option… I have always known that having a child wasn't an option. I have always said that if I got pregnant this early I would have it aborted. (TOP010, 17yrs) I knew more or less straight away (TOP011, 18yrs)	7 (All 7 knew quickly they would choose TOP)	36.8	I were just going to keep it. (AN003, 18yrs) We knew we weren't gonna get rid of it. Don't know why, just knew. I didn't want to get rid of it. (AN007, 15yrs)	3 (all 3 knew quickly and did not seem to consider TOP)	33.3
21) Having an approach to help decide	I had friends round me and they helped me through it, which was good. Being in that panic helps you make that decision because it makes everything clear. (TOP010, 17yrs) I am in a relationship, and we talked about it before, and talked about what would happen… It was easy, as I made up my mind beforehand. (AN022, 17yrs) Just me who decided (TOP027, 15yrs) I wrote down the good and the bad things about having an abortion. There were more good things than bad. (TOP014, 18yrs)	8 (5 talked to others e.g. family, the father, friends, ex, and sister, 1 decided themselves, and 2 considered pros and cons.)	42.1	Talked about it together (with partner) (AN006, 15yrs) It was hard. I talked to family and Conifer House (Sexual Health Service) to help me decide. (AN020, 17yrs)	2 (both talked to others)	22.2

Like Future to be

	ToP Number (out of 19)	% of ToP group	AN Number (out of 9)	% of AN group	NP Number (out of 23)	% of NP group
Education	11	57.9	5	55.5	11	47.9
Work/ Career	17	89.5	5	55.5	20	87.0
Own Family	15	79.0	5	55.5	21	91.3
Self Concerns	7	36.8	4	44.4	12	52.2
Others	3	15.8	4	44.4	8	34.8
Living Arrangements	10	52.7	5	55.5	11	47.8
Finances	10	52.7	2	22.2	11	47.8
Approach to the future	5	26.3	2	22.2	1	4.4
Context	1	5.3	1	11.1	2	8.7

Dislike the future to be

	ToP Number (out of 19)	% of ToP group	AN Number (out of 9)	% of AN group	NP Number (out of 23)	% of NP group
Education	3	15.8	1	11.1	2	8.7
Work/ Career	11	57.9	3	33.3	13	56.5
Own Family	7	36.8	6	66.6	13	56.5
Self Concerns	8	42.1	0	0	8	34.8
Others	6	31.6	0	0	8	34.8
Living Arrangements	6	31.6	4	44.4	3	13.0
Finances	7	36.8	4	44.4	11	47.8
Approach to the future	1	5.3	0	0	0	0
Context	2	10.5	2	22.2	2	8.7

Different Futures

	ToP Number (out of 19)	% of ToP group	AN Number (out of 9)	% of AN group	NP Number (out of 23)	% of NP group
Education	4	21.1	0	0	3	13.0
Work/ Career	9	47.4	1	11.1	11	47.8
Own Family	2	10.5	2	22.2	7	30.4
Self Concerns	1	5.3	0	0	3	13.0
Others	3	15.8	0	0	1	4.4
Living Arrangements	2	10.5	3	33.3	3	13.0
Finances	1	5.3	0	0	2	8.7
Approach to future	8	42.1	2	22.2	2	8.7
Context	0	0	0	0	0	0
How many gave more than 1 idea	14	73.7	5	55.5	13	56.5

Affect

	ToP Number (out of 19)	% of ToP group	AN Number (out of 9)	% of AN group	NP Number (out of 23)	% of NP group
External	12	63.2	7	77.7	9	39.1
Internal	19	100	7	77.7	16	69.6
Non-Specific	4	21.1	4	44.4	12	52.2

Information

	ToP Number (out of 19)	% of ToP group	AN Number (out of 9)	% of AN group	NP Number (out of 23)	% of NP group
Source						
Education	9	47.4	3	33.3	5	21.7
Services/ Agencies	3	15.8	4	44.4	3	13.0
Career Professionals	7	36.8	0	0	0	0
Others	3	15.8	2	22.2	4	17.4
Research Material	10	52.7	4	44.4	9	39.1
About						
Education	9	47.4	4	44.4	11	47.8
Work/Career	13	68.4	0	0	4	17.4
Living Situation	2	10.5	3	33.3	0	0
Family Matters (incl. Pregnancy)	1	5.3	4	44.4	0	0
Others (incl support)	1	5.3	1	11.1	0	0
Finances	1	5.3	2	22.2	0	0
Self-concerns	0	0	0	0	0	0
Helpfulness						
Helpful	14	73.7	4	44.4	5	21.7
Not Helpful	1	5.3	0	0	1	4.4

Ideas right for them?

	ToP Number (out of 19)	% of ToP group	AN Number (out of 9)	% of AN group	NP Number (out of 23)	% of NP group
Source						
Education	3	15.8	0	0	1	4.4
Services/ Agencies	0	0	0	0	1	4.4
Career Professionals	5	26.3	0	0	2	8.7
Others	3	15.8	6	66.6	6	26.1
Research Material	0	0	0	0	1	4.4
Confirmation of ideas						
Confirmation	8	42.1	1	11.1	10	43.5
Disconfirmation/ highlighting negatives	3	15.8	1	11.1	7	30.4

Plans

	ToP Number (out of 19)	% of ToP group	AN Number (out of 9)	% of AN group	NP Number (Our of 23)	% of NP group
Education	8	42.1	3	33.3	14	60.9
Work/ Career	14	73.7	4	44.4	10	43.5
Own Family	11	57.9	3	33.3	8	34.8
Self Concerns	8	42.1	1	11.1	5	21.7
Others	2	10.5	1	11.1	2	8.7
Living Arrangements	9	47.4	4	44.4	5	21.7
Finances	7	36.8	4	44.4	5	21.7
Approach to the future	12	63.2	7	77.7	0	0
Context	1	5.3	0	0	0	0

Done

	ToP Number (out of 19)	% of ToP group	AN Number (out of 9)	% of AN group	NP Number (Out of 23)	% of NP group
Education	13	68.4	4	44.4	11	47.8
Work/ Career	10	52.6	3	33.3	7	30.4
Own Family	1	5.3	1	11.1	1	4.4
Self Concerns	3	15.8	1	11.1	3	13.0
Others	0	0	0	0	1	4.4
Living Arrangements	0	0	3	33.3	0	0
Finances	2	10.5	2	22.2	1	4.4
Approach to the future	0	0	2	22.2	5	21.7
Context	0	0	0	0	0	0

Feelings

	ToP Number (out of 19)	% of ToP group	AN Number (out of 9)	% of AN group	NP Number (Out of 23)	% of NP group
Uncertain	6	31.6	2	22.2	4	17.4
Worry	8	42.1	1	11.1	11	47.8
Positive	16	84.2	8	88.8	20	87.0
Negative	3	15.8	3	33.3	0	0
Determined	3	15.8	0	0	2	8.7

Advice

	ToP Number (out of 19)	% of ToP group	AN Number (out of 9)	% of AN group
Make your own decision	5	26.3	1	11.1
Talk to others	5	26.3	2	22.2
Coping with pressure from others	4	21.1	0	0
Consider the future	3	15.8	1	11.1
Think carefully	2	10.5	1	11.1