



DEMOGRAPHY AND SOCIOLOGY PROGRAM

RESEARCH SCHOOL OF SOCIAL SCIENCES

**PSYCHOSOCIAL ASPECTS OF TEENAGE
PREGNANCY RESOLUTION**

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Working Papers in
Demography

No. 96

July 2005

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Attitudes to motherhood and family have been found to be associated with pregnancy resolution decisions of teenagers. Young women with egalitarian views of women's role in the family are more likely to choose abortion in the event of a teenage pregnancy (Plotnick 1992). In 1984 Betsy Wearing (1984) developed a theory of the ideology of motherhood based on interviews with mothers in suburban Sydney. Forming this ideology are five core tenets:

1. Motherhood is an essential part of womanhood
2. Motherhood is hard but rewarding work
3. A good mother puts her children first
4. Young children need their mothers in constant attendance
5. Mothering is an important but low status job.

Clark (1984: 63–65) found that these tenets were endorsed by teenage mothers in Mt. Druitt, NSW. She further suggested that abortion was 'in direct opposition to the values of the ideology of motherhood' (Clark 1984: 67). Luker (1984) also argued that abortion represents a rejection of the roles of mother and wife. However, she stressed that choosing abortion did not preclude these roles from being found desirable later in life. The attitudes tested in the present study were adapted from the five core tenets espoused by Wearing. In addition, questions were asked about single motherhood and sexual relationships.

For many, the decision to carry a pregnancy to term is perceived as the only choice given their views on abortion. In Australia, attitudes to abortion are positive with the majority of Australians (83%) expressing agreement with a woman's right to choose abortion (Evans and Gray 2005). Using a small sample in Sydney Ray (1984) found that attitudes to abortion are intrinsically linked to religious beliefs, particularly those of Catholicism (Ray 1984).

Perhaps not surprisingly, liberal attitudes to abortion have been found to be associated with the intention to abort in the case of an unplanned teenage pregnancy (Brazzell and Acock 1988) and resolving a premarital teenage pregnancy through abortion (Eisen, et al. 1983). Zabin et al (1993) have studied the influence of attitudes to abortion and contraception on the behaviour of young Black women in Baltimore. They find that attitudes to contraception and abortion at one point in time are associated with future contraceptive or pregnancy resolution behaviour. That is, more positive attitudes to contraception lead to greater use of contraception, and more positive attitudes to abortion lead to an increased chance of terminating a pregnancy (Zabin, et al. 1993). In a survey of 187 pregnant Californian teenagers, Frost and Oslak (1999) found that moral opposition to, or fear of, abortion was associated with the decision to continue a pregnancy.

The effects of self-esteem on pregnancy and pregnancy decisions have been measured by some researchers with conflicting results. In a recent study of the US National Longitudinal Survey of Youth, Hockaday et al. (2000) conclude that self-esteem is significantly lower in teenagers who become pregnant than in those who did not. Studies looking at the self-esteem of pregnant and non-pregnant teenagers have found the evidence tends to suggest little or no difference between

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those who become pregnant and those who do not (Barnett, et al. 1991; Morgan, et al. 1995; Robbins, et al. 1985; Robinson and Frank 1994).

Self-esteem was also found to be unrelated to teenage premarital pregnancy in an analysis which also used data from the US National Longitudinal Survey of Youth (Plotnick 1992). However, Plotnick (1992) found that self-esteem was positively related to resolving a teenage pregnancy through abortion. Zabin's (Zabin, et al. 1989) study of young women in Baltimore found no difference in levels of self-esteem prior to pregnancy between young women who continued and those who terminated their pregnancies.

Aspirations are often mentioned in the literature on teenage pregnancy, however they are rarely measured or analysed. Hockaday et al. (2000) found educational aspirations to be significant predictors of pregnancy among White adolescents in the US National Longitudinal Survey of Youth. Using the same survey, Plotnick (1992) found that higher educational expectations of young women increase the likelihood of abortion in the event of a teenage pregnancy.

As indicated, the associations between psychosocial characteristics and pregnancy resolution are far from conclusive. This is in part due to small sample sizes and different methods of measurement. This paper seeks to redress this gap in our knowledge based on a sample of 1,324 ever-pregnant teenagers in NSW and the ACT.

Data

To explore the relationship between psychosocial characteristics and pregnancy resolution data are drawn from a survey designed to examine the factors associated with terminating or continuing a teenage pregnancy. The survey is a case control study that surveyed 1,324 young women living in New South Wales or the Australian Capital Territory who either:

- were aged under 20 years and 7 months, and had given birth in the year preceding the survey; or
- terminated a pregnancy at participating abortion clinics in New South Wales prior to their 20th birthday.

In this paper the two groups are referred to as the motherhood group and the abortion group indicating the outcome of their pregnancies. The survey was a self-completed mail back survey. Women in the motherhood group were sent the questionnaire via the Department of Social Security, whereas those in the abortion group were presented with the questionnaire when they attended an abortion clinic. The abortion clinics' participation was limited to 3 months. A Survey Hotline was established to assist with completing the survey and to answer questions on use of the data and confidentiality. The survey was designed to examine various aspects of the decision to terminate or continue a teenage pregnancy, beyond the scope of this paper, including comprehensive questions on sexual initiation as well as sexual histories and contraceptive use.

This paper first examines differences in attitudes between those who eventually chose to terminate and those who chose motherhood. Self-esteem and future career and educational aspirations are also examined. The paper concludes by incorporating these psychosocial factors into a multivariate logistic regression model to examine the relationships between psychosocial characteristics, background characteristics and the resolution of teenage pregnancy.

Attitudes to motherhood, contraception and abortion

A range of attitudinal statements was measured.¹ Factor analysis was performed to identify the underlying dimensions measured by the attitudinal statements. The extracted factors measure respondents' attitudes to traditional motherhood roles, single motherhood, the gendered nature of contraception, abortion approval, government benefits and sexual values.

Reliability tests were performed on the six factors. The abortion, contraception and motherhood factors all have alpha scores of over 0.6 and mean inter-item correlations within the acceptable range (Boyle 1991; Briggs and Cheek 1986). The factors measuring attitudes to sexual relationships and government benefits have lower alpha scores as they contain only two items and the size of the alpha is partly a function of the number of items (Green, et al. 1997). The factor describing attitudes to single motherhood was not considered reliable based on these tests.

Once underlying dimensions had been identified, five factor-based scales were constructed to measure these dimensions. These scales were created by summing an individual's responses to the items included in the factor and dividing by the number of items. The variables were then re-scaled to range from 0–10. Where a value was missing for one item in a factor, the missing value was assumed to be equal to the average score of the other items in the factor. Where the factor was only made up of two items the missing values were left as missing. The new variables were then tested for correlations and were found to be independent of each other.

The scales measure a person's agreement with the attitude. Scores range from zero to ten, with zero meaning no agreement and ten indicating total agreement with the attitude. The higher the response the more positive the attitude. For example, respondents who scored seven on the abortion scale had a more positive attitude towards abortion than did those whose score was three.

The new scales were explored using ANOVA to examine differences in the mean score by pregnancy resolution and background characteristics of the respondent. Table 1 shows the result of this analysis.

There were significant differences between the two resolution groups in their mean scores for attitudes towards motherhood, contraception and abortion. As would be expected, traditional ideals surrounding motherhood were stronger for those in the motherhood group than for those in the abortion group. The motherhood group were also more likely to agree with gendered statements about contraception.

The two resolution groups did not differ statistically in their attitudes to sexual relationships and the provision of government benefits. On the whole, respondents from both groups thought that financial assistance to families and single parents was important. They also felt that being in love and discussing contraception were prerequisites to sexual activity.

With regard to the other respondent characteristics, there were few differences in the mean scores for the various attitude scales. Motherhood was valued more highly by Muslim and other religious non-Christian women than by those with a Christian or no religion. There was minimal variation in the value of motherhood for other background characteristics.

¹ For a full description of items collected see <http://thesis.anu.edu.au/public/adt-ANU20021028.105146/>

Abortion approval differed by area of residence, with young women living in inner urban areas holding the most positive attitudes toward abortion. Abortion attitudes were also related to religion, with Muslim and other non-Christians holding the most negative attitudes toward abortion.

Table 1: Mean scores for attitudinal scales by resolution decision and background characteristics

	Value of motherhood	Abortion approval	Gov't benefits	Sexual values	Contracep- tion
Pregnancy resolution	**	**			**
Motherhood	4.8	6.1	6.5	7.0	3.7
Abortion	4.0	8.4	6.6	7.0	3.2
Total	4.7	6.4	6.5	7.0	3.6
Area of residence		**			
Suburban	4.6	6.5	6.4	7.1	3.7
Rural and remote	4.7	6.2	6.6	6.9	3.5
Inner urban	4.6	7.4	6.8	6.8	3.7
Living at conception	**	**			*
With family of origin	4.5	6.7	6.5	7.0	3.5
With putative father	5.0	6.0	6.6	7.0	3.8
Alone or with peers	4.4	6.8	6.6	6.8	3.5
Religion	**	**		**	**
No religion	4.4	6.9	6.7	6.7	3.3
Catholic	4.7	6.5	6.5	7.0	3.8
Other Christian	4.8	6.2	6.4	7.2	3.6
Muslim/ Other	5.7	5.1	7.0	7.9	6.1
Ethnicity	**			**	**
English speaking	4.6	6.5	6.5	6.9	3.5
Non-English speaking	5.4	6.3	7.0	8.2	5.0
Indigenous	5.1	6.3	6.5	6.7	3.7
Age at conception					
17 or younger	4.6	6.7	6.5	6.9	3.6
18 or older	4.7	6.4	6.5	7.0	3.6

* $p < 0.05$

** $p < 0.01$

Ethnicity was significantly related to sexual and contraceptive attitudes. Young women from non-English speaking backgrounds were more likely to hold traditional sexual attitudes. They were also more likely to agree with gendered statements about contraception.

Self-esteem

The measure of self-esteem used in this study is a modified version of the Rosenberg Self-Esteem Scale (Rosenberg 1965). The scale was designed to examine feelings of self-worth and self-acceptance among adolescents. Five items were included and only three of those came from Rosenberg's initial scale. The items were measured using a Likert-style response format with a 5-point scale.²

Table 2: Mean scores for self-esteem scale by resolution decision and background characteristics

	Self-esteem
Pregnancy resolution	
Motherhood	7.3
Abortion	7.4
Total	7.3
Area of residence	
Suburban	7.3
Rural and remote	7.3
Inner urban	7.3
Living at conception	
With family of origin	7.3
With putative father	7.3
Alone or with peers	7.3
Religion	
No religion	7.4
Catholic	7.4
Other Christian	7.3
Muslim/ Other	6.7
Ethnicity	
English speaking	7.3
Non-English speaking	7.4
Indigenous	7.0
Age at conception	
	**
17 or younger	7.1
18 or older	7.4

* p<0.05

** p<0.01

Responses were re-scaled to range from zero to ten, with zero signalling very poor self-esteem and ten signalling very positive self-esteem. The distribution was skewed towards the lower end of the scale, with responses clustering around seven and eight. Analysis of variance was conducted to

² The scale was tested for reliability and had an alpha of 0.66 and mean inter-item correlation of 0.3.

examine differences in the mean scores by resolution decision and background characteristics. Results are presented in Table 2.

Self-esteem was significantly related to age at conception. Women who became pregnant at age 18 or older scored slightly higher on the self-esteem scale than those who became pregnant at age 17 or younger. There were no statistically significant differences in self-esteem scores according to other characteristics presented in Table 2, except for a small difference between those who conceived prior to, or post, age 18.

Educational aspirations

Respondents were also asked about their educational and career aspirations. They were asked to think back to before they were pregnant and how they felt at the time.

Furthering education was considered to be important by 70 per cent of young women in the survey before they became pregnant (Table 3). Most of the young women in this survey had left school before becoming pregnant. In addition, only nine per cent of respondents indicated that their pregnancy was the reason that they left school. It was also found that young women who chose abortion were more likely to have completed secondary school to Year 12 (Evans 2004).

There were no significant relationships between educational aspirations and pregnancy resolution for the majority of the background characteristics. Ethnicity, however, was significantly related to educational aspirations with those from non-English speaking backgrounds being most likely to value furthering their education (Table 3).

Table 3: Percentage of respondent who consider furthering their education to be important

	n	%
Pregnancy resolution		
Motherhood	779	69.4
Abortion	145	71.8
Total	924	69.8

* $p < 0.05$

** $p < 0.01$

Career aspirations

Although educational aspirations did not differ between the resolution groups, there were significant differences in their career aspirations. Aspirations for a career were nearly universal in the abortion group, with 90 per cent indicating that having a career was important to them before they became pregnant (Table 4). Still, 78 per cent of those in the motherhood group also held career aspirations. Living arrangement was the only background characteristic by which career aspirations differed significantly. Those living with their family of origin at the time of conception were more likely (83%) to hold career aspirations than those living with the putative father (77%), or those living alone or with peers (74%) (Table 4).

Table 4: Percentage of respondent who consider furthering their career to be important

	n	%
Pregnancy resolution		**
Motherhood	869	77.5
Abortion	182	90.1
Total	1,051	79.4
Living at conception		**
With family of origin	566	82.7
With putative father	384	76.2
Alone or with peers	101	74.3

* p<0.05

** p<0.01

Those who indicated that a career was an important goal were further asked if they still aspired to that goal and, if so, whether they thought it would be achieved. Again, the two outcome groups differed significantly. Having a career was still an important goal for all of the young women in the abortion group, while 16 per cent of the motherhood group were no longer interested in having a career. Of those who were still interested in a career after pregnancy, 83 per cent of the abortion group and 70 per cent of the motherhood group felt that they could achieve their career goals.

Career aspirations were more important for the young women in this survey than were educational aspirations. In addition, career aspirations discriminated between the two groups, whereas educational aspirations did not.

Psychosocial characteristics and the resolution decision

The previous sections have shown that some psychosocial characteristics do differ between the two groups, and that the factor-based scales created to measure the different attitudinal dimensions also differed. These differences were primarily found in respondents' attitudes to traditional motherhood, abortion, sexual values and gendered contraceptive values. Career aspirations also differed between the two groups.

This section takes the analysis one step further by testing the psychosocial characteristics in a multivariate logistic model. Modelling the effects of the attitude scales on pregnancy resolution indicates that only attitudes to abortion are significantly related to the outcome of pregnancy (Table 5; Model II) when controlling for other psychosocial characteristics. Career aspirations were also significantly associated with the outcome of pregnancy (Table 5; Model II). As expected, a more positive attitude toward abortion tends to increase the odds of choosing abortion. Also, having career aspirations increases the odds of choosing abortion three-fold.

The results are similar to those seen in the analysis of variance (Table 1), with approval of government benefits and attitudes to sexual relationships being poor discriminators between the two groups. However, the scale measuring gendered attitudes to contraception, which showed significant mean differences in Table 1, no longer discriminates between the two groups after controlling for the four other attitudinal factors (Table 5; Model II).

When the set of background variables is added to the model (Table 5; Model III) there are some significant changes in their effects (Table 5; Model I). Without the psychosocial characteristics, a respondent's religion was significantly associated with the resolution decision. In particular, respondents who reported any religion had lower odds of choosing abortion than had those who reported no religion (Table 5; Model I). With the attitudinal factors dealing with psychosocial characteristics in the model, the influence of religion is no longer significant. That is, the effect of religion is overshadowed by the effect of attitudes towards abortion.

Table 5: Logistic regression coefficients—Model predicting abortion

	Model I			Model II			Model III		
	B	SE	Odds Ratio	B	SE	Odds Ratio	B	SE	Odds Ratio
Value of Abortion approval				– 0.05	0.91		– 0.06	0.94	
Government				0.41	0.05	1.51 *	0.40	0.05	1.49 *
Sexual values				0.02	0.04	1.02	– 0.04	0.99	
Contraception				– 0.05	0.94		– 0.06	0.95	
Self-esteem				0.02	0.04	1.02	0.03	0.05	1.03
Career aspirations				– 0.05	0.99		0.00	0.06	1.00
Educational				1.20	0.32	3.34 *			
Area of residence				– 0.20	0.90		– 0.22	0.71	
Suburban	0.00		1.00				0.00		1.00
Rural and remote	0.23	0.18	1.26				0.14	0.20	1.16
Inner urban	1.85	0.29	6.35 *				1.61	0.34	5.01 *
Living at conception									
With family of	0.00		1.00				0.00		1.00
With putative	– 0.23	0.22	0.22 *				– 0.91	0.41	0.41
Alone or with	– 0.28	0.57	0.57				1.28	0.73	3.60
Religion									
No religion	0.00		1.00				0.00		1.00
Catholic	– 0.22	0.57	0.57 *				– 0.24	0.71	0.71
Other Christian	– 0.20	0.50	0.50 *				– 0.22	0.65	0.65
Muslim/ Other	– 0.62	0.28	0.28 *				– 0.72	0.44	0.44
Ethnicity									
English speaking	0.00		1.00				0.00		1.00
Non-English	1.41	0.30	4.10 *				1.46	0.35	4.31 *
Indigenous	– 0.73	0.15	0.15 *				– 0.75	0.19	0.19 *
Age at conception									
17 or younger	0.00		1.00				0.00		1.00
18 or older	– 0.18	0.73	0.73				– 0.20	0.76	0.76
Interaction effects									
Family of origin x Career aspirations							1.87	0.54	6.50 *
Putative father x Career aspirations							1.27	0.77	3.56
Alone or with Career aspirations							– 0.62	0.69	0.69

* p<0.05

** p<0.01

Dependent variable coded as 1=Abortion, 0=Motherhood

After controlling for psychosocial factors, those living in inner urban areas continue to have higher odds of terminating than those in suburban areas. The relationships between ethnicity and age at conception and pregnancy resolution remain unchanged.

In this final model (Table 5; Model III), the association between abortion approval and pregnancy outcome remains. Career aspirations also continue to affect the resolution decision; however, the relationship is not straightforward. Career aspirations displayed a significant interaction with living arrangement at conception. For women living with their families of origin, the odds of abortion were higher for those with career goals than for those with no career aspirations. However, there was no significant association between career aspirations and pregnancy outcome for those living outside of their family of origin.

Conclusion

It cannot be determined from the data presented here whether a respondent's attitude towards abortion or motherhood affected her decision to terminate or continue her pregnancy, or whether her decision affected her eventual attitude. However, the relationship in the multivariate model between religion and the attitudinal scales suggests that attitudes are strongly linked to religion, and are therefore likely to have been held for some time. It is also possible that the event of pregnancy has allowed some women to evaluate their beliefs in this area and form more concrete opinions.

With this in mind, in terms of their attitudes towards the value of motherhood, government benefits, sexual relationships and contraception, the young women in both groups appear to be more similar than they are different, after controlling for background characteristics. Abortion approval discriminated between the two groups, that is, those who scored higher on the abortion approval scale were more likely to have had an abortion. This relationship overshadowed the effect of religion, which was a significant discriminator before the abortion approval scale was introduced into the model. Self-esteem was found to be a poor discriminator, with no difference between the two groups in either the bivariate or multivariate model.

While aspirations were hypothesised to be important factors discriminating between those who had continued their pregnancies and those who had had an abortion, the preceding analysis throws doubt on this. Educational aspirations were similar for the two groups in both the bivariate and multivariate models. Although career aspirations showed a significant association with pregnancy outcome, this association was modified by the effect of living arrangements of the young women. For women living with their families of origin, career aspirations translated into increased chances of abortion. On the other hand, for those who lived outside of their families of origin, career aspirations were not associated with pregnancy outcome.

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