



SC PRAMS Special Delivery

Feelings versus Actions: Comparing Pregnancy Intendedness and Pregnancy Planning in South Carolina, 2004-2007

Introduction

Since 1992, the South Carolina Pregnancy Risk Assessment Monitoring System (S.C. PRAMS) survey has asked mothers the following question: “Thinking back to *just before* you got pregnant with your *new* baby, how did you feel about becoming pregnant?” In response to this question, mothers can indicate that they wanted to be pregnant sooner, then, later, or that they did not want to be pregnant then or at any time in the future.

This question is used most often to ascertain pregnancy intendedness. Women reporting that they wanted to be pregnant then or sooner are considered to have had *intended* pregnancies; women reporting they wanted to be pregnant later are considered to have had *mistimed* pregnancies; and women reporting that they did not want to be pregnant then or at any time in the future are considered to have had *unwanted* pregnancies. Most often, *unintended* pregnancies are defined as women reporting either a mistimed pregnancy or an unwanted pregnancy.

This definition of pregnancy intention is widely accepted and used in surveillance summaries, reports, peer-reviewed publications, and program

planning and evaluation activities. However, pregnancy intendedness is a complex concept,

dependent on multiple factors, and is very difficult to quantify¹. Pregnancy intendedness is often ascertained by using retrospective questions either during pregnancy or after a woman has given birth or had an abortion. Responses to retrospective pregnancy intendedness questions have been shown to be subject to substantial recall bias^{2,3} and to change over the course of a pregnancy in some populations^{4,5}.

Further, retrospective questions about pregnancy intendedness may make it difficult for a mother to differentiate between pre-pregnancy intention to conceive and other concepts such as pregnancy wantedness or

pregnancy happiness during and after pregnancy^{2,6}. Though they have been shown to be correlated, pregnancy intendedness, pregnancy planning, pregnancy wantedness, and pregnancy happiness are conceptually different⁷⁻⁹. Klerman gives a good overview of these and other concepts related to pregnancy intendedness¹⁰.

While the concept of pregnancy intendedness conveys preconception feelings and attitudes about becoming pregnant, pregnancy planning

What is S.C. PRAMS?

The South Carolina Pregnancy Risk Assessment Monitoring System (S.C. PRAMS) is an ongoing population-based surveillance system of maternal behaviors and experiences before, during and after pregnancy. About 2,300 mothers are randomly sampled from the state’s live birth registry each year.

The data presented in this newsletter reflect live births to South Carolina mothers occurring in South Carolina during the years of 2004 -2007. The overall response rate for these three years was 69.4 percent.

refers to a woman's behaviors and actions before she became pregnant. That is, pregnancy planning reflects the presence or absence of actions to prevent or avoid pregnancy. Since behaviors and actions are more concrete than feelings and attitudes, ascertaining a measure of pregnancy planning retrospectively may be less prone to recall bias and confusion with other concepts. Analyzing pregnancy planning also allows for the study of pregnancies that seem to be neither planned nor unplanned, a group that has been largely overlooked¹⁰.

In this report we use responses to questions 12, 13, and 14 on the S.C. PRAMS Phase V survey (Figure 1, PRAMS phase V core questions 11, 12, and 13) to create a three-category pregnancy planning variable. This variable codes each pregnancy as a planned pregnancy, a neither planned nor unplanned pregnancy, or an unplanned pregnancy. We seek to compare this planning variable to the pregnancy intendedness variable and make recommendations about the potential usefulness of this pregnancy planning measure. For these analyses, we use S.C. PRAMS data from the years 2004-2007.

Methods

Women who are S.C. residents delivering live born infants in S.C. are eligible to be selected for participation in the PRAMS project. All PRAMS participants are selected through a random sampling of the South Carolina live birth registry, stratified by birth weight.

For the years 2004-2007, 9,314 women were sent a S.C. PRAMS survey. Of these women, 6,240 completed the survey, yielding an unweighted response rate of 67.0 percent (weighted response rate: 69.4 percent). For the presented analyses, women with missing information for the question used to calculate the pregnancy intendedness variable are excluded (n=208) as well as women with missing information for the series of questions used to create the pregnancy planning variable (n=141). This results in a total sample of 5,891 women included in the analyses. All data management and analyses are conducted using SAS 9.1.3.

As described above, pregnancy intendedness is defined as an intended pregnancy if the woman indicated that before she became pregnant she wanted to be pregnant then or sooner, a mistimed pregnancy

Figure 1: Questions used in the calculation of the pregnancy planning variable

12. When you got pregnant with your new baby, were you trying to get pregnant?

No
 Yes → Go to Question 15

13. When you got pregnant with your new baby, were you or your husband or partner doing anything to keep from getting pregnant?
 (Some things people do to keep from getting pregnant include not having sex at certain times [rhythm] or withdrawal, and using birth control methods such as the pill, condoms, cervical ring, IUD, having their tubes tied, or their partner having a vasectomy.)

No
 Yes → Go to Question 15

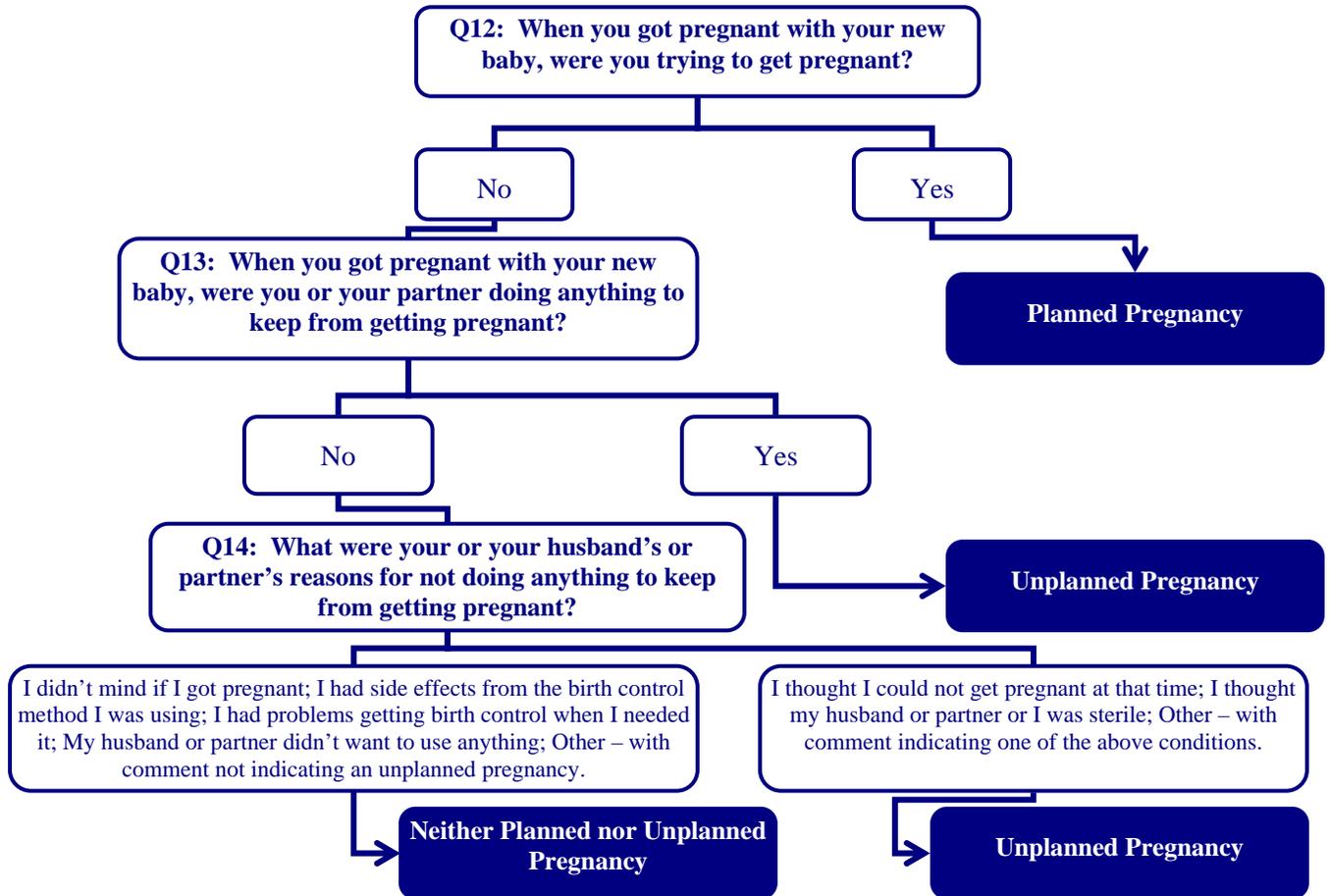
14. What were your or your husband's or partner's reasons for not doing anything to keep from getting pregnant?

Check all that apply

I didn't mind if I got pregnant
 I thought I could not get pregnant at that time
 I had side effects from the birth control method I was using
 I had problems getting birth control when I needed it
 I thought my husband or partner or I was sterile (could not get pregnant at all)
 My husband or partner didn't want to use anything
 Other → Please tell us:

if she indicated that she wanted to get pregnant later, and an unwanted pregnancy if she indicated that she didn't want to be pregnant then or at any time in the future. Unintended pregnancies are those categorized as either mistimed or unwanted.

Figure 2: Definition of the pregnancy planning variable



The pregnancy planning variable is created using the chain of questions in Figure 1 as follows (a visual description of this definition is given in Figure 2):

- *Planned* pregnancies:
 - Women that indicated in question 12 that they were trying to get pregnant
- *Unplanned* pregnancies:
 - Women that indicated in question 12 that they were not trying to get pregnant and indicated in question 13 that they were doing something to keep from getting pregnant
 - Women that were not trying to get pregnant (question 12) and not doing anything to keep from getting pregnant (question 13) because they thought they could not get pregnant at that time or that they thought they or their husband or partner was sterile (question 14)
- Women that answered “No” to questions 12 and 13 but checked the “Other” box in question 14 and entered a comment indicating that they or their partner had been told that they could not have children (n=27)
- *Neither planned nor unplanned* pregnancies:
 - Women that indicated in question 12 that they were not trying to get pregnant and indicated in question 13 that they were not doing anything to keep from getting pregnant, unless forced into the unplanned pregnancy category by their answer to question 14, as described above

This pregnancy planning variable attempts to define unplanned pregnancies conservatively, assuming that all women answering that they were neither trying to get pregnant nor doing anything to prevent getting pregnant had

neither planned nor unplanned pregnancies, unless they thought that they could not get pregnant.

The weighted prevalences of intended, mistimed, and unwanted pregnancies are observed, as well as the weighted prevalence of planned, neither planned nor unplanned, and unplanned pregnancies. The pregnancy intendedness variable and the pregnancy planning variable are then compared using unweighted data. While we will look at how closely correlated these variables are, we do not expect that they should necessarily agree because they are designed to quantify different concepts. In particular, we do not expect mistimed pregnancies to correspond to neither planned nor unplanned pregnancies.

Results

There were 5,891 women included in this study. For the prevalence estimates, these women were weighted to represent approximately 210,525 S.C. women who delivered a live-born infant during 2004-2007.

Figure 3a displays the weighted prevalence of intended, mistimed, and unwanted pregnancies by year from 2004-2007. The prevalence of intended pregnancies decreased from 52.9% in 2004 to 50.1% in 2006, but rose to 56.7% in 2007 for a net increase over the four years. The prevalence of mistimed pregnancies increased from 34.1% in 2004 to 39.2% in 2006, but dropped to 34.2% in 2007 resulting in almost no net change from 2004-2007. The prevalence of unwanted pregnancies decreased each year, dropping from 13.0% in 2004 to 9.1% in 2007.

Figure 3b displays the weighted prevalence of planned, neither planned nor unplanned, and unplanned pregnancies from 2004-2007. The prevalence of planned pregnancies was very stable over the four years, with 42.6% of pregnancies being planned in both 2004 and 2007. The prevalence of neither planned nor unplanned pregnancies dropped from 18.7% in 2004 to 16.9% in 2005, but rose to 20.9% in 2007. The prevalence of unplanned pregnancies increased slightly from 38.7% in 2004 to 41.0% in 2005, but fell to 36.5% in 2007 for a small net decrease.

Table 1 displays a cross-tabulation of the pregnancy intendedness and pregnancy planning variables. Unweighted data was used for this comparison so that each survey response to the intendedness question

Figure 3a: Prevalence of pregnancy intendedness by year of birth

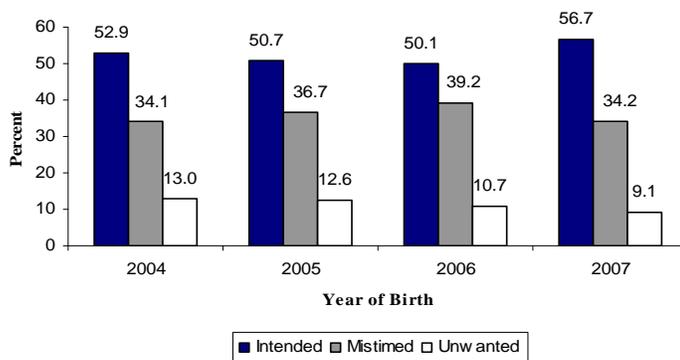
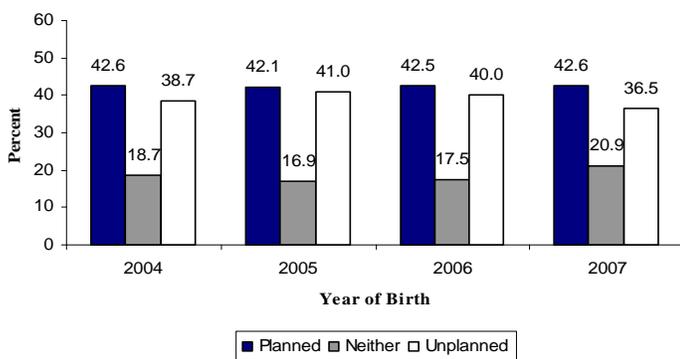


Figure 3b: Prevalence of pregnancy planning by year of birth



could be compared to the same woman's responses to the planning questions.

Among all women reporting an intended pregnancy, 73.3% indicated that their pregnancy was planned, with 14.7% indicating that their pregnancy was unplanned. Among women reporting a mistimed pregnancy, 67.4% indicated an unplanned pregnancy and 26.2% indicated a pregnancy that was neither planned nor unplanned. Finally, 77.0% of women reporting an unwanted pregnancy indicated that the pregnancy was unplanned, with 20.7% indicating that it was a neither planned nor unplanned pregnancy.

However, among all women indicating a planned pregnancy, 93.7% reported that their pregnancy was intended and 6.4% reported a mistimed pregnancy. Among women indicating a pregnancy that was neither planned nor unplanned, 51.1% reported that the pregnancy was mistimed, 34.4% reported that the pregnancy was intended, and 14.5% reported that their pregnancy was unwanted. Among women

Table 1: Unweighted cross-tabulation of pregnancy intendedness and pregnancy planning variables

		Planned	Neither	Unplanned
Intended	Frequency	2243	367	451
	Row %	73.3	12.0	14.7
	Column %	93.7	34.4	18.5
Mistimed	Frequency	134	545	1404
	Row %	6.4	26.2	67.4
	Column %	5.6	51.1	57.8
Unwanted	Frequency	17	155	575
	Row %	2.3	20.7	77.0
	Column %	0.7	14.5	23.7

indicating an unplanned pregnancy, 57.8% reported the pregnancy to be mistimed, 23.7% reported that the pregnancy was unwanted, and 18.5% reported that the pregnancy was intended.

If the mistimed and unwanted categories are combined to make up unintended pregnancies, then 69.9% of women with unintended pregnancies indicated that their pregnancy was unplanned, while 81.5% of women indicating an unplanned pregnancy reported that the pregnancy was unintended.

Discussion

Overall, from 2004 to 2007 52.6% of women reported an intended pregnancy, 36.1% reported a mistimed pregnancy, and 11.3% reported an unwanted pregnancy. The distribution of the pregnancy planning variable is very different, with 42.4% of women reporting a planned pregnancy, 18.5% of women reporting that their pregnancy was neither planned nor unplanned, and 39.1% of women reporting an unplanned pregnancy.

It appears that a woman's pregnancy planning status is a more reliable predictor of her intendedness status than vice versa. Almost 94% of planned pregnancies are intended, whereas 73.3% of intended pregnancies are reported to be planned. Further, 81.5% of unplanned pregnancies are unintended (mistimed + unwanted), while 69.9% of unintended pregnancies are reported to be unplanned. It is interesting that 451 women with unplanned pregnancies also reported that they were intended. Upon finding a similar result, Trussel et.al. suggest that this may reflect an ambivalence about proper contraceptive use⁹.

Measures of pregnancy intendedness have been shown to be strongly influenced by the intendedness of a woman's husband or partner^{5,11}. Joyce et. al. found that women reporting during pregnancy that their pregnancy was unintended, but whose husband or partner intended the pregnancy, were very likely to report that the pregnancy was intended after delivery⁵. Partner's intendedness has been shown to influence attitudinal dimensions, like those measured by intendedness, more than behavioral dimensions, like those measured by planning status¹¹. No information on partner's pregnancy intendedness is collected by S.C. PRAMS.

The data presented in this report have several limitations. The data for both the pregnancy intendedness variable and the pregnancy planning variable are gathered retrospectively, which could lead to recall bias. Some women may also feel that it would be socially undesirable to report that their pregnancy was not intended or planned, which may result in additional bias. Further, since the data used for the cross-tabulation of intendedness and planning are not weighted, these results may not be generalizable beyond the women that responded to the S.C. PRAMS survey from 2004 to 2007. A major limitation is that these analyses are restricted to pregnancies that end in live births. It has been estimated that about half of all unintended pregnancies in the United States end in abortion¹². There were over 47,555 abortions to S.C. residents in 2004-2007, thus very many unintended and unplanned pregnancies are not captured by data from sources such as PRAMS.

Conclusion

Due to the differential impact that partner's intendedness has been shown to have on measures of pregnancy intendedness and planning, the potential for differential impact of recall bias on the two measures, and the result that pregnancy planning predicts intendedness more reliably than intendedness predicts planning, we recommend the use of the pregnancy planning variable for program planning in S.C. Further study is needed to better understand the relationship between pregnancy intendedness and pregnancy planning. Additional studies are also needed to identify and examine correlates of unplanned pregnancies and pregnancies that are neither planned nor unplanned.

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