

The Relationship between Unintended Pregnancy and Women’s Mental Health in Later Life: An Exploration Using the Wisconsin Longitudinal Study

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Abstract

Despite ample research on unintended pregnancy (UP), no study has explored UP’s later-life mental health effects on the women who carry those pregnancies. Further, no study has been able to examine these associations for pregnancies that occurred prior to the impact of *Roe v. Wade*, when abortion was generally not a viable solution for an unwanted pregnancy. Consequently, we employ the Wisconsin Longitudinal Study (WLS), a longitudinal study of Wisconsin high school graduates from the class of 1956, which allows for an examination of associations between UP and mental health in later life based on reports of respondents’ pregnancy intendedness for all pregnancies. Data on pregnancy intention were collected in 1975, when these women were approximately age 36; at that time, 55% of women reported having had at least one unintended pregnancy; among all unintended pregnancies, 73% were mistimed and 27% were unwanted). Compared to women with no UPs, women who had at least one unwanted pregnancy were, by their early 50s, more likely to report prior depression, a higher number of depressive symptoms, and higher levels of hostility. These findings held even after accounting for a range of prospectively reported pre-pregnancy confounders including early life socioeconomic conditions, IQ, personality, and educational attainment. For women with mistimed versus unwanted pregnancies, the impact on mental health outcomes was smaller and not as robust to model specification.

Introduction & Background

Unintended pregnancy (UP) has been a source of significant policy concern for decades. Current estimates from the U.S. indicate that one out of every two pregnancies is unintended, the highest measured rate in the industrialized world.¹ A sizable body of UP research falls into three main camps. First, scholars have published widely on UP’s prevalence and predictors, with younger and socially disadvantaged women far more likely to report UPs than other women.^{1,2} Second, researchers have tried to establish the public costs of UP as a way of diverting more resources into family planning programs. In 2006, UPs accounted for \$11.1 billion in state-funded maternity and infant care costs.³ Third, researchers have explored the health and development indicators among children whose births were intended versus unintended. Babies born as the result of UP consistently have

shorter breastfeeding duration and poorer nutritional status than children born as a result of intended pregnancies,⁴ and older children have demonstrated poorer developmental outcomes than their “intended” peers.⁵

Comparatively thin is the literature exploring the effect on well-being for the *women who carry unintended pregnancies*. The reproductive health field knows little about whether carrying unintended pregnancies is associated with any mental and/or health problems later in life. No study has examined the existence of later-life mental health effects for women who carried mistimed or unwanted pregnancies.

One of the challenges to this research is the availability of abortion, which is likely to minimize life and health disruptions compared to virtually 100% live births. Among women who experienced pregnancies prior *Roe v. Wade*, individuals who experienced unwanted pregnancies in particular are an especially select group because they did not have the option to legally terminate a pregnancy. We set out to assess the possible long-term consequences of unwanted birth for women’s long term well-being, particularly their mental health.

In sum, these analyses fill the aforementioned gaps by analyzing a dataset uniquely positioned to explore associations between UP and later-life mental health effects on the women who carried these unintended pregnancies to term.

Data & Methodology

Data derive from the Wisconsin Longitudinal Study (WLS). The WLS is based on a 1/3 sample of all 1957 Wisconsin high school graduates (N=10,317) and a sibling of these graduates.⁶ The WLS was initially designed to assess the demand for higher education in Wisconsin, yet has since become an influential resource for studies of social stratification in the United States, and its design and findings have had world-wide influence.⁶ Data were collected on the graduates in 1957, 1964, 1975, 1993, 2004, and 2012. Respondents are currently in their early 70s.

In 1975, all women in the WLS (who were approximately age 36) were asked about up to 4 pregnancies they had ever experienced (as well as the current pregnancy if the respondent was pregnant at the time of the survey). In addition to questions about birth dates and pregnancy outcomes, respondents were asked whether each pregnancy was intended, wanted but not planned (mistimed), or unwanted. Since 1992, the WLS has included detailed questions about mental health. These data provide a unique opportunity to examine the long term mental health consequences of UP for women. Because these

respondents had experienced most pregnancies before the 1973 Roe v. Wade decision (which legalized abortion in Wisconsin for the first time), this cohort provides an innovative way to examine this question because most of these women did not have the opportunity to terminate an unwanted pregnancy.

The mental health measures employed in these analyses were collected in 1992 and include the following: 1) a hostility index, 2) the CES-D scale, a validated self-report depression scale, 3) self-report of ever experiencing depression, and 4) count of depressive symptoms reported over a 2-week reference period. All measures had been piloted and validated either in prior research or specifically for the WLS.

The WLS also contains a wealth of early life measures, collected prospectively before the reported pregnancies, which could potentially confound the relationship between pregnancy intendedness and later life mental health outcomes. In particular, we are able to include measures of early life socioeconomic conditions (parental SES, income, and occupational attainment), IQ, and educational attainment. We also have an administrative measure of high school rank. Sensitivity analyses indicate that when including both IQ and rank in a model, rank captures psychological attributes that could both bias an individual's interpretation of pregnancy intendedness, as well as be correlated with mental health. To further address this concern, we included additional models that include personality measures (collected in 1992).

Preliminary Results

Prevalence of Unintended Pregnancy

The original WLS sample contained 5,326 women, 4,809 of whom (90%) were interviewed in 1975. The majority of these women (4,199) had given birth to at least one child by the time of their interview in 1975. Among these women, 4,061 (76% of the original sample) reported complete data on pregnancy intentions.

Cumulatively, these women reported a total of 11,632 pregnancies, 34% of which they classified as unintended. Among unintended pregnancies (3,899), 73% were mistimed (2,861) and 27% were unwanted (1,038). More than half (55%) of women in the sample reported at least one unintended pregnancy; 47% had at least one mistimed pregnancy and 22% had at least one unwanted. As expected, reports of unintendedness increased as birth order increased.

Relationships between Pregnancy Intention and Later-Life Mental Health

Results suggest a strong and persistent relationship between having an unwanted pregnancy and later life mental health outcomes, even when controlling for other variables likely to affect both mental health and number of children. Compared to those reporting intended pregnancies, those who had at least one unwanted pregnancy were significantly more likely to report: 1) ever being depressed (8 percentage points more likely); 2) a higher number of depressive symptoms over the prior two week period (range: 0-7; $b=.37$); 3) higher levels of hostility (range: 1-20; $b=.45$); and 4) higher CESD scores (range: 1-25; $b=2.6$). These results were robust to the inclusion of measures of early life experiences and endowments collected prior to the pregnancies.

Conclusion

Prior research on UP has focused almost entirely on three main areas: 1) the socio-demographic predictors of UP; 2) the public costs associated with births resulting from UPs; and 3) health and development effects among children whose births were unintended. The current analysis has the potential to significantly enhance understandings of the long term effects on well-being for the women who carry unintended, and especially unwanted, pregnancies to term. Preliminary results indicate that women who experience unwanted pregnancies, in particular, were likely to experience more mental distress and hostility later in life than women who had planned pregnancies. These results held even after accounting for a range of early life experiences and endowments that may potentially confound that relationship. Given the significant policy focus on UP, this analysis offers a much-needed focus on the women who actually experience these pregnancies.

Resources

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