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No one to turn to: low social support and the incidence of undesired pregnancy in the United States

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ABSTRACT

Objective: Young women may experience social barriers to achieving their reproductive goals. This analysis explored whether low social support may contribute to the high incidence of undesired pregnancy in young women in the United States.

Study design: Using 6 months of data from a prospective cohort of 970 women ages 18–22 years in the United States, we described contraceptive use and applied multivariable logistic regression and standardization to estimate adjusted odds and absolute risk of undesired pregnancy among women reporting low social support versus higher social support. We investigated several measures of contraceptive use as possible explanations for this pathway.

Results: Sixty-five pregnancies were reported in the 6 months of the study, of which 30 (46%) were classified as undesired prior to conception. Among young women who reported low social support, 8% reported an undesired pregnancy during the study period as compared to 3% of the young women who reported higher levels of social support. Among non-black women, those who reported low social support had nearly seven times the odds of an undesired pregnancy as compared to women who reported higher social support (aOR: 6.8, 95%CI: 1.7, 27.1). We found no association between social support and undesired pregnancy among young black women. Contraceptive method use differed by social support at baseline, and throughout follow-up.

Conclusions: Low social support — defined as the feeling of not having anyone to turn to – may be a risk factor for persistently high levels of undesired pregnancy among young women in the U.S. This association may be driven by differences in contraceptive use by level of social support.

Implications: Interventions to increase young women's perceptions of social support may reduce the risk of undesired pregnancy for some individuals.

1. Introduction

By the age of 20, one in three women in the United States will experience at least one pregnancy [1], and over 80% of these will be unintended [2,3]. The vast majority of unintended pregnancies in the United States are associated with inconsistent, incorrect or non-use of contraceptives [4]. A continuing focus of study is why people – young people in particular – are not using contraception consistently, or correctly. Partial explanations include lack of access, physical concerns about side effects, method dissatisfaction, misconceptions about fertility risk [5–7] difficulty negotiating use with a partner, substance use, reproductive coercion, and ambivalence about pregnancy [8–10].

Drawing on research that posits that differences in the risk of early pregnancy across demographic groups reflect social, rather than biological or other, differences [11], we explored the role of social support in the risk of *undesired* pregnancy. Our focus on undesired, rather than unintended pregnancy, reflects the ongoing evolution of the understanding of people's feelings about pregnancy [12]. While an "unintended" pregnancy is defined in terms of an individual's explicit fertility plans at the time of conception, an alternative framework focuses on a person's desire for (positive), and desire to avoid (negative), pregnancy [13,14]. Focusing on an individual's desire for pregnancy — rather than on timing-based plans - may align more closely with how people think about pregnancy, particularly in early adulthood when many young individuals may not have formulated a fertility plan.

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Although definitions vary, "social support" generally refers to the tangible and intangible forms of assistance that people provide for one another, such as information or expressions of caring. Socially supportive networks have been shown to facilitate health-related behaviors [15–17]. In particular, several previous studies have found a positive association between social support, conceptualized in a variety of ways, and contraceptive use [18–22]. While this prior research focused largely on normative and perceived social support for contraceptive use, we extended this research to explore whether perceived social support is associated with undesired pregnancy among young people. We hypothesized that the incidence of undesired pregnancy would be higher for individuals who reported low social support at baseline as compared to individuals who reported more support. This hypothesis rests on the theory that a more supportive social network may increase a young person's sense of confidence and self-worth, which in turn may empower the individual to seek reproductive health information and to act on it, potentially including contraceptive use, thereby decreasing the risk of undesired pregnancy.

2. Material and methods

2.1. Sample and procedures

We analyzed data from the Relationship Dynamics and Social Life (RDSL) Study, a population-based study of 1003 young people ages 18–22 years in Michigan conducted between 2008 and 2012. Investigators designed the study to prospectively investigate the influence of behavioral, attitudinal and contextual aspects of relationships, contraceptive use, and activities that compete with childbearing, on the occurrence of undesired pregnancy during the transition to adulthood [23–26]. Within RDSL, recruitment focused only on individuals who self-identified as "female"; thus, throughout this manuscript, we use the words "woman/women" and the pronouns "she/her" to refer to study participants, although we acknowledge that some individuals who do not identify as a woman or female are capable of pregnancy.

Following an initial baseline RDSL interview, 99% of women (n= 992) participated in weekly phone or Internet surveys that captured information on attitudinal and behavioral measures of pregnancy, relationships, and contraceptive use over two and a half years. To reduce non-response and attrition, study managers offered participants multiple incentives, including: payment for competed journals, additional payment for on-time journals, tokens of appreciation (e.g., pen, compact, lip balm), and regular reports of study findings [23]. Eighty-four percent of baseline participants remained in the study 6 months after baseline [27]. Socio-demographic characteristics of continuing and drop-out participants did not differ, with the exception of individuals who reported two or more prior pregnancies at baseline and individuals who reported having a mother who gave birth before age 20. Respectively, these individuals participated for approximately 50 and 90 days fewer on average, than did individuals without these characteristics ($p \leq .05$) [23]. More details on study design and implementation can be found elsewhere [28]. The Institutional Review Boards of the University of Michigan (study #: HUM00014150) and the University of California, San Francisco (study #: 14–13501) approved this study.

2.2. Measures

We measured the exposure, perceived social support [29], in the baseline interview using the following question: *"How often do you feel that there are people you can turn to? Would you say never, almost never, sometimes, fairly often, or very often?"* We selected this measure to capture emotional support, one of the four key dimensions of social support, defined as "the availability of one or more persons who can listen sympathetically when an individual is having problems and can provide indications of caring and acceptance." [15] However, we acknowledge the possibility that some participants may have interpreted this question to refer to other forms of social support beyond emotional support, such as tangible or informational support. Due to small numbers of respondents in some categories, responses were collapsed into a binary indicator of low social support – "low" for those women reporting "never" or "almost never" having someone they can turn to, and "higher" for those reporting "sometimes", "fairly often", or "very often". Participants responded to a measure of social support at baseline only.

We defined the primary outcome, undesired pregnancy, using a combination of women's self-report of a new pregnancy and prospective responses to the positive and negative desire for pregnancy scales asked at baseline and each week thereafter. Each week, women were asked to report if they were "probably" or "definitely" pregnant, and if this pregnancy had been confirmed by a home or clinic pregnancy test. For participants reporting a definite pregnancy, responses to the positive and negative desire for pregnancy scales were taken from two journals prior (approximately 2 weeks prior) to the first report of the new pregnancy, to capture desire for pregnancy near the time of conception. The positive desire for pregnancy scale asks: *"How much do you want to get pregnant during the next month? Please give a number between 0 and 5, where 0 means you don't at all want to get pregnant and 5 means you really want to get pregnant."* The corresponding negative scale asks: *"How much do you want to avoid getting pregnant during the next month? Please give a number between 0 and 5, where 0 means you don't at all want to avoid getting pregnant and 5 means you really want to avoid getting pregnant."* We created a binary indicator for undesired pregnancy that flagged a pregnancy as undesired if a woman responded between 0 and 2 on the positive desire to get pregnant (low desire for pregnancy) and between 3 and 5 on the desire to avoid pregnancy scale (high desire to avoid pregnancy). We include pregnancies occurring in the first 6 months only, due to a concern that the exposure (social support) measured at baseline, might no longer be an accurate reflection of perceived social support more than 6 months later, particularly given the socially fluid early adulthood years in which this study took place. Extending the study beyond 6 months might have introduced substantial misclassification into our measure of exposure and potentially diluted the association with the outcome, if one existed. For sensitivity analyses, however, we considered pregnancies that occurred in the first 12 months of the study, and also constructed a secondary, more inclusive definition of undesired pregnancy that categorized anyone that reported a non-zero desire to avoid pregnancy *and* anything but the strongest desire for pregnancy as undesired (only 0 on desire to avoid pregnancy and 5 on desire for pregnancy were considered "desired").

We measured the secondary outcome, contraceptive use — a potential mediator on the pathway between social support and undesired pregnancy — both at baseline and weekly at each journal. Participants reported any use of contraception, as well as the method used, both at baseline and in weekly journals. With these data, we created three binary outcome variables: (1) any use of contraception versus no use of contraception post-baseline in the 6-month study period; (2) any use of "hormonal" methods (intra-uterine device, implant, injection, ring, patch, or pills) versus coital-specific methods (barrier methods or withdrawal) post-baseline in the 6-month study period for individuals who reported any contraceptive use; and (3) "consistent" use of contraception (reported use of contraception for each reported sex act) post-baseline in the 6-month study period for individuals who reported any contraceptive use.

Other variables measured via self-report in the baseline interview and used in these analyses include age (continuous), childhood family structure (two-parent household versus other), employment (employed versus not), education (enrolled in school versus not), race (black versus non-black), and relationship status (being in any physical or emotional relationship, marriage, engagement, or other special romantic relationship, versus not). Additionally, we examined data from baseline measures of sexual activity, including self-reported age

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