Social Support Regarding Abortion Decision and Mental Health Outcomes at Time of Seeking Abortion Services

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Abstract

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Background: While the relationship between social support and mental health in the general population is well established, little is known about the role of social support, particularly decision support, in the mental health of people seeking abortion services. The objective of this study was to investigate the association between social support regarding abortion decision and mental health outcomes at the time of seeking abortion.

Methods: We analyzed data from a cross-sectional survey of people seeking abortion services recruited from four reproductive health clinics in California, New Mexico, and Illinois in 2019. Multivariate Poisson regression was used to examine the association between social support regarding abortion decision from six individual sources (mother, father, other family members, friends, current intimate partner, and man involved in pregnancy) and risk of depression and anxiety. Multivariate Poisson regression was also used to examine the association between unwanted disclosure of abortion decision and risk of depression and anxiety.

Results: Among 717 participants, a lack of social support regarding abortion decision from the man involved in the pregnancy was associated with greater prevalence of depression risk (48.7% versus 32.0%; adjusted Prevalence Ratio [aPR]: 1.55; 95% CI: 1.05, 2.30) compared to those with full support. A similar trend was observed for prevalence of anxiety risk, though results were not statistically significant (40.5% vs. 32.7%; aPR: 1.25; 95% CI: 0.83, 1.89). Partial support regarding abortion decision from a current intimate partner was associated with greater prevalence of anxiety risk (47.8% versus 37.7%; aPR: 1.46; 95% CI: 1.05, 2.05) compared to those with full support. A similar trend was observed for prevalence of depression risk, though results were not statistically significant (43.1% versus 33.5%; aPR: 1.34; 95% CI: 0.89, 2.04). Social support regarding abortion decision was not associated with risk of depression or anxiety for other sources of support. Unwanted disclosure of abortion decision was associated with higher prevalence of depression risk (49.5% versus 32.1%; aPR 1.41; 95% CI: 1.08, 1.83). A similar trend was observed for anxiety risk, though the results were not statistically significant (49.5% versus 34.6%; aPR: 1.27; 95% CI: 0.98, 1.65).

Conclusions: Social support regarding abortion decision from intimate partners (whether a current intimate partner, the man involved in the pregnancy, or both) may play a prominent role in the mental health outcomes of people seeking abortion services, particularly during the decision-making process.

INTRODUCTION

Abortion is a common medical procedure in the United States, with over 850,000 abortions performed nationwide in 2017. While evidence suggests that rates may be declining, it is estimated that 1 in 4 women will have an abortion in their lifetime.[1] Although the notion that abortion may have adverse mental health consequences has become the center of public debate and legislation[2], empirical evidence has firmly established that there is no association between abortion and subsequent adverse mental health outcomes or related health behaviors.[3–6] In contrast, perceived social and emotional support from members of one's social network have been consistently associated with reduced risk of adverse mental health outcomes in the general population.[7,8] Among women specifically, a growing body of evidence suggests an inverse relationship between social support and adverse mental health outcomes during pregnancy and the perinatal period, including stress, antenatal and postnatal depression, and anxiety.[9–11] However, little is known about the relationship between social support and mental health outcomes in the context of abortion.

Previous studies have reported an association between perceived social support for their decision and various socioemotional outcomes in women receiving abortion services, including higher satisfaction with the decision to end pregnancy, greater self-efficacy to cope with the decision, and lower distress and negative emotional response following the abortion.[12–17] While the relationship between social support and socioemotional outcomes is well documented, few studies have examined the role of social support regarding the abortion decision in mental health outcomes such as anxiety and depression at the time women are seeking abortion services. The present study aims to fill this gap by evaluating the association between social support regarding decision to end pregnancy and reports of depression and anxiety in a large cohort of people seeking abortion services. Additionally, this study will examine whether unwanted disclosure of decision to end pregnancy is associated with depression and anxiety at the time of seeking care,

as little is known about the mental health consequences of such disclosures. Findings from this study will advance our understanding of the mental health needs of people seeking abortion services and may inform programmatic interventions to enhance counseling support.

METHODS

Study design and population

The Burden Study is a cross-sectional survey of individuals seeking abortion services at reproductive health clinics designed to assess the logistical and psychosocial barriers to accessing these services. From January to June 2019, participants were recruited from waiting rooms in four clinics in three states (two sites in California, one in Illinois, and one in New Mexico). Sites were chosen from states with few abortion restrictions; specifically, these states had public funding for abortion services and no mandated counseling or waiting period, and they allowed abortions beyond the first trimester. Individuals were eligible to participate if they were 15 years or older, able to speak and read in English or Spanish, and were pregnant and seeking abortion services but had not yet received the abortion. Individuals were ineligible if they were known to be under the influence of narcotics, such as those who had already taken pre-procedure medications at the study sites. Individuals of all genders were eligible to participate. The survey was self-administered on iPads provided by study staff after informed consent was obtained. Participants were asked about demographic characteristics and circumstances around learning about the pregnancy and seeking abortion services, barriers to accessing care, and mental health status. This study received ethical approval from the University of California, San Francisco Institutional Review Board.

Exposures and outcomes

The primary exposure of interest was perceived social support regarding a participant's decision to seek an abortion. Respondents were asked, "*To what extent do the following people in your life support you in ending this pregnancy?*" and could select "*Not at all*," "*A little bit*,"

"*Somewhat*," "*Very much,"* "*Mixed support*," "*Don't know,"* or "*They are not in my life or they don't know I'm considering ending this pregnancy."* Respondents were asked to provide responses for the following individuals: mother(s), father(s), other family members, friends, the man involved in the pregnancy, and their current intimate partner. Notably, participants were not asked whether their current intimate partner is the man involved in the pregnancy; thus, it is not possible to determine whether these are distinct sources of support for each participant. From these questions, six categorical social support variables were created corresponding to each of the six individual sources of support. For each categorical social support variable, five categories were created: "Not at all," "Partial support," "Very much," "Don't know," or "They are not in my life or they don't know I'm considering ending this pregnancy." Participants were categorized as "Partial support" if they answered "*A little bit,"* "*Somewhat*," or "*Mixed support*"; otherwise, they were categorized as the level of social support corresponding to their original response. Additionally, two aggregate dichotomous measures of social support were also evaluated as exposures: whether a participant had at least one source who very much supported their decision, and whether a participant had at least one source who did not support their decision at all. The secondary exposure of interest was unwanted disclosure of decision to terminate pregnancy. Participants were asked, "*In order to get to the clinic for your appointment today, did you have to tell anyone that you would have preferred not to tell, that you were considering ending this pregnancy*?" and could respond "*Yes*" or "*No*."

Outcomes of interest were risk of depression and anxiety at the time of seeking abortion services. Risk of depression was measured using the Patient Health Questionnaire-2 (PHQ-2) scale, and participants were categorized as being at risk for depression using a standardized cut-off of 3 or higher.[18] Risk of anxiety was measured using the General Anxiety Disorder-7 (GAD-7) scale, and participants were categorized as being at risk for anxiety using a standardized cut-off of 10 or greater.[19]

Statistical analysis and multiple imputation

Descriptive statistics were used to summarize sociodemographic and pregnancy characteristics. Data on exposures and covariates were missing for 5.6% of participants; variables with missing data included race/ethnicity (1.1%), educational attainment (1.3%), number of previous births (1.4%), gestational age (1.3%), support from mother (0.8%), support from father (1.3%), support from other family members (1.3%), support from friends (1.8%), support from current intimate partner (1.5%), social support from man involved in pregnancy (0.3%), difficulty in travelling for care (0.3%), difficulty in obtaining money for care (0.3%), difficulty in the amount of time spent obtaining care (0.7%), and unwanted disclosure (0.1%). Multiple imputation methods as described by von Hippel were used to address missingness for potential confounders in regression analyses.[20] A chained equations approach was used to avoid assumptions of multivariate normality and to allow for imputation of categorical variables. Ten iterations were used to ensure model convergence, and 5 imputed datasets were created. Imputation models included all variables described above, namely all social support variables, mental health outcomes, and sociodemographic and clinical covariates. Univariate and multivariate Poisson models were fit to each of the imputed datasets, and the respective crude prevalence ratios (PR), adjusted PRs (aPR), and corresponding 95% confidence intervals (CI) were pooled using Rubin's rules.[21] Statistical significance was assessed using an alpha level of 0.05.

Relevant covariates were considered for inclusion in multivariate models based on *a priori* assumptions regarding associations with social support and mental health. The chi-squared test was then used to evaluate whether each potential *a priori* covariate was associated with social support for abortion decision and risk of anxiety and depression in the data; covariates were ultimately included in multivariate models if associated with one or more sources of social support and one or both outcomes at $p<0.05$. Final model covariates included age, race, Hispanic ethnicity, parity, gestational age (calculated from date of last menstrual period), educational

attainment, socioeconomic security, and clinic site. In the unwanted disclosure analysis, additional covariates related to barriers faced in accessing care were included; specific barriers included finding a facility to obtain care, travelling to obtain care, obtaining money for care, and time spent obtaining care. For each of these barriers, participants were asked, *"In thinking about the time since you discovered you were pregnant, how difficult were the following experiences trying to obtain care?"* Response options included *"Not at all difficult," "A little bit difficult," "Somewhat difficult,"* and *"Very difficult."* Participants were considered to have experienced difficulties related to each barrier if they responded *"Somewhat difficult*" or *"Very difficult*." All racial categories as well as Hispanic ethnicity were included as separate covariates in order to reflect participants with multiple racial and ethnic identities; non-Hispanic white was used as the reference group. To evaluate socioeconomic security, participants were asked, "*How confident are you that you could come up with $2,000 if an unexpected need arose within the next month?"* Response options included *"Not at all confident," "Only slightly confident," "Somewhat confident," "Very confident,"* and *"Don't know."* Participants were categorized as high confidence if they answered "*Somewhat confident*" or "*Very confident*" and as low confidence if they answered "*Not at all confident*" or "*Only slightly confident."*

Sensitivity analyses were conducted (1) to evaluate whether the relationship between social support for abortion decision and mental health outcomes differed for participants under the age of 25 compared to those over the age of 25, and (2) to evaluate the association between social support for abortion decision and mental health outcomes using continuous measures of mental health. All statistical analyses were performed in Stata version 15.1.

RESULTS

Of the 1,092 potential participants approached, 846 (77.5%) agreed to participate. In total, 20 were ineligible, and 784 (71.7%) of the eligible individuals completed the survey. The most common indicated reasons for non-participation were lack of interest (13.4%), emotional

discomfort or stress (11.4%), and inconvenient timing (11.0%). Of the 784 participants surveyed, 67 were excluded due to missing values for either anxiety or depression, leaving 717 participants for inclusion in the analysis.

Demographic and pregnancy characteristics, health behaviors, and characteristics of abortion services are reported in Table 1. The majority of participants (95.4%) were 18 years of age or older. Approximately half (48.8%) of the participants in the sample were white, and 26.4% of participants indicated Hispanic ethnicity. At the time of recruitment, the majority (67.7%) of participants were less than 13 weeks pregnant and 40.0% were nulliparous. While 49.7% of participants obtained care within 25 miles of their home, 26.4% travelled over 100 miles to receive abortion services. Difficulties with other logistical barriers were notable, as 24.7% of participants reported difficulties in finding a facility to receive care and 37.8% of participants reported difficulties in obtaining money to pay for services or related expenses.

Depression risk was reported by 265 (37.0%) participants, and the median PHQ-2 score was 2 (IQR: 0-4). Results for the association between individual sources of support and risk of depression are listed in Table 2. The prevalence of depression risk did not differ between participants who reported a high level of support for their decision versus those that reported no support from mothers, fathers, other family members and friends. However, participants for whom the man involved in the pregnancy did not support their decision at all had a higher prevalence of depression risk compared to participants for whom the man involved in the pregnancy very much supported their decision (Prevalence: 48.7% versus 32.0%; aPR: 1.55; 95% CI: 1.05, 2.30). A similar trend was observed for current intimate partner, although the association was not statistically significant (Prevalence: 43.1% versus 33.5%; aPR: 1.34; 95% CI: 0.89, 2.04). In a sensitivity analysis using continuous measure of depressive symptoms, similar associations between social support for abortion decision and risk of depression were observed for current intimate partner and man involved in the pregnancy (data not shown). In sensitivity analyses

evaluating the relationship between social support for abortion decision and risk of depression among participants under the age of 25 compared to those over the age of 25, results did not differ by age (data not shown).

Similar patterns were observed for the relationship between social support for abortion decision and risk of anxiety (Table 2). Anxiety risk was reported by 278 (38.8%) participants, and the median GAD-7 score was 7 (IQR: 4-14). The prevalence of anxiety risk did not differ between participants who reported a high level of support for their decision versus those that reported no support from mothers, fathers, other family members and friends. Compared to participants whose current intimate partner very much supported their decision, participants whose current intimate partner only somewhat supported their decision had a higher prevalence of anxiety risk (Prevalence: 47.8% versus 37.7%; aPR: 1.46; 95% CI: 1.05, 2.05). Similarly, participants for whom the man involved in the pregnancy did not support their decision at all had higher prevalence of anxiety risk compared to those receiving full support, though the difference was not statistically significant (Prevalence: 40.5% vs. 32.7%; aPR: 1.25; 95% CI: 0.83, 1.89). In a sensitivity analysis using continuous measures of mental health, similar associations between social support for abortion decision and anxiety risk were observed for current intimate partner and man involved in the pregnancy (data not shown). In a sensitivity analysis evaluating the relationship between social support for abortion decision and anxiety risk among participants under the age of 25 compared to those over the age of 25, results did not differ by age (data not shown).

When considering the association between aggregate measures of support for abortion decision and risk anxiety and depression, mixed results were observed. Compared to participants who indicated that none of the sources very much supported their decision, participants who indicated that at least one source very much supported their decision had a similar prevalence of depression risk (Prevalence: 35.9% vs. 40.8%; aPR: 0.88; 95% CI: 0.66, 1.16) and anxiety risk

(Prevalence: 38.6% vs. 39.1%; aPR: 0.92; 95% CI: 0.69, 1.21). However, compared to participants who reported that none of the sources were completely unsupportive, participants with at least one source who did not support their decision at all had a higher prevalence of risk for depression (Prevalence: 49.6% versus 34.0%; aPR: 1.46; 95% CI: 1.10, 1.92). In contrast, the prevalence of anxiety risk did not differ between these groups (Prevalence: 44.4% versus 37.7%; aPR: 1.27; 95% CI: 0.94, 1.71) (Table 2).

Additional analyses investigating the relationship between unwanted disclosure of decision to terminate pregnancy and risk of anxiety and depression revealed that participants who were forced to disclose had a higher prevalence of depression risk than participants who reported that they were not forced to disclose (Prevalence: 49.5% versus 32.1%; aPR 1.41; 95% CI: 1.08, 1.83) (Table 3). A similar trend was observed for anxiety risk, although the results were not statistically significant (Prevalence: 49.5% versus 34.6%; aPR: 1.27; 95% CI: 0.98, 1.65). Results were similar in the sensitivity analyses using continues scores for symptoms of depression and anxiety, including a statistically significant increase in GAD-7 scores (data not shown).

DISCUSSION

In this cross-sectional study of people seeking abortion services in three US states, lower levels of perceived support regarding decision to seek abortion were associated with a higher prevalence of risk of depression and anxiety at the time of seeking abortion services. In particular, people for whom the man involved in the pregnancy did not support their decision at all had a 55% higher prevalence of depression risk compared to those for whom the man involved with the pregnancy fully supported their decision. Similarly, people whose current intimate partner only somewhat supported their decision had a higher prevalence of anxiety risk compared to those whose partners fully supported their decision. Previous evidence has suggested a protective effect of general partner support on various socioemotional outcomes;[12,22] these findings add to

this body of evidence and suggest that support from intimate partners may also be an important contributor to depression and anxiety during the decision-making process.

Social support regarding abortion decision from familial and peer sources, namely mother, father, other family members, and friends, was not found to be associated with risk of depression and anxiety. These findings seemingly contrast with previous evidence suggesting that general social support is associated with lower rates of adverse mental health outcomes following abortion. In particular, a 2020 longitudinal study of people seeking abortion services reported that increased emotional social support was associated with a reduced odds of subsequent psychological distress in adjusted regression models, although anxiety and depression were not evaluated separately.[23] Additionally, a study of post-abortion mental health and social support found that support from family and friends was inversely correlated with both anxiety and depression.[24] However, it is important to note that these studies defined support using the Multidimensional Scale of Perceived Social Support (MSPSS), which measures general social and emotional support rather than support regarding abortion decision[25]; additionally, both studies examined social support and mental health outcomes following the receipt of abortion services. Given the findings of the present study, it is possible that decisional support from an intimate partner plays a more prominent role than support from other sources during the decision-making process prior to the abortion, and that the latter sources of support are more critical during the post-abortion period.

Additional analyses revealed that unwanted disclosure of decision to terminate pregnancy was associated with risk of depression and anxiety, even after adjusting for the barriers to care which may have necessitated the unwanted disclosure. These findings are consistent with recent literature, which suggests that people seeking abortions who disclosed their decision to one or more people other than their partner have two-fold greater odds of experiencing psychological distress over five years following the abortion.[23] Taken together with the present study's findings

related to the protective effect of social support regarding abortion decision in risk of depression and anxiety, these findings suggest that the circumstances under which a person discloses their decision to seek an abortion play an important role in their mental health. Specifically, these findings highlight the importance of privacy and autonomy in the decision-making process. Conversely, these findings also illustrate the deleterious effects of barriers to accessing abortion care on the mental health of people who disclose their decision in order to overcome these barriers; these findings suggest that reducing these logistical and financial barriers, thereby increasing access to abortion services, would likely reduce the adverse mental health consequences associated with unwanted disclosure.

The current study has several notable strengths. The assessment of social support in the context of abortion-related decision-making, rather than general support, from a variety of individual sources adds novel and important insight into the risk of depression and anxiety among people seeking abortion services. The inclusion of multiple study sites from distinct geographic regions allows for greater generalizability of study findings; additionally, over one in four people indicated that they travelled 100 miles or more to obtain care from these facilities, further increasing the geographic generalizability. Likewise, the characteristics of the sample are consistent with previously published data from a nationally representative sample of patients seeking abortions with respect to race/ethnicity, educational attainment, marital status, age, and parity.[26]

It is also important to interpret the findings from the present study in the context of several limitations. First, the cross-sectional nature of the survey precludes a temporal understanding of the observed relationship between social support and mental health outcomes. Measures of social support regarding decision to terminate pregnancy may be susceptible to misclassification, particularly for people who responded "*Don't know*," or "*They are not in my life or they don't know I'm considering ending this pregnancy*"; this potential misclassification may obscure the true

associations between these levels of support and mental health. However, it is unlikely that misclassification affected responses related to other levels of support, specifically for people who responded "*Very much*" or "*Not at all*." Additionally, the survey design precluded the ability to discern whether the man involved in the pregnancy was distinct from a person's current intimate partner. Future studies of social support regarding abortion decision should further explore the differences in the role of social support for people whose current intimate partner is not the man involved in the pregnancy. Lastly, while the study was open to all genders, the sample of transgender and gender non-conforming participants was too small to evaluate potential differences in this group. The authors acknowledge that the need for abortion and other reproductive health services is not exclusive to cisgender women and that further research is necessary to understand the relationship between social support regarding abortion decision and mental health outcomes in gender minority populations.

CONCLUSION

The findings from the current study support the growing body of evidence suggesting that increased social support is associated with a reduction in the prevalence of anxiety and depression. Specifically, findings from this study suggest that intimate partner support (whether a current intimate partner, the man involved in the pregnancy, or both) may play a prominent role in the mental health outcomes of people seeking abortion services, particularly during the decision-making process. Additionally, unwanted disclosure of decision to terminate pregnancy was associated with increased prevalence of depression and increased GAD-7 scores. These findings have important implications for clinical practice, namely in the provision of counselling and other programmatic interventions for people who lack the necessary social support regarding their decision or were forced to disclose in order to access services.

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TABLES

Table 1a. Demographic characteristics and health behaviors

Characteristic	**Overall (N = 717)**
Age, n (%)	
15-17	33 (4.6)
18-19	54 (7.5)
20-24	187 (26.1)
25-29	207 (28.9)
30-39	212 (29.6)
40+	24 (3.3)
Hispanic ethnicity, n (%)	189 (26.4)
Race[1], n (%)	
Black	241 (33.6)
Asian	51 (7.1)
Native American or Alaska Native	44 (6.1)
White	350 (48.8)
Native Hawaiian or Pacific Islander	19 (2.7)
Middle Eastern or North African	6 (0.8)
Other	17 (2.4)
Missing	8 (1.1)
Highest level of education completed, n (%)	
Less than high school diploma	80 (11.2)
High school diploma	216 (30.1)
Some college or Associate's degree	283 (39.5)
Bachelor's degree or higher	129 (18.0)
Missing	9 (1.3)
Marital status, n (%)	
Single or never married	550 (76.7)
Married	80 (11.2)
Separated, divorced, or widowed	71 (9.9)
Missing	16 (2.2)
Has health insurance, n (%)	
Yes	552 (77.0)
No	134 (18.7)
Don't know	20 (2.8)
Missing	11 (1.5)

Characteristic	Overall (N = 717)
Confidence in ability to come up with $2,000 for unexpected needs in next month[2], n (%)	
High confidence	504 (70.3)
Low confidence	195 (27.2)
Don't Know	18 (2.5)
Illicit drug use[3], n (%)	96 (13.4)
Excess alcohol use[4], n (%)	229 (31.9)
History of depression or anxiety, n (%)	
None	455 (63.5)
Anxiety only	77 (10.7)
Depression only	36 (5.0)
Depression and anxiety	81 (11.3)
Don't know	58 (8.1)
Missing	10 (1.4)

[1]Race categories are reported as non-mutually exclusive in order to reflect participants who identify as multiple races. Thus, percentage values may add up to greater than 100.
[2]Participants were asked, "How confident are you that you could come up with $2,000 if an unexpected need arose within the next month?" and were categorized as "Yes" if they answered "Somewhat confident" or "Very confident."
[3]Illicit drug use was defined as a participant indicating monthly, weekly, daily, or almost daily use of any illicit or street drugs or prescription drugs for recreational use in the 12 months prior to pregnancy.
[4]Excess alcohol use was defined as a participant indicating monthly, weekly, daily, or almost daily consumption of 4 or more alcoholic drinks on one occasion in the 12 months prior to pregnancy.

Table 1b. Pregnancy and abortion characteristics

Characteristic	**Overall (N = 717)**
Number of previous births, n (%)	
None	287 (40.0)
One	176 (24.6)
Two	130 (18.1)
Three or more	114 (15.9)
Missing	10 (1.4)
Gestational age, n (%)	
<=12 weeks	500 (69.7)
13-19 weeks	104 (14.5)
>=20 weeks	104 (14.5)
Missing	9 (1.3)
Distance travelled to obtain care, n (%)	
25 miles or fewer	356 (49.7)
26-50 miles	94 (13.1)
51-75 miles	41 (5.7)
76-100 miles	37 (5.2)
100 miles or more	189 (26.4)
Seeking abortion due to fetal medical condition, n (%)	28 (3.9)
Seeking abortion because pregnancy is result of rape or sexual assault, n (%)	13 (1.8)
Experienced difficulties …[2]	
Finding a facility to receive care, n (%)	177 (24.7)
Travelling to receive care, n (%)	198 (27.6)
Obtaining money to pay for services, n (%)	271 (37.8)
Time spent related to receiving care, n (%)	222 (31.0)

Table 2. Association between social support regarding abortion decision and risk of depression and anxiety[1]

	Depression, n (%)	PR, Crude (95% CI)	PR, Adjusted[2] (95% CI)	Anxiety, n (%)	PR, Crude (95% CI)	PR, Adjusted[2] (95% CI)
Social support by individual source						
Mother						
Very much supports decision (n = 187)	75 (40.1)	Ref.	Ref.	79 (42.3)	Ref.	Ref.
Somewhat supports decision (n = 69)	27 (39.1)	0.98 (0.63, 1.51)	1.03 (0.66, 1.61)	31 (44.9)	1.06 (0.70, 1.61)	1.13 (0.74, 1.72)
Does not support decision at all (n = 63)	26 (41.3)	1.03 (0.66, 1.61)	1.03 (0.64, 1.64)	24 (38.1)	0.90 (0.57, 1.42)	0.96 (0.60, 1.54)
Don't know (n = 136)	45 (33.1)	0.83 (0.57, 1.19)	0.86 (0.58, 1.26)	40 (29.4)	0.70 (0.48, 1.02)	0.75 (0.51, 1.12)
Not in my life/have not disclosed (n = 256)	90 (35.2)	0.88 (0.65, 1.19)	0.89 (0.65, 1.22)	101 (39.5)	0.93 (0.70, 1.25)	0.92 (0.68, 1.25)
Father						
Very much supports decision (n = 84)	31 (36.9)	Ref.	Ref.	41 (48.8)	Ref.	Ref.
Somewhat supports decision (n = 36)	13 (36.1)	0.98 (0.51, 1.87)	1.05 (0.55, 2.03)	16 (44.4)	0.91 (0.51, 1.62)	0.94 (0.55, 1.50)
Does not support decision at all (n = 71)	29 (40.9)	1.11 (0.67, 1.84)	1.16 (0.69, 1.97)	27 (38.0)	0.78 (0.48, 1.27)	0.91 (0.52, 1.69)
Don't know (n = 176)	54 (30.7)	0.83 (0.53, 1.29)	0.90 (0.57, 1.42)	52 (29.6)	0.61 (0.40, 0.91)	0.68 (0.44, 1.03)
Not in my life/have not disclosed (n = 341)	133 (39.0)	1.06 (0.71, 1.56)	1.14 (0.76, 1.70)	136 (39.9)	0.82 (0.58, 1.16)	0.86 (0.60, 1.24)
Other family members						
Very much supports decision (n = 131)	41 (31.3)	Ref.	Ref.	47 (35.9)	Ref.	Ref.
Somewhat supports decision (n = 89)	34 (38.2)	1.22 (0.77, 1.92)	1.20 (0.75, 1.90)	35 (39.3)	1.10 (0.71, 1.70)	1.14 (0.73, 1.78)
Does not support decision at all (n = 63)	27 (42.9)	1.37 (0.84, 2.23)	1.29 (0.78, 2.12)	22 (34.9)	0.97 (0.59, 1.61)	1.01 (0.60, 1.71)
Don't know (n = 169)	59 (34.9)	1.12 (0.75, 1.66)	1.06 (0.71, 1.59)	57 (33.7)	0.94 (0.64, 1.38)	0.94 (0.63, 1.40)
Not in my life/have not disclosed (n = 256)	101 (39.5)	1.26 (0.88, 1.81)	1.21 (0.84, 1.76)	114 (44.5)	1.24 (0.88, 1.74)	1.18 (0.83, 1.69)
Friend(s)						
Very much supports decision (n = 257)	87 (33.9)	Ref.	Ref.	89 (34.6)	Ref.	Ref.
Somewhat supports decision (n = 120)	53 (44.2)	1.30 (0.93, 1.84)	1.28 (0.90, 1.81)	51 (42.5)	1.23 (0.87, 1.73)	1.22 (0.86, 1.73)
Does not support decision at all (n = 41)	12 (29.3)	0.86 (0.47, 1.58)	0.86 (0.47, 1.60)	12 (29.3)	0.85 (0.46, 1.54)	0.98 (0.53, 1.80)
Don't know (n = 14)	35 (30.7)	0.91 (0.61, 1.34)	0.89 (0.60, 1.33)	40 (35.1)	1.01 (0.70, 1.47)	1.02 (0.70, 1.49)
Not in my life/have not disclosed (n = 172)	72 (41.9)	1.24 (0.90, 1.69)	1.19 (0.87, 1.64)	79 (45.9)	1.33 (0.98, 1.80)	1.27 (0.93, 1.73)

	Depression, n (%)	PR, Crude (95% CI)	PR, Adjusted[2] (95% CI)	Anxiety, n (%)	PR, Crude (95% CI)	PR, Adjusted[2] (95% CI)
Current intimate partner						
Very much supports decision (n = 340)	114 (33.5)	Ref.	Ref.	128 (37.7)	Ref.	Ref.
Somewhat supports decision (n = 111)	46 (41.4)	1.24 (0.88, 1.74)	1.34 (0.94, 1.92)	53 (47.8)	1.27 (0.92, 1.75)	1.46 (1.05, 2.05)
Does not support decision at all (n = 72)	31 (43.1)	1.28 (0.86, 1.91)	1.34 (0.89, 2.04)	24 (33.3)	0.89 (0.57, 1.37)	1.03 (0.65, 1.62)
Don't know (n = 58)	18 (31.0)	0.93 (0.56, 1.52)	0.89 (0.53, 1.48)	19 (32.8)	0.87 (0.54, 1.41)	0.94 (0.57, 1.55)
Not in my life/have not disclosed (n = 125)	53 (42.4)	1.26 (0.91, 1.75)	1.25 (0.89, 1.74)	51 (40.8)	1.08 (0.78, 1.50)	1.12 (0.80, 1.56)
Man involved in pregnancy						
Very much supports decision (n = 369)	118 (32.0)	Ref.	Ref.	137 (32.7)	Ref.	Ref.
Somewhat supports decision (n = 134)	54 (40.3)	1.26 (0.91, 1.74)	1.37 (0.98, 1.92)	57 (42.5)	1.15 (0.84, 1.56)	1.35 (0.98, 1.86)
Does not support decision at all (n = 74)	36 (48.7)	1.52 (1.05, 2.21)	1.55 (1.05, 2.30)	30 (40.5)	1.09 (0.74, 1.62)	1.25 (0.83, 1.89)
Don't know (n = 55)	19 (34.6)	1.08 (0.67, 1.75)	1.05 (0.64, 1.72)	18 (32.7)	0.88 (0.54, 1.44)	0.95 (0.57, 1.56)
Not in my life/have not disclosed (n = 83)	37 (44.6)	1.39 (0.96, 2.02)	1.30 (0.89, 1.91)	35 (42.2)	1.14 (0.78, 1.65)	1.08 (0.73, 1.59)
Overall social support						
Very much supported by at least one source						
No; no sources who very much support decision (n = 184)	75 (40.8)	Ref.	Ref.	72 (39.1)	Ref.	Ref.
Yes; at least one source very much supports decision (n = 515)	185 (35.9)	0.88 (0.67, 1.15)	0.88 (0.66, 1.16)	199 (38.6)	0.99 (0.75, 1.29)	0.92 (0.69, 1.21)
Not at all supported by at least one source						
No; no sources who do not support decision at all (n = 573)	195 (34.0)	Ref.	Ref.	216 (37.7)	Ref.	Ref.
Yes; at least one source who does not support decision at all (n = 135)	67 (49.6)	1.46 (1.10, 1.92)	1.46 (1.10, 1.92)	60 (44.4)	1.18 (0.89, 1.57)	1.27 (0.94, 1.71)

Abbreviations: PR: Prevalence ratio

[1]Depression risk was defined as a score of 3 or greater on the PHQ-2 assessment. Anxiety risk was defined as a score of 10 or greater on the GAD-7 assessment.

[2]Models adjusted for age, race/ethnicity, gestational age, educational attainment, number of previous births, socioeconomic security, and clinic site.

Table 3. Association between unwanted disclosure of abortion and risk of depression and anxiety[1]

	Depression, n (%)	**PR, Crude (95% CI)**	**PR, Adjusted[1] (95% CI)**	**Anxiety, n (%)**	**PR, Crude (95% CI)**	**PR, Adjusted[1] (95% CI)**
Disclosure of decision to terminate pregnancy						
No unwanted disclosure (n = 520)	167 (32.1)	Ref.	Ref.	180 (34.6)	Ref.	Ref.
Unwanted disclosure (n = 196)	97 (49.5)	1.54 (1.20, 1.98)	1.41 (1.08, 1.83)	97 (49.5)	1.43 (1.12, 1.83)	1.27 (0.98, 1.65)

Abbreviations: PR: Prevalence ratio
[1]Depression risk was defined as a score of 3 or greater on the PHQ-2 assessment. Anxiety risk was defined as a score of 10 or greater on the GAD-7 assessment.
[2]Models adjusted for age, race/ethnicity, gestational age, educational attainment, number of previous births, socioeconomic security, barriers to care, and clinic site.