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Psychological Aspects of Contraception, Unintended Pregnancy, and Abortion

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Abstract

The knowledge of important biopsychosocial factors linking women's reproductive health and mental health is increasing. This review focuses on psychological aspects of contraception, unintended pregnancy, and abortion because these are common reproductive health experiences in U.S. women's lives. This review addresses the mental-health antecedents and consequences of these experiences, mostly focusing on depression and depressive symptoms before and after unintended pregnancy and contraception. As mental-health antecedents, depressive symptoms predict contraceptive behaviors that lead to unintended pregnancy, and mental-health disorders have been associated with having subsequent abortions. In examining the mental-health consequences, most sound research does not find abortion or contraceptive use to cause mental-health problems. Consequently, evidence does not support policies based on the notion that abortion harms women's mental health. Nevertheless, the abortion-care setting may be a place to integrate mental-health services. In contrast, women who have births resulting from unintended pregnancies may be at higher risk of postpartum depression. Social policies (e.g., paid maternity leave, subsidized child care) may protect women from mental-health problems and stress of unplanned children interrupting employment, education, and pre-existing family care responsibilities.

Keywords

unintended pregnancy; abortion; contraception; depressive symptoms

Introduction

Women's reproductive health across the life span encompasses adolescent sexual health, pubertal timing, sexuality, sex education, menstrual cycle, unintended pregnancy and abortion, contraception, body image, pregnancy, childbirth, miscarriage, assisted

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Tweet: Contraception, unintended pregnancy, abortion, and psychological health: Does science inform reproductive policies?

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reproductive technologies, menopause, and reproductive aging. Highlighting the importance of this topic, the World Health Organization (2009) reviewed research at the intersection of mental health and reproductive health. Here we provide a more critical, in-depth, and up-to-date focus on psychological aspects of contraception, unintended pregnancy, and abortion. As their psychology cannot be understood outside of their sociopolitical context, we focus on the U.S. context, where policies and clinical practice have much potential to be informed by scientific research.

Unintended pregnancy, abortion, and contraception are common experiences in U.S. women's lives. Approximately half (51%) of pregnancies in the United States are unintended (Finer & Zolna, 2014), one of the highest of developed nations (Singh, Sedgh, & Hussain, 2010); 30% of U.S. women will have an abortion by the age of 45 (Jones & Kavanaugh, 2011); and 99% of U.S. women who have sex will use contraception at some point in their reproductive life spans (Mosher & Jones, 2010). Few consider psychological aspects of each of these common experiences in women's lives, particularly mental-health-related aspects. In this review, the first two sections on contraception and unintended pregnancy focus on depression or depressive symptoms, because this is one of the most common and debilitating mental-health conditions among reproductive-aged women (National Comorbidity Survey Replication, 2007; U.S. Burden of Disease Collaborators, 2013). Moreover, in reproductive experiences, depression's role is better understood than other psychological conditions. Because abortion and mental-health research has been conducted for approximately 50 years, broader mental-health outcomes appear here.

Contraception, unintended pregnancy, and abortion, though distinct, are interrelated. Forty-three percent of unintended pregnancies are due to inconsistent or incorrect contraceptive use, and another 52% are due to non-use (Sonfield, Hasstedt, & Gold, 2014). Many unintended pregnancies end in abortion. Specifically, 40% of unintended pregnancies, excluding miscarriages, end in abortion, and 95% of abortions result from unintended pregnancies (Finer & Zolna, 2011).

Psychological Aspects of Contraception

Some psychological research examines whether hormonal contraception causes mood disorders, namely depression. In the 60s and 70s, when oral contraceptive pills used higher dose hormones, using oral contraception briefly seemed to increase depressive symptoms (Parry & Rush, 1979). In contrast, recent studies with current hormonal contraceptives, which use lower doses, find no association or that hormonal contraceptive use lowers depressive symptoms (Keyes et al., 2013; O'Connell, Davis, & Kerns, 2007). However, because 95% of unintended pregnancies are due to flaws in contraceptives use, the role of psychological health in contraceptive behaviors is also crucial. Research has begun to examine whether depressive symptoms influence women's contraceptive behaviors.

Depressive Symptoms' Influence on Contraceptive Behaviors

Psychology research previously focused on understanding risky sexual behavior, such as not using condoms or birth control without a significant focus on mental-health variables (Lopez, Tolley, Grimes, Chen, & Stockton, 2013; Miller, 1986; Reid & Aiken, 2011). This

research is now considering how depressive symptoms influence condom use or contraceptive behaviors. Experiencing more depressive symptoms can lead to contraceptive behaviors that are proximate determinants of unintended pregnancy (Alvy et al., 2011; Carvajal et al., 2014; Hall, Moreau, Trussell, & Barber, 2013a, 2013b; Hall, White, Rickert, Reame, & Westhoff, 2012).

Among adolescent girls or young adult women, more depressive symptoms are associated with not using contraception, inconsistent or incorrect use, and earlier discontinuation (Garbers, Correa, Tobier, Blust, & Chiasson, 2010; Hall et al., 2013a, 2013b; Hall et al., 2012). For instance, women with more depressive symptoms were less likely to leave a reproductive health visit with any method at all (Garbers et al., 2010). However, other work has found no association between depression and contraceptive behaviors among women (Callegari et al., 2014; Faisal-Cury, Menezes, & Huang, 2013; Shrier, Harris, Sternberg, & Beardslee, 2001), or that worse mental health (including depressive symptoms and diagnosis) was associated with using or choosing more effective contraceptive methods (Callegari et al., 2014; Steinberg et al., 2013). These different findings may be due to how the outcome was assessed or the chronic versus contextual nature of the depressive symptoms that were experienced. Depression and depressive symptoms may be associated with one behavior set in the context of a routine reproductive health visit, and another behavior set in the context of an acute stressor, such as when facing an unintended pregnancy. Further research is needed to fully understand individual and situational influences on contraceptive decisions and behaviors. Considering the significant body of research linking depression with cognition and behavior (Alvy et al., 2011; Bandura, 1997; Carvajal et al., 2014; Cléry-Melin et al., 2011; Hall et al., 2012; Jeong & Cranney, 2009; Joorman, Teachman, & Gotlib, 2009; Matt, Vázquez, & Campbell, 1992; Philipson, Wakefield, & Kasparian, 2011), psychological studies of depression and contraceptive use might investigate the influence of depressive symptoms on memory and information-processing of contraceptive side effects, motivation to use contraceptive consistently and correctly, and contraceptive self-efficacy, among other variables, to elucidate mechanisms linking depression with contraceptive use.

Policy and Clinical Implications

Depressive symptoms do not necessarily lead to selecting less effective contraception (Steinberg et al., 2013), so clinicians should not assume that depressed women will not be interested in effective methods. Nevertheless, because more depressive symptoms do sometimes lead to non-use, incorrect or inconsistent use, and discontinued use, encouraging long-acting reversible methods (e.g., intrauterine device or implant) may best help women with depressive symptoms protect themselves. Furthermore, policies that provide free Food and Drug Administration (FDA)-approved contraception may remove obstacles among women with more depressive symptoms. Consequently, the passage of the Patient Protection and Affordable Care Act of (2010) may enable women with more depressive symptoms to use more effective contraception.

Psychological Aspects of Unintended Pregnancy

A 2010 Institute of Medicine report on women's health identified unintended pregnancy as one research area showing little progress, in part because the proportion of pregnancies that are unintended—approximately half—has remained high and steady for 20 years (Guttmacher Institute, 2013). Here we follow the standard definition of unintended pregnancy: pregnancies earlier than women desired or not wanted ever in the future (Mosher, Jones, & Abma, 2012).

Psychological Effects of Unintended Pregnancy

Preventing unintended pregnancy not only supports women in fulfilling their reproductive goals but also avoids negative outcomes for mothers, children, and families, and saves costs to society (Gipson, Koenig, & Hindin, 2008; Singh & Darroch, 2012; Sonfield, Hasstedt, Kavanaugh, & Anderson, 2013). The research reflects the outcomes associated with two choices for women facing an unintended pregnancy, namely, mental-health effects of births and of abortions resulting from unintended pregnancies.

Births from unintended pregnancy connect with antepartum and postpartum depression (C. T. Beck, 2001; Lancaster et al., 2010). Factors common among those having unintended pregnancies and postpartum depression (e.g., poverty, being single, or being in a violent relationship) could drive this association (Abbasi, Chuang, Dagher, Zhu, & Kjerulff, 2013). Alternatively, women who decide to carry unintended pregnancies to term may experience more stress, disappointment, or ambivalence from the unanticipated interruptions to educational, career, or other life aspirations; this in turn may lead to more depressive symptoms during and after pregnancy. Because women who have unintended pregnancies are disproportionately poor and unmarried (Finer & Zolna, 2014), a large group may also experience financial strain from a birth due to an unintended pregnancy. Not all U.S. women receive leave after giving birth, so if a woman takes maternity leave, she may lose her job (Family and Medical Leave Act of 1993, 2006). In addition, because maternity leave is unlikely to be paid (Abt Associates, 2012), financial strain may lead to shorter maternity leave, associated with maternal depression (Feldman, Sussman, & Zigler, 2004).

Policy Implications of Unintended Pregnancy's Consequences

One policy to promote mental health after an unintended pregnancy is requiring paid maternity leave and subsidizing child care, particularly for those most in need (Finer & Zolna, 2014; Guttmacher Institute, 2013). All developed nations, except the United States, have paid maternity leave, and longer leave times (Livingston, 2013). Many also have government-subsidized child care, so women may return to work after childbirth. The 1993 Family and Medical Leave Act (2006) requires that *eligible* employers allow 12 weeks of *unpaid* maternity leave, though some employers that are not required to provide maternity leave do, and some provide *paid* maternity leave. Indeed, 21% of U.S. employers provide paid maternity leave (Abt Associates, 2012, Table 2.5.3). Approximately 35% of U.S. employees' workplaces offer paid maternity leave to most or all female employees (Abt Associates, 2012, Table 2.5.2). Of women who reported being employed during their last pregnancy, approximately 70% reported taking maternity leave (Child Health USA, 2013).

The “White House Summit on Working Families” (June 2014) and the related Council of Economic Advisors (CEA; 2014) report support improved federal policies. Although the CEA (2014) report highlights the impact of leave and flexibility on health, it does not mention mental health. However, policies requiring paid maternity leave and supporting child care could psychologically benefit women, enabling them to stay in the workforce, relieving stress of lost wages, avoiding separation from their newborn just after birth, and ensuring child care upon returning to the workplace. Stress, disappointment, and depression from having to halt a career or education may be averted if affordable and reliable child care was available.

Another way to promote mental health may be to assess pregnancy intention in the prenatal setting. Women who report that their pregnancy was not wanted could be screened for mental-health symptoms at various prenatal visits, enabling early intervention if needed.

Psychological Antecedents of Unintended Pregnancy

Many factors are associated with unintended pregnancy. Much U.S. research has focused on sociodemographic factors (Finer & Zolna, 2011, 2014). For instance, over the past 20 years, unintended pregnancy has increasingly concentrated among poor and low-income women (Guttmacher Institute, 2013). Thus, providing no-cost contraception, particularly long-acting reversible methods (e.g., intrauterine devices, implants) reduces the number of unintended pregnancies (Foster et al., 2011; Peipert, Madden, Allsworth, & Secura, 2012). But it does not eliminate them because methods are used inconsistently, used incorrectly, discontinued, or not chosen (Finer & Sonfield, 2013; Montouchet & Trussell, 2013). Understanding other factors, including psychological ones, that lead to unintended pregnancy is important for prevention.

Psychological health is one such factor contributing to unintended pregnancy. Some research finds that more depressive symptoms link to unintended pregnancies (Hall, Kusunoki, Gatny, & Barber, 2014; Nelson & Lepore, 2013), but not always (Tenkku et al., 2009). There are various reasons why depressive symptoms may influence unintended pregnancy. Women with more depressive symptoms may engage in contraceptive behaviors that put them at risk of unintended pregnancy (see previous section; for example, Hall et al., 2012). Women with more depressive symptoms may be more likely to have violent or controlling partners (Devries et al., 2013; Lehrer, Buka, Gortmaker, & Shrier, 2006), thereby having less reproductive autonomy and more likelihood of being subjected to reproductive coercion, leading to unintended pregnancy (Clark, Allen, Goyal, Raker, & Gottlieb, 2014; Miller et al., 2014).

Since the findings on the relationship between depressive symptoms and unintended pregnancy are disparate, this relationship may be more complicated than a linear one.¹ Consequently, the field is too nascent for drawing policy implications.

Does Psychological Health Influence Decision-Making Around an Unintended Pregnancy?

Although some research has investigated women's reasons for having abortions (Finer, Frohwirth, Dauphinee, Singh, & Moore, 2005; Wokoma, Jampala, Bexhell, Guthrie, & Lindow, 2014), little research has examined what influences women's decision-making at

the time an unintended pregnancy occurs or how women make decisions about whether to terminate versus carry an unintended pregnancy to term. Some women may have decided before they are pregnant what they would do if faced with an unplanned pregnancy. Other women may decide what to do only when faced with it (Lydon, Dunkel-Schetter, Cohan, & Pierce, 1996). Just as depressive symptoms are associated with other health decisions and behaviors (DiMatteo, Lepper, & Croghan, 2000), including contraceptive decisions and behaviors (Hall et al., 2012; Steinberg et al., 2013), depressive symptoms may influence women's decision to carry versus terminate an unintended pregnancy.²

Psychological Aspects of Abortion

Research on psychological aspects of abortion revolves around two main questions: (a) Does abortion harm women's mental health? and (b) What personal and contextual factors influence post-abortion adjustment? Published literature answering the former question often uses trauma theory (Lee, 2003; Reardon, 1987; Robinson, Stotland, Russo, Lang, & Occhiogrosso, 2009; Speckhard, 1985). An alternative, the common-risk-factors approach (Steinberg & Finer, 2011), is largely a methodological and statistical argument: Women who have abortions have an increased prevalence of subsequent mental-health problems because of "third variables" (common risk factors). Studies answering the latter question, what influences post-abortion adjustment, usually use a stress and coping perspective (Adler, 1975; Major et al., 1990; Major, Richards, Cooper, Cozzarelli, & Zubek, 1998).

Public and scientific interest in abortion and mental health grew after President Reagan commissioned Surgeon General C. Everett Koop to write a report on the health effects of having an abortion. Instead of submitting a report to President Reagan, Koop wrote a letter stating "... the data do not support the premise that abortion does or does not cause or contribute to psychological problems" (Koop, 1989, p. 174) and testified at a congress subcommittee that possible psychological problems resulting from abortion are "miniscule from a public health perspective" (H.R., 1989).

Does Abortion Harm Women's Mental Health?

Since President Reagan's request and Surgeon General Koop's letter, three reviews by academic or professional organizations have examined evidence regarding whether abortion harms women's mental health (Adler et al., 1992; Major et al., 2009; National Collaborating Centre for Mental Health, 2011). All conclude that abortion (relative to birth of an unwanted or unintended pregnancy) does not increase women's risk of subsequent mental-health problems. Of others reviews (Charles, Polis, Sridhara, & Blum, 2008; Coleman, 2011; Robinson et al., 2009; Steinberg & Russo, 2009), only one concluded that the evidence demonstrate abortion harms women's mental health (Coleman, 2011). Because this article had several fatal methodological flaws and violated guidelines for meta-analysis, its conclusions have been rendered invalid (Kendall, Bird, Cantwell, & Taylor, 2012; Steinberg, Trussell, Hall, & Guthrie, 2012).

As mentioned above, two frameworks appear in the published literature. The first draws from trauma theory, and postulates that abortion is akin to war or rape, is necessarily traumatic, and is likely to lead to mental-health problems resembling post-traumatic stress

disorder (Lee, 2003; Reardon, 1987; Robinson et al., 2009; Speckhard, 1985). This framework originally found support from interviews with small numbers of women specifically recruited because they deemed their abortion a highly stressful experience (Speckhard, 1985). Since then, quantitative studies of poor quality have been published documenting the trauma of having an abortion (Major et al., 2009; National Collaborating Centre for Mental health, 2011; Steinberg & Russo, 2009). One example of a poor quality study (Coleman, Coyle, Shuping, & Rue, 2009) that has received much scientific scrutiny, been used to inform policy, and attracted the attention of the media concluded that abortion led to 12 different mental-health problems in the National Comorbidity Survey (Coleman et al., 2009, 2011; Planned Parenthood v. Rounds, 2012). Although the study (Coleman et al., 2009, 2011) reported that mental health was assessed after the abortion, this was not the case (Steinberg & Finer, 2012). Instead, *lifetime* mental-health diagnoses and *lifetime* abortion experience were correlated with one another, meaning that this study did not assess whether the abortion came before or after the mental-health outcome.

Sounder research examines the association between abortion versus birth and *subsequent* mental health, controlling as needed for other confounding factors. The simple association between abortion and subsequent mental-health disorders—including mood, anxiety, substance-use disorders, and suicidal ideation—appears open to alternative explanations (Steinberg, Becker, & Henderson, 2011; Steinberg & Finer, 2011; Steinberg, McCulloch, & Adler, 2014; Steinberg & Russo, 2008; Taft & Watson, 2008). In models that control for confounding factors—such as prior mental health, prior or current adverse experiences, and sociodemographic factors—the association between abortion and subsequent mental health evaporates for mood and anxiety disorders, and suicidal ideation (Fergusson, Horwood, & Boden, 2013; Steinberg et al., 2011; Steinberg & Finer, 2011; Steinberg et al., 2014; Steinberg & Russo, 2008; Taft & Watson, 2008). Furthermore, strong predictors of post-pregnancy (including post-birth and post-abortion) mental health were prior mental health, and adverse experiences. These results demonstrate that abortion is not a cause of these mental-health problems, and the simple association between abortion and these outcomes is spurious. For substance-use disorders, the association becomes non-significant when controlling for confounding factors (Fergusson et al., 2013), or reduces but remains significant (Steinberg & Finer, 2011; Steinberg et al., 2014). This association may have remained significant because important confounding factors (e.g., pregnancy intention, risk-taking personality) were not able to be controlled.

What Personal and Contextual Factors Influence Post-Abortion Adjustment?

From a stress and coping perspective, depending on personal, contextual, and social factors, a woman may perceive an abortion as more or less stressful (e.g., Major et al., 2000; Major et al., 1990; Major et al., 1998; Mueller & Major, 1989). How she perceives the experience then influences her coping strategies, and these coping strategies then influence subsequent adjustment. Some factors that predict better psychological adjustment include viewing the situation as less stressful, having social support, having more self-efficacy in coping, having a resilient personality, giving less meaning to the pregnancy, having had less intention to get pregnant, having no history of mental-health problems, and using coping strategies such as

acceptance of the situation and positive reframing (Major et al., 2000; Major et al., 1990; Major, Mueller, & Hildebrandt, 1985; Major et al., 1998).

Mental Health as an Antecedent to Abortion

Women who have abortions are more likely to have had prior mental-health problems (Steinberg & Finer, 2011; Steinberg et al., 2014; van Ditzhuijzen, ten Have, de Graaf, van Nijnatten, & Vollebergh, 2013). As noted, mental-health symptoms influence contraceptive behaviors and risk of unintended pregnancy. However, whether or not mental health influences pregnancy decision-making, once faced with an unintended pregnancy, remains unclear.

Policy and Clinical Implications Regarding the Psychology of Abortion

Generally, U.S. abortion policies are not informed by the psychological science. Some U.S. policies and court decisions assume that abortion harms women's mental health. For instance, eight states require that women seeking abortions be warned of a negative psychological effect from having an abortion. For example, in South Dakota, women are told that the medical risks of having an abortion include “depression and related psychological distress” and “suicide ideation and suicide” (South Dakota Codified Law, 2012). Although this law had been challenged in the courts, in 2012 the U.S. Court of Appeals for the Eighth Circuit upheld this law (*Planned Parenthood v. Rounds*). This ruling largely relied on findings from the aforementioned flawed Coleman et al.'s (2009) article. Furthermore, in the majority opinion of a 2007 Supreme Court decision to uphold a later abortion ban (*Gonzales v. Carhart*, 2007), Justice Kennedy stated “... it seems unexceptionable to conclude ... Severe depression and loss of esteem can follow [an abortion]” (p. 29). These policies are not supported by the evidence-base in the abortion and mental-health field.

Besides policies, the psychological science should inform clinical practice. Although abortion does not cause mental-health problems, women having abortions are more likely to have had mental-health problems. Because women who have abortions are more likely to have histories of mental-health problems, and these mental-health problems may be untreated, the abortion-care setting may be a place to provide mental-health screening or interventions. Given that women seeking abortion are disproportionately low-income, this may be the only setting in which these women receive mental-health services.

Conclusion

Depression or depressive symptoms do not result from using hormonal contraception, nor are depression or other mental-health problems effects of having an abortion. Therefore, policies based on the notion that abortion harms women are unwarranted. Still, abortion clinics may be an appropriate setting to integrate mental-health services. In contrast, the science does connect unintended pregnancies resulting in births and subsequent depression. Consequently, policies that provide paid maternity leave and subsidized child care may relieve stress for many women having unintended pregnancies.

Research on depressive symptoms as an antecedent of contraception, unintended pregnancy, and abortion, is still emerging. However, most research finds depressive symptoms relate to contraceptive behaviors that lead to unintended pregnancy and abortion. Future research, beneficial to both psychology and reproductive health fields, could uncover mechanisms by which depressive symptoms lead to not using contraception, using it inconsistently or incorrectly, and discontinuing it. As well, such research could help understanding whether and how depressive symptoms or depression influences women's decision to carry to term or terminate an unintended pregnancy. Providing free contraception, as the Affordable Care Act does, may remove barriers perceived as more difficult by women with depressive symptoms.

Notes

1. It may be curvilinear, such that those with the least or no depressive symptoms and those with the most depressive symptoms are at lowest risk of unintended pregnancy, albeit for different reasons. Women with little or no depressive symptoms may be better able to protect themselves from unintended pregnancy by using contraception consistently and correctly, and not having relationship with controlling partners. Women with the most depressive symptoms may have little sexual desire and withdraw from social activities (American Psychiatric Association, 2013; Hamilton & Meston, 2013), thereby not engaging in frequent sexual activity with others and decreasing their chances of having an unintended pregnancy. Alternatively, some women with high levels of depressive symptoms may engage in sexual behaviors that lead to unintended pregnancies whereas others do not, in which case no relationship may be found between depressive symptoms and unplanned pregnancy.
2. Various social-psychological theories propose that affect, which is influenced by psychological health, influences peoples' decisions, judgments, and behaviors (Forgas, 1995; Kahneman, 2003; Schwarz & Clore, 2003; Singer & Salovey, 1988). For instance, women who are experiencing more depressive symptoms at the time of making a decision about an unintended pregnancy may be more likely to use this as information in their decision-making process (Forgas, 1995; Schwarz & Clore, 2003). Feelings of depression may be attributed to the unexpected pregnancy and possibility of having a child that is not wanted, leading women to choose to terminate their pregnancy. Alternatively, those with more mental-health symptoms may have more negative views of the world (Beck, 1987) and not want to bring a child into it. Future research that seeks to understand how women make decisions when faced with an unintended pregnancy is imperative to understand how to help women make the best decisions for themselves and to inform decision-making theories.

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Key Points

- Science provides evidence relevant to reproductive policies regarding contraception, unintended pregnancy, and abortion.
- More depressive symptoms predict contraceptive behaviors that lead to unintended pregnancy, and mental-health disorders predict subsequent abortions.
- Contraception and abortion themselves do not predict mental-health issues.
- Depression does follow unintended pregnancies ending in birth.