JOGNN

RESEARCH

Insomnia Treatment Preferences During Pregnancy

Ivan D. Sedov, Sherryl H. Goodman, and Lianne M. Tomfohr-Madsen

Correspondence
Ivan D. Sedov, MSc,
201-1711 11 St. SW,
Calgary, AB T2T 3J7,
Canada.
isedov@ucalgary.ca

Keywords
insomnia
intervention
pregnancy
treatment preferences

ABSTRACT

Objective: To determine pregnant women's preferences for the treatment of insomnia: cognitive behavioral therapy (CBT-I), pharmacotherapy, or acupuncture.

Design: A cross-sectional survey of pregnant women.

Setting: We recruited participants in person at a low-risk maternity clinic and a pregnancy and infant trade show and invited them to complete an online questionnaire.

Participants: The sample ($N = 187$) was primarily White (70%), married or common-law married (96%), and on average 31 years of age; the mean gestational age was 28 weeks.

Methods: Participants read expert-validated descriptions of CBT-I, pharmacotherapy, and acupuncture and then indicated their preferences and perceptions of each approach.

Results: Participants indicated that if they experienced insomnia, they preferred CBT-I to other approaches, $\chi^2(2) = 38.10$, $p < .001$. They rated CBT-I as the most credible treatment ($\eta^2_{partial} = .22$, $p < .001$) and had stronger positive reactions to it than to the other two approaches ($\eta^2_{partial} = .37$, $p < .001$).

Conclusion: Participants preferred CBT-I for insomnia during pregnancy. This preference is similar to previously reported preferences for psychotherapy for treatment of depression and anxiety during pregnancy. It is important for clinicians to consider women's preferences when discussing possible treatment for insomnia.

Ivan D. Sedov, MSc, is a graduate student in the Department of Psychology, University of Calgary, Calgary, Alberta, Canada.

Sherryl H. Goodman, PhD, is a professor in the Department of Psychology, Emory University and in the Department of Psychiatry and Behavioral Sciences, Emory University School of Medicine, Atlanta, GA.

Lianne M. Tomfohr-Madsen, PhD, is an assistant professor in the Department of Psychology, University of Calgary and holds a professorship at the Alberta Children's Hospital Research Institute, Calgary, Alberta, Canada.

The authors report no conflict of interest or relevant financial relationships.

P atient preferences are increasingly recognized as key factors in the delivery of evidence-based care (Charles, Gafni, & Whelan, 1999; Tompkins, Swift, & Callahan, 2013). The delivery of preferred treatments for psychological problems, including mood and sleep disorders, has been shown to improve adherence and outcomes (Lin et al., 2005; Vincent & Lionberg, 2001). A growing number of researchers suggest that women prefer nonpharmacologic therapies for the treatment of mood and anxiety disorders during pregnancy (Arch, 2014; Dimidjian & Goodman, 2014; Goodman, Dimidjian, & Williams, 2013). Although it follows that they may also prefer nonpharmacologic interventions for the treatment of insomnia in pregnancy, to our knowledge, no articles have been published to date on this question.

The lack of evidence about treatment preferences for insomnia in pregnancy is important, because sleep complaints are common among pregnant women (Baratte-Beebe & Lee, 1999; Facco, Kramer, Ho, Zee, & Grobman, 2010; Hutchison et al., 2012; Lee, Zaffke, & McEnany, 2000). Subthreshold symptoms of insomnia measured by the Insomnia Severity Index are frequent across all trimesters of pregnancy and were reported by 57% (Mindell, Cook, & Nikolovski, 2015) to 74% (Fernández-Alonso, Trabalón-Pastor, Chedraui, & Pérez-López, 2012) of participants. Clinically significant symptoms were reported by 14% (Mindell et al., 2015) to 27% (Fernández-Alonso et al., 2012) of participants. Moreover, symptoms of insomnia increase as pregnancy progresses, with risk estimated as 2.03 times greater in the third trimester than in the first trimester (Kızılırmak, Timur, & Kartal, 2012). After childbirth, subjective sleep quality was stable in most participants; those with poor sleep quality in pregnancy continued to report poor sleep quality in the postpartum period (Tomfohr, Buliga, Letourneau, Campbell, & Giesbrecht, 2015).

Disturbed sleep is associated with a number of potential maternal consequences. For example,

AWHONN

1

FLA 5.4.0 DTD ■ JOGN196_proof ■ 24 March 2017 ■ 2:32 am ■ ce

> **Several treatment modalities are available for sleep complaints during pregnancy, but little is known about the way women perceive these interventions.**

poorer sleep quality in early pregnancy predicted greater levels of depression symptoms later in pregnancy and in the postpartum period (Skouteris, Wertheim, Germano, Paxton, & Milgrom, 2009; Tomfohr et al., 2015). Poorer sleep quality and shorter sleep duration during pregnancy were also associated with greater risk of preterm labor, longer labor, and increased risk of cesarean birth (Lee & Gay, 2004; Okun, Schetter, & Glynn, 2011). Clearly, disturbed sleep in pregnant women is an important concern for the health of mother and child, and a number of treatment modalities (psychotherapy, pharmacotherapy, and complementary alternative treatments) are available from which to choose.

Potential Treatments for Insomnia in Pregnancy

Among psychotherapeutic treatments, cognitive behavioral therapy for insomnia (CBT-I) is a non-pharmacologic, evidence-based treatment that combines elements of cognitive (e.g., challenging maladaptive beliefs about sleep) and behavioral (e.g., sleep restriction) therapy to treat insomnia. In a number of clinical trials, researchers indicated that CBT-I was effective to reduce symptoms of insomnia, and benefits continued for as long as 3 years posttreatment (Backhaus, Hohagen, Voderholzer, & Riemann, 2001; Edinger, Wohlgemuth, & Radtke, 2001; Edinger, Wohlgemuth, Radtke, Marsh, & Quillian, 2001; Morin, Colecchi, & Stone, 1999; Morin, Kowatch, Barry, & Walton, 1993). In contrast, discontinuation of medication for sleep is often associated with a return of insomnia symptoms (Riemann & Perlis, 2009). The authors of a small pilot study tested CBT-I in pregnancy and found it to be effective to reduce symptoms of insomnia (Tomfohr-Madsen, Clayborne, Rouleau, & Campbell, 2016). CBT-I also was effective to reduce symptoms of insomnia during the postpartum period (Swanson, Flynn, Adams-Mundy, Armitage, & Arnedt, 2013). Overall, CBT-I appears to be a promising treatment for insomnia during the perinatal period; however, large-scale efficacy trials are needed.

Several different classes of hypnotic medications are available to treat insomnia. Although these medications are effective in the short term, they are also accompanied by safety concerns when used during pregnancy. These drug classes include benzodiazepine receptor agonists, antidepressants, and γ-aminobutyric acid reuptake inhibitors (Feren, Katyal, & Walsh, 2006). In terms of safety of sleep medications for the treatment of insomnia in the prenatal period, some authors suggested that benzodiazepine and hypnotic benzodiazepine receptor agonists are associated with increased risk of preterm labor, low birth weight, and small-for-gestational-age infants (Okun, Ebert, & Saini, 2015). In particular, zolpidem, a γ-aminobutyric acid agonist medication, has been associated with preterm birth, cesarean birth, and low-birth-weight infants (Juric, Newport, Ritchie, Galanti, & Stowe, 2009; Wang, Lin, Lin, & Chen, 2010). With regard to efficacy, the sleeping medications trazodone (an antidepressant medication) and diphenhydramine (an antihistamine) improved total sleep time and sleep efficiency in pregnant women (Khazaie, Ghadami, Knight, Emamian, & Tahmasian, 2013). Khazaie et al. also reported that pharmacologic treatment of insomnia in pregnancy was associated with decreased symptoms of postpartum depression compared with placebo. Overall, more research is needed on the balance between efficacy and safety of various pharmacologic agents for treatment of insomnia during the prenatal period.

Complementary and alternative medicine treatments are also available. Researchers found that many women use such interventions during pregnancy, in part because of a greater perception of control over health and well-being (Hall, Griffiths, & McKenna, 2011; Warriner, Bryan, & Brown, 2014). Acupuncture is a commonly used treatment with some preliminary evidence to support its efficacy in the treatment of insomnia (Cheuk, Yeung, Chung, & Wong, 2012). Authors of one small trial on acupuncture for treatment of insomnia during pregnancy reported that pregnant women were more likely to experience a greater than 50% reduction in symptoms if they received acupuncture plus sleep hygiene education compared with sleep hygiene education alone (da Silva & Nakamura, 2005). Results from this study indicate that acupuncture may be an efficacious treatment for insomnia experienced during pregnancy, although randomized controlled clinical trials are needed.

Currently, little is known about women's treatment preferences for insomnia during pregnancy or the factors that may influence these preferences.