Contents lists available at ScienceDirect

International Journal of Nursing Studies

Review

Pregnancy-related anxiety: A concept analysis

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A B S T R A C T

Objectives: Evidence suggests that pregnancy-related anxiety is more strongly associated with maternal and child outcomes than general anxiety and depression are and that pregnancy-related anxiety may constitute a distinct concept. However, because of its poor conceptualization, the measurement and assessment of pregnancy-related anxiety have been limited. Efforts to analyze this concept can significantly contribute to its theoretical development. The first objective of this paper was to clarify the concept of pregnancy-related anxiety and identify its characteristics and dimensions. The second aim was to examine the items of current pregnancy-related anxiety measures to determine the dimensions and attributes that each scale addresses, noting any gaps between the current assessment and the construct of the concept.
Design: A concept analysis was conducted to examine the concept of pregnancy-related anxiety.
Data sources: To obtain the relevant evidence, several databases were searched including MEDLINE, PsycINFO, EBSCO's SocINDEX, Psychological and Behavioral Sciences Collection, CINAHL, SCOPUS, and EMBASE.
Review methods: A modified approach based on Walker and Avant (Strategies for theory construction in nursing. 5th ed; 2011) was used. Qualitative or quantitative studies published in English that explored or examined anxiety during pregnancy or its dimensions prospectively or retrospectively were included.
Results: Thirty eight studies provided data for the concept analysis. Three critical attributes (i.e., affective responses, cognitions, and somatic symptoms), three antecedents (i.e., a real or anticipated threat to pregnancy or its outcomes, low perceived control, and excessive cognitive activity, and four consequences (i.e., negative attitudes, difficulty concentrating, excessive reassurance-seeking behavior, and avoidance behaviors) were identified. Nine dimensions for pregnancy-related anxiety were determined, and a definition of the concept was proposed. The most frequently reported dimensions included anxiety about fetal health, fetal loss, childbirth, and parenting and newborn care. The content of five scales was analyzed to determine the attributes and dimensions measured by each tool. Our findings suggest that the Pregnancy-Related Anxiety Scale tapping five dimensions of pregnancy-related anxiety and the Pregnancy Outcome

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Questionnaire with six items pertaining to the consequences of pregnancy-related anxiety can respectively be considered the most useful tools for assessing the existence and severity of the concept.

Conclusions: The critical attributes of pregnancy-related anxiety are similar to those defined for anxiety disorders. However, the behavioral consequences of pregnancy-related anxiety appear to apply only some women and may serve as important indicators of the severity of the condition. Current tools are useful instruments to determine whether the concept exists and to capture selected domains of pregnancy-related anxiety. A tool that includes all dimensions of the concept and examines the severity of pregnancy-related anxiety is needed.

What is already known about the topic?

- Pregnancy-related anxiety (PrA) constitutes a distinct concept from general anxiety and depression and is more strongly associated with maternal and child outcomes.
- Several recent reviews identified the need for a well-developed scale with a rigorous theoretical basis for the assessment of PrA.
- The assessment of PrA has been limited, mainly due to its poor conceptualization.

What this paper adds

- Three critical attributes, three antecedents, four consequences, and nine dimensions for PrA were identified and a definition of the concept was proposed.
- Current tools are useful to determine whether the concept exists and to capture selected domains. A tool that includes all dimensions and examines the consequences and severity of PrA is needed.
- This knowledge provides nursing and midwifery professions with a conceptual basis to identify PrA and also constitutes a groundwork for further development of the concept.

1. Introduction

Anxiety is a prevalent mental health concern during pregnancy (Lee et al., 2007; Teixeira et al., 2009). Various categories of anxiety disorders, each with different clinical presentations, are recognized by the Diagnostic and Statistical Manual of Mental Disorders 5th Edition (DSM-V). Although pregnancy is associated with higher rates of certain common anxiety disorders, such as generalized anxiety disorder (Matthey and Ross-Hamid, 2011; Sutter-Dallay et al., 2004), a considerable amount of variation in anxiety during pregnancy cannot be explained by generalized anxiety or explained as a comorbidity with depression (Huizink et al., 2004; Orr et al., 2007). Thus, pregnancy-related anxiety (PrA) may constitute a discrete entity that is not fully captured by other common mental health issues. Initial evidence in this area emerged from the work of Theut et al., who compared two groups of couples with and without a previous pregnancy loss and reported that the Pregnancy Outcome Questionnaire, a measure of PrA, differentiated women with previous loss from those without loss, while the trait subscale of the State-Trait Anxiety Inventory (STAI) as a general anxiety measure and the Beck Depression Inventory measures did not differentiate

women in this manner (Theut et al., 1988). Later in 2004, Huizink et al. examined associations between PrA with general anxiety and depression, and they noted that general anxiety and depression explained only 8–27% of the variation in concerns related to the fetal health and giving birth in early and mid-pregnancy. No associations were found during late pregnancy. A factor analysis of the Center for Epidemiologic Studies Depression (CES-D) scale and a six-item PrA scale also demonstrated that PrA was a construct independent from depression (Orr et al., 2007). This evidence suggests that a lone assessment of general anxiety may underestimate anxiety specific to pregnancy (McMahon et al., 2013) and that PrA should be treated as a distinct concept from general anxiety or depression. The goal of the research presented in this paper was therefore to understand and refine the concept of PrA.

Anxiety during pregnancy is associated with several adverse maternal and child outcomes, such as postpartum depression (Ahluwalia et al., 2004; Heron et al., 2004; Skouteris et al., 2009), preterm birth, low birth weight (Littleton et al., 2007; O'Donnell et al., 2011; Teixeira et al., 1999), and subsequent developmental and mental health challenges in children (Buss et al., 2011; Davis and Sandman, 2012; Kingston et al., 2012; Loomans et al., 2012). Available data suggest that PrA may be more strongly associated with maternal and child outcomes than general anxiety or depressive symptoms are and may predict these outcomes more accurately (Blair et al., 2011; Kramer et al., 2009; Lobel et al., 2008). For instance, in a multicentre prospective cohort study of spontaneous preterm birth, Kramer et al. examined a large number of stressors and measures of psychological distress among 5337 women in Canada. After adjustment for medical and obstetric risks, perception of pregnancy risk, and depression, only PrA was consistently and independently associated with spontaneous preterm birth (Kramer et al., 2009). In another study, Blair et al. compared the trajectories of PrA at five time points during pregnancy with general anxiety as measured by the STAI. The results indicated that PrA predicted child negative affectivity, but no association between child outcomes and the level or trajectory of state anxiety was detected (Blair et al., 2011).

Several professional organizations recognize the risk of mental health problems such as anxiety during pregnancy and the potential benefits of screening for mental health problems (ACOG, 2006; National Institute for Health and Care Excellence, 2014). However, the detection and management of PrA have been limited by the scarcity of