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Poor marital support associate with anxiety and worries during pregnancy in Greek pregnant women ☆

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ABSTRACT

Objective: a wide range of psychosocial variables may influence pregnant women's psychological status. However the association between marital and social support, anxiety and worries during pregnancy is a relatively neglected area of research. Therefore, the aim of this study was to examine the relationship between marital support, social support, antenatal anxiety and pregnancy worries after controlling for the effects of background variables.
Setting: public hospital in Athens, Greece.
Design: a cross-sectional study.
Participants: 165 pregnant women attending an antenatal clinic for antenatal screening between January 2011 and March 2011.
Methods: anxiety was measured using the State scale of the State-Trait Anxiety Inventory, pregnancy worries were measured with the Cambridge Worry Scale, social support with the Social Support Questionnaire-6 and marital satisfaction with the Quality of Marriage Index. Pearson's correlation coefficients were calculated among all study variables, followed by hierarchical multiple linear regression.
Findings: a STAI score of ≥ 43 was taken as indicative of anxiety and 44.4% of participants responded with a score of 43 or above. Linear regression analysis showed that conception after IVF treatment and low marital satisfaction were both significantly related to anxiety and pregnancy worries. In addition, low income level was significantly related to pregnancy worry whereas low educational level was related to anxiety.
Conclusion: the risk factors found in this study could help clinicians target anxiety screening to high-risk populations of pregnant women. Health care professionals and midwives in particular should be trained in the detection and management of anxiety and worries during pregnancy.

Introduction

Pregnancy and the transition to parenthood involve major biological and psychosocial changes that have been linked to an increase in anxiety symptoms, depressive symptoms and distress (Gourounti et al., 2011). The current literature suggests that the rate of antenatal depression ranges between 4.8% and 86.5% (Lee et al., 2007; Leigh and Milgrom, 2008; Bodecs et al., 2009; Qiao et al., 2009; Teixeira et al., 2009; Kaaya et al., 2010; Melville et al., 2010; Mohammad et al., 2011; Nasreen et al., 2011; Faisal-Cury et al., 2012; Gourounti et al., 2013a; Carolan-Olah and Barry, 2013) and the incidence rate of antenatal anxiety ranges between 10.1% and 75.6% (Faisal Cury and Menezes, 2007; Grant et al., 2008; Leigh and Milgrom, 2008; Bodecs et al., 2009; Teixeira et al., 2009; Salacz et al., 2012; Gourounti et al., 2013a; Carolan-Olah and Barry, 2013). The wide prevalence range found among studies may be due to methodological factors (e.g. use of different measures of anxiety, use of different cut-off points on screening tools). For example a variety of different cut-off points on the STAI measure have been used to indicate anxiety. The STAI has been used in perinatal samples with cut-off value of >39 (Carolan-Olah

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and Barry, 2013) or of >45 (Teixeira et al., 2009; Salacz et al., 2012). For instance, the high prevalence of anxiety (75.6%) reported in the study by Carolan-Olah and Barry (2013) might be due to the fact that the cut-off point of 39 was considered indicative of high anxiety whereas the lower rate of anxiety reported in studies by Salacz et al. (2012) (10.1%) and by Teixeira et al. (2009) (15%) may be due to the STAI cut-off point of 45. Furthermore, the wide prevalence range observed might be due to socio-economic and psychosocial factors. For example, higher rates of antenatal depression and anxiety have been reported mostly in developing countries (Faisal Cury and Menezes, 2007; Nasreen et al., 2011), and in countries facing or having faced economy collapse (Gourounti et al., 2013a, 2013b; Carolan-Olah and Barry, 2013). Anxiety, depression and other stressful feelings during pregnancy can be harmful to the mother and fetus. Epidemiological evidence suggests that maternal psychosocial stress is an independent risk factor for preterm birth, low birth weight (Littleton et al., 2010), obstetric complications, increased nausea and vomiting, and planned caesarean childbirth (Anderson et al., 2004). Therefore, research on antenatal anxiety is of great importance.

The rates of antenatal anxiety and depression identified by previous studies are of concern and the identification of risk factors is crucial. A number of psychosocial, clinical and demographic variables may influence pregnant women's psychological status. Risk factors for antenatal depression have been extensively studied and include history of depression, lack of a partner, marital difficulties, maladaptive coping strategies, lack of social support, poverty, family violence, increased life stress, substance abuse, history of previous abortions, unplanned pregnancy, ambivalence toward the pregnancy and anxiety about the fetus (Leigh and Milgrom, 2008; Lancaster et al., 2010; Breedlove and Fryzelka, 2011). It is noteworthy that investigation of the risk factors for antenatal anxiety is a relatively neglected area of research. According to the United Kingdom national clinical guideline (No 45) entitled 'Antenatal and postnatal mental health, clinical management and service guidance' (NICE, 2007), limited evidence exists on the predictive risk factors for general anxiety disorders in pregnancy or the postnatal period. According to the few studies that have been conducted, risk factors of antenatal anxiety include low educational level, low income level, unemployment, lack of social support, marital difficulties and lack of husband's support (Faisal Cury and Menezes, 2007; Qiao et al., 2009; Nasreen et al., 2011). These studies emphasise the need for further research on antenatal anxiety. There is evidence for the role of social support in stress susceptibility (Valentiner et al., 1994). Lazarus and Folkman (1984) defined resources such as social support as what an individual 'draws on in order to cope' with a stressor. The role of social and marital support has been extensively studied concerning antenatal depression. According to the systematic review by Lancaster et al. (2010) more than 20 studies have addressed the relationship between social support and depressive symptoms during pregnancy. However, the role of social and marital support with regard to antenatal anxiety has been studied to a lesser extent. According to the authors' knowledge, few studies (Nasreen et al., 2011; Roos et al., 2013) have investigated the relationship between social and marital support and antenatal anxiety.

Antenatal anxiety is often assessed through general measures of anxiety such as the State Trait Anxiety Inventory (STAI) (Spielberger, 1972). Despite their good psychometric properties these measures have been primarily developed for use in general populations and can contain items that may be interpreted differently by a specific clinical population, such as pregnant women. Such items may lack the sensitivity to detect important concerns specific to pregnancy. The use of non-specific measures for the assessment of anxiety in pregnancy has been reviewed and criticised (Johnson and Slade, 2003; Riecher-Rössler and Rohde, 2005). According to Green et al. (2003), state anxiety as measured using a general measure is indicative of the extent of anxiety at a particular time point, but it does not indicate what a person is anxious about. Therefore, it seems that there is a lack of studies that have assessed antenatal distress through a standardised pregnancy-specific measure. Thus, the Cambridge Worry Scale (CWS) (Green et al., 2003), which is a validated, multidimensional measure that identifies the content and the extent of worries during pregnancy (Green et al., 2003), was used in the present study. Additionally, a general measure of anxiety (STAI) was also used in our study to enable cross-study comparisons, given that in a recent meta-analysis (Littleton et al., 2007), the STAI was found to be the most widely used questionnaire to measure anxiety in pregnancy.

Consequently, the aim of this study was to examine the relationship between marital support, social support, antenatal anxiety and pregnancy worries. Given that numerous demographic (e.g. age, educational level) and clinical background variables (e.g. parity, history of previous abortions, method of conception) may contribute to the development of antenatal anxiety and pregnancy worries, the relationship between psychosocial risk factors, antenatal anxiety and pregnancy worries was assessed after controlling for the effects of these background variables.

Methods

Sample and data collection procedures

The study was conducted in one of the two largest public hospitals in Athens, Greece, to achieve a representative sample. The hospital handles approximately 7000 births per year, representing about one-sixth of the births of Athens. The questionnaires were administered to a sample of pregnant women with a gestational age of between 11 and 26 weeks, who were booked for antenatal ultrasound screening (nuchal translucency, second trimester ultrasound scan) in the antenatal clinic of the hospital. More specifically, the questionnaires were self-administered just before antenatal screening in order to avoid capturing anxiety caused by positive screening finding. Participants completed the questionnaires without any help or guidance. Inclusion criteria were: (a) ability to read and write in Greek in order to have the ability to complete the questionnaires, and (b) age above 18 years.

Study instruments

Worries during pregnancy were measured with the Cambridge Worry Scale (CWS) developed by Green et al. (2003). The CWS contains items concerning worries during pregnancy, such as the infant's health, financial issues and giving birth. Each item is scored on a 6-point Likert-type scale ranging from *not a worry* (0) to *major worry* (5). The CWS score was dichotomised into high (4–5, indicating major worry) and low (0–3, signifying less than major worry) scores. The dichotomisation of the scale points was conducted according to the original English study by Green et al. (2003) and it was similar to how data were managed in the study by Georgsson Ohman et al. (2003). The CWS scale can be used throughout pregnancy. Depending on the pregnancy week, additional context-specific items can be added or removed as appropriate. According to the instrument developers and the validation results obtained from Greek datasets (Gourounti et al., 2011), the CWS has a four-factor structure: (1) socio-medical aspects of having a baby: giving birth; going to hospital; internal examinations; and coping with the new baby; (2) socio-economic issues: money, employment problems, housing and the law; (3) health of

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