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The Roles of Social Support in Helping Chinese Women with Antenatal Depressive and Anxiety Symptoms Cope With Perceived Stress

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A B S T R A C T

A community-based sample of 755 pregnant Chinese women were recruited to test the direct and moderating effects of social support in mitigating perceived stress associated with antenatal depressive or anxiety symptoms. The Social Support Rating Scale, the Perceived Stress Scale, the Edinburgh Depressive Postnatal Scale and the Zung Self-Rating Anxiety Scale were used. Social support was found to have direct effects and moderating effects on the women's perceived stress on antenatal depressive and anxiety symptoms in multiple linear regression models. This knowledge of the separate effects of social support on behavioral health is important to psychiatric nurse in planning preventive interventions.

Pregnancy is a time for celebration of the arrival of a new member in the family but it is also a time of conspicuous changes to the expecting mother's body, lifestyles, roles, relationships and responsibilities (Guardino & Schetter, 2013; Razurel, Kaiser, Selienet, & Epiney, 2013). Profound changes can trigger stress in pregnant women (Cardwell, 2013; Lazatus & Folkman, 1984). Stress during pregnancy has been associated with increased incidence of antenatal depressive (Razurel et al., 2013) or anxiety (Roos, Faure, Lochner, Vythilingum, & Stein, 2013) symptoms. Depression and anxiety during pregnancy are major public health problems with prevalence report as high as 70% of pregnant women experience either depressive or anxiety symptoms during pregnancy (Ali, Azam, Ali, Tabbusum, & Moin, 2012). Thus, it is important to consider ideas for interventions that might be effective in reducing symptoms of anxiety, depression, or both.

Psychosocial stress theory identifies social support as a protective factor against depressive (Jeong et al., 2013) and anxiety (Aktan, 2012) symptoms during pregnancy. Although social support during the antenatal period appears to be a major factor related to the psychological health of pregnant women (Razurel et al., 2013), the specific role of social support on psychological health remains unclear (Ibarra-Rovillard & Kuiper, 2011).

China has experienced profound economic and social development in the last two decades, and, like many countries of today's fast-paced world, perceived stress and antenatal depressive and/or anxiety symptoms have become more prevalent, thus becoming a matter of utmost concern to health-care policy makers (Lau, 2013; Lau, Yin, & Wang, 2011). It is important to identify the mechanisms through which social support might be protective against the development of antenatal depressive and anxiety symptoms. Therefore, this study sought to enhance knowledge by examining the direct and moderating effects of social support on the relationship between perceived stress and antenatal depressive and anxiety symptoms.

DIMENSIONS OF SOCIAL SUPPORT

Social support is considered a meta-construct and as such, it has no single, simple definition (Gottlieb & Bergen, 2010). Social support, in general, is a resource that people use to cope with stress and improve psychological adaptation (Rubens, Vernberg, Felix, & Canino, 2013) as well as maintain functional ability (Wilson, Washington, Engel, Ciol, & Jensen, 2006). Support can provide reassurance, clarification, discussion and stability during stressful events (Nguyen, Kohorn, Scgulman, & Colson, 2012).

We propose that the relationship between perceived stress, social support and antenatal depressive or anxiety symptoms can be considered within the psychoneuroimmunology (PNI) framework (McCain, Gray, Walter, & Robins, 2005). The mechanisms of the PNI are focused on the multidimensional physiological and pathophysiological interactions and this framework incorporates neuroendocrine–immune processes underlying biological adaptation and physical health (McCain et al., 2005). The PNI framework suggested that the roles of social support can change perceived stress related responses and improve the psychological outcomes of antenatal depressive or anxiety symptoms (McCain et al., 2005).

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The concept of social support may be viewed differently in different cultures (Stanaway et al., 2011), and so to understand how people appraise their social relationships, a culturally-sensitive assessment tool is necessary (Tonsing, Zimet, & Tse, 2012). In response to this consideration, a number of Chinese theorists have developed the Social Support Rating Scale (SSRS) tested on and validated for use on Chinese populations that focuses on the subjective–objective dimension and support availability (Xiao, 1999; Xie, He, Koszycki, Walker, & Wen, 2009).

Subjective support deals with the individual's subjective experience of an expected availability—not its actual materialization—where trust in a mobile support system is feasible within an individual's interpersonal network (Xiao, 1999). On the other hand, objective support reflects the degree of practical support the social network is able to provide (Xiao, 1999; Xie et al., 2009). The availability of support refers to the accessibility and effectiveness of social support to an individual for dealing with a life event (Xiao, 1999). Subjective support is based primarily on one's history of having received effective objective support (Lakey & Orehek, 2011). Conceptually, subjective support is more closely linked to the intrapersonal approach, and objective support and support availability are more likely to represent a situational factor that is closely related to the interpersonal approach (Uchino, 2009). Although subjective support has been found to be more determinative and valuable than objective support on behavioral health in Western literature (Gottlieb & Bergen, 2010; Gulacti, 2010), the applicability of these findings to Chinese populations is still in question.

Direct Effect of Social Support on Antenatal Depressive and Anxiety Symptoms

In the direct effects model, a predictor of social support is directly related to its outcome, and its mode of action does not involve any intermediate variable (Wills & Fegan, 2001). For instance, a study has found that social support has a direct effect on people's mental health, that is, people with lower social support have poorer mental health than those with higher social support, regardless of the stress levels (Cohen & Wills, 1985). The perinatal literature has found lack of social support to be an important and consistent risk factor for antenatal depressive (Jeong et al., 2013) and antenatal anxiety (Aktan, 2012) symptoms. Because lack of support constitutes a stressor in and of itself, there may be a negative stressor–support correlation (Kingston, Heaman, Fell, Dzakpasu, & Chalmers, 2012). The core idea of the direct effects model is that social support may be related to mental health outcomes through psychosocial mechanisms (Thoits, 2011) or neuroendocrine system functioning (Hostinar & Gunnar, 2013). Notably, the relations between anxiety symptoms, stress and social support have received less attention compared with the relations between depressive symptoms and stress and social support in the literature (Aktan, 2012). In addition even fewer studies have simultaneously investigated the direct effects of social support on depressive and anxiety symptoms during pregnancy. Therefore, whether social support has a direct effect on antenatal depressive and anxiety symptoms is worthy of further research.

Moderating Effect of Social Support on Antenatal Depressive and Anxiety Symptoms

The moderating model conceptualizes that social support may protect individuals facing high levels of stress from experiencing stress-related symptoms, such as depressive and anxiety symptoms (Gottlieb & Bergen, 2010). These moderating effects may alter people's perceptions of negative events, transfer their coping resources, facilitate changes or provide solutions to people in terms of encouraging changes in people's adaptive responses to health-related behaviors (Cohen & Wills, 1985; Razurel, Bruchon-Schweitzer, Dupanloup, Irion, & Epiney, 2011), thus making negative consequences less likely (Andreotti et al., 2013). In this sense, social support may intervene between the experience of stress and the onset of a pathological outcome by reducing a person's reactiveness to the perceived stress (Cohen & Wills, 1985). Social support appears to decrease the intensity of one's perception of crises or to aid one in acquiring the means and skills required to buffer the effects of stressors (Kingston et al., 2012). However, the empirical evidence for the moderating effects of social support has been mixed (Lewis, Byrd, & Ollendick, 2012; Sirin et al., 2013). Although a few studies have found that social support has a moderating effect on the development of psychological problems among pregnant women (Lau & Wong, 2008; Pires, Araujo-Pedrosa, & Canavarro, 2013), the relationship between social support and antenatal depressive and anxiety symptoms requires further examination.

The purpose of this study was to expand our knowledge about social support and mental health among pregnant Chinese women. The study's objectives were to examine the direct and moderating effects of social support in the presence of stress on antenatal depressive and anxiety symptoms, and to compare the effects of objective support, subjective support and support availability on antenatal depressive and anxiety symptoms among a convenience sample of pregnant Chinese women. Identification of the separate effects of social support on mental health may suggest more effective interventions to reduce these symptoms on pregnant women.

METHODS

Design

This research is an exploratory cross-sectional quantitative study. The study was approved in April 2012, and a pilot study with 100 subjects was carried out for a month in a setting similar to the main study's and on a similar population. The pilot study examined the reliability, validity and feasibility of the methods of measurement in the target population. On the basis of the comments received, some of the demographic and obstetric items were revised without changing their meanings to make the items more accessible.

Setting and Sampling

The research setting was Chengdu, a sub-provincial city located in south-western China and the capital of Sichuan province. Chengdu is one of the most important economic centers and transportation and communication hubs in the region, and it covers an area of 12.3 thousand square kilometres (4749 mile^2) with a population of over 11 million. The study was approved by the institutional review board of a regional public hospital in Chengdu which serves an obstetric population of over 204,096 women annually and delivers about 12,000 babies per year (Chengdu Women & Children's Central Hospital, 2013). Despite the fact that recruitment was conducted at this hospital, the sample is nonetheless community-based, and is representative of pregnant women in the general population, as women from different regions of Chengdu that covered different demographic and socio-economic divisions were included in this study. Assuming that the prevalence of stress in the sample population is the same as that found in a previous study (Kok et al., 2013), which was $\pm$1.98%, a sample size of 755 would achieve a low error factor (Altman, 2006). This degree of error is approximately one quarter of the size of the prevalence estimate, and is therefore sufficiently small to use with confidence for planning purposes in the health-care service system. A community sampling with a sample size of 755 antenatal women was used, which was considered adequate for the detection of women experiencing stress. Non-probabilistic convenience sampling was adopted because of resource constraints. The inclusion criteria included (1) primiparae or multiparae;