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Original article

First-time fathers' health status during the perinatal period

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ABSTRACT

Background: For first-time fathers, the perinatal period is a critical period of stress and imbalance. Marital intimacy and social support may affect their stress and health status while they change their roles.
Aim: This study was to explore the changes of and correlations among marital intimacy, social support, and health status and predictors of first-time fathers' health status during the perinatal period.
Methods: With a repeated measures study design, a total of 217 first-time fathers whose spouses were in the third trimester of pregnancy were recruited for the study. The Chinese Health Questionnaire, Marital Intimacy Scale, and Social Support Scale were employed to collect data at a medical center in the 36th week of pregnancy and the 1st and 4th weeks after childbirth.
Results: The levels of marital intimacy and social support of first-time fathers during the perinatal period increased significantly with time. Meanwhile, the period of the first week after childbirth was a predictor of first-time father's health status.
Conclusions: This study only tracked the first-time fathers' health status in the 36th week of pregnancy and the 1st and 4th weeks after childbirth. Future studies could track them until one year after childbirth in order to explore the impact of the perinatal period on the couples and their babies. During the perinatal period, health care providers shall assess and provide needed interventions to first-time fathers as soon as possible to facilitate the first-time fathers to get ready for the role transition and to promote their health status.

1. Introduction

The birth of a baby is wonderful, which marks an important milestone for a family. However, family members may have physical symptoms during the pregnancy and perinatal period in the face of family structural change. In particular, a father as the backbone of a family, takes charge to make a living for the whole family due to finances and affection. Hence, the period before and after childbirth is critical for the first-time fathers as stress, crisis, and imbalance are due to their transition of role in a happy and proud but helpless and anxious manner. They need to face and adapt to the changes caused by the perinatal period (Wang & Chen, 2006; Yu, Hung, Chan, Yeh, & Lai, 2012).

Tsai and Chen (1997) found that a father-to-be faces heavy stressors in the third trimester of pregnancy, such as a lack of skill to take care of newborns, concern for the development of newborns, and balancing between work and family. High stress results in physical symptoms and health problems such as physical symptoms, insomnia, poor interpersonal relationships, anxiety, and depression (Genesoni & Tallndini, 2009; Hung, 2004; Tsai & Chen, 1997). It had been found that 68% of fathers-to-be suffered from the physical symptoms involving dyspepsia, weight gain, diarrhea or constipation, anxiety, depression, insomnia, headache, and panic in the third trimester of pregnancy (Klein, 1991; Tsai & Chen, 1997), while 14.4% had psychological symptoms (Yu et al., 2012). Mao, Zhu, and Su (2011) found 12.5% had depression symptoms during pregnancy and after childbirth, while Wang and Chen (2006) demonstrated 31% suffered from slight or even severe depression. Therefore, the health status, defined as a sense of well-being without psychological difficulties, of first-time fathers during the perinatal period should be paid attention to.

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Fang and Hung (2012) pointed out that the health status of fathers was closely related to their marital intimacy. Intimacy referred to affection support, especially sexual and physical contact (Fang & Hung, 2012). However, after childbirth, the marital intimacy established between couples would be affected, resulting in lower marital intimacy. If couples were lacking in communication and touch, their intimacy would be threatened (Ahlborg & Strandmark, 2006; Ou, Lee, Chen, & Tseng, 2010). As long as fathers felt unsatisfying marital intimacy, they would suffer from psychological symptoms. Yang and Chen (2001) assumed that closer marriage could promote marital intimacy, adaption to stress, and a better health status of fathers. Marital satisfaction is based on social support that could help fathers-to-be to vent their emotions, gain information, maintain healthy behavior, reduce anxiety and depression, enhance adaptability, and drive marital intimacy and psychological health (Castle, Slade, Barranco-Wadlow, & Rogers, 2008; Langford, Bowsher, Maloney, & Lillis, 1997; Yang & Chen, 2001; Yu et al., 2012).

Yu et al. (2012) found that fathers with poor marital intimacy suffered from depression symptoms more often. Boyce, Condon, Barton, and Corkindale (2007) demonstrated that, after childbirth, if fathers gained less social support and had lower satisfaction of marital intimacy they could suffer from more psychological symptoms. It was also confirmed that the depression symptoms and unsatisfying marital intimacy of fathers during the pregnancy and childbirth of their spouses were related to low social support (Boyce et al., 2007; Wee, Skouteris, Pier, Richardson, & Milgrom, 2011). Therefore, low social support and unsatisfying marriage bonds increased the depression symptoms of fathers.

It was demonstrated that social support was a vital predictor of fathers' health during the perinatal period (Fang & Hung, 2012; Wang & Chen, 2006; Wee et al., 2011; Yu et al., 2012). Tsai and Chen (1997) asserted that if fathers-to-be gained high social support in the third trimester of pregnancy, they were less likely to have physical symptoms such as fatigue, anxiety, and insomnia; otherwise, they were prone to have depression due to high stress after childbirth (Castle et al., 2008; Gao, Chan, & Mao, 2009; Tsai & Chen, 1997). Wang and Chen (2006) also deemed that the depression experienced by first-time fathers was related to low social support.

Since becoming a father is a major change and challenge in a man's life, one needs positive social support to adapt to the new role. However, studies showed that the social support gained by mothers after childbirth was higher than that of fathers (Fang & Hung, 2012; Gao et al., 2009; Wang & Chen, 2006). Most of the studies explored the postpartum stress, psychological health, marital intimacy, and social support of mothers (Hung, 2005; Hung & Chung, 2001; Lin & Hung, 2015). There were few studies on the health status of fathers during the perinatal period.

In Taiwan, after childbirth, women were provided with high social support due to a postpartum ritual that ignored the needs of fathers during the perinatal period (Lin & Hung, 2015; Tsai & Chen, 1997). Thus, the current study aimed to explore the changes of and correlations among health status, marital intimacy, and social support and the predictor of health status of fathers during the perinatal period.

2. Methods

2.1. Design and participants

Using a repeated measures design, 217 first-time fathers who were over 20 years of age and whose spouses were in the third trimester of pregnancy were recruited. Data were collected when their spouses were in the 36th week of pregnancy and the 1st and 4th weeks after childbirth. Sample size was calculated based on the statistics using repeated measures (Barcikowski & Robey, 1985). The correlation coefficient was 0.30; the repeated measures benchmark effect size was 0.30, the statistical power was 0.80; and the value of α was 0.05. The participants were repeatedly measured 3 times. Thus, the number of required participants was estimated to be 39. According to the study by Yu, Hung, Huang, and Chan (2016), who predicted the health status of women during the perinatal period with five repeated measures, the attrition rate was about 30% (Yu et al., 2016). Therefore, the number of required participants for this study was 56.

2.2. Instruments

The research questionnaires included demographic characteristics, the Chinese Health Questionnaire (CHQ), Marital Intimacy Scale, and Social Support Scale. The demographic characteristics included age, education level, religious beliefs, expectation of fetal gender, family income, and plan of pregnancy.

The first-time fathers' health status was measured with the 12-item CHQ. This culture-specific questionnaire is designed to reflect the Chinese sociocultural preferences in the expression of distress, including anxiety, depression, sleep disturbance and somatic symptoms, somatic concerns, and interpersonal difficulties within the past one to two weeks (Cheng, 1985; Cheng & Williams, 1986). The sensitivity and specificity of the scale were 91.9% and 66.7%, respectively (Chong & Wilkinson, 1989). The Cronbach's α of internal consistency was 0.76 (Lin & Hung, 2015). The scale contained 12 questions and four-point Likert scale was adopted as 1 referred to “Not at all” while 4 referred to “Much more than usual.” Scores were recoded such that “Not at all (1)” and “Almost the same as usual (2)” were recoded as a 0 score. “More than usual (3)” and “Much more than usual (4)” were recoded as a 1 score. Questions No. 7 and No. 10 were reverse coded. The total score ranged from 0 to 12 and 2/3 was considered as the cutting point; Scores lower than or equivalent to 2 were considered as good health, while scores higher than or equivalent to 3 were poor health. The Cronbach's α for this study was 0.74.

The Marital Intimacy Scale was adopted to measure the interaction between spouses and feelings of the participants in their daily life. Its construct validity with four dimensions had been verified, including gratitude, appreciation, intimacy, and fitness (Li, 2000). The scale covered 32 questions and five-point Likert scale. The total score ranged from 32 to 160. A higher score stands for higher marital intimacy. The Cronbach's α of internal consistency was 0.98 (Yu et al., 2012). The Cronbach's α for this study was 0.98.

The Social Support Scale with spouses and health care providers APGAR Index, including adaption, partnership, growth, affection, and resolve (Smilkstein, 1978) was adopted to measure the degree of support received by the first-time fathers from their spouses and health care providers. This scale had been widely applied in other studies and the construct validity through factor analysis was confirmed (Hung & Chung, 2001; Lin & Hung, 2015; Yu et al., 2012). It was a 10-item and five-point Likert scale. The total score ranged between 10 and 50; a higher score referred to higher social support. The values of Cronbach's α were 0.91 (Lin & Hung, 2015) and 0.89 (Yu et al., 2012). The Cronbach's α for this study was 0.88.

2.3. Procedure

This study was approved by the Institutional Review Board (IRB) at the researcher's institution. A research assistant explained the purpose and procedure of this study to the participants at an obstetric outpatient department (OPD) in a medical center in Southern Taiwan. After the participants signed the informed consent from, they completed questionnaires in the 36th week of pregnancy and the first and fourth weeks after childbirth. Because of most first-time fathers accompanied their partners at the OPD for prenatal checkups, during hospitalization for childbirth, and at the OPD for the one-month postpartum checkup. If participants were unavailable at some points of time, their partners could bring the questionnaires to them and then mailed the completed questionnaires back to us with a prepaid stamp envelope.