Analysis of status quo and research progress in nursing of postpartum fatigue: a literature review

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Abstract: Postpartum fatigue is an important issue that threatens women’s health. The incidence of postpartum fatigue is high. Failure to intervene in time may lead to adverse outcomes such as postpartum depression, premature termination of breastfeeding, child abuse, and low infant development. This article reviews the concepts, characteristics, related factors, adverse effects, and interventions of postpartum fatigue. The aim is to improve doctors’ and nurses’ awareness of postpartum fatigue in pregnant women, enrich the research content and methods, stimulate the interest of nurses, and actively carry out targeted intervention research to prevent or reduce the occurrence of adverse outcomes.

Keywords: postpartum fatigue • maternal • postnatal • pregnancy • nursing • current status • research progress

1. Introduction
Childbirth is an important part of many women’s lives. It is a critical period in life and will have a great impact on maternal health.1–3 After childbirth, many women have some psychosocial problems, such as fatigue,4 anxiety,5 and depression.6 The study of postpartum fatigue is particularly critical: on the one hand, postpartum fatigue is one of the common symptoms after childbirth. Sustained postpartum fatigue is associated with postpartum depression,6 which seriously affects the quality of life of the mother and has many adverse effects,7–10 such as mood changes, child abuse, decreased self-care ability, and so on. On the other hand, postpartum fatigue is not easy to detect and is often ignored by many people.4

Around the 1990s, foreign scholars began research on postpartum fatigue. At present, there are many studies on postpartum fatigue in foreign countries, and relatively few in China. This article reviews the concepts, characteristics, related factors, adverse effects, and interventions of postpartum fatigue. The aim is to provide the reference for interventional research on postpartum fatigue in pregnant women in China.

2. Concepts of postpartum fatigue
At present, there is no clear definition of postpartum fatigue, no specific diagnostic criteria for postpartum
status quo and research progress in nursing of postpartum fatigue

fatigue. Nanda Nursing Diagnoses pointed: “Postpartum fatigue (PPF) is an overwhelming, sustained sense of exhaustion and decreased capacity for physical and mental work.” Studies have pointed out that it has a multidimensional concept of physical, emotional, and cognitive aspects: fatigue is physiologically characterized by weariness, exhaustion, emotional aspects involving anxiety, depression, and cognitive aspects may be power loss, no motivation.

3. Incidence and characteristics of postpartum fatigue

The incidence of postpartum fatigue is high, affecting the care of mothers and babies. About 60% of women have postpartum fatigue, and the incidence of postpartum fatigue differs across countries. According to the available data, in China, Zhao investigated 220 cases of women after 6 weeks of postpartum; the incidence rate was 56%. The data show that 67% of women reported fatigue at 1 month postpartum in Japan; 82% at 3 months postpartum in South Korea; 69% at 6-7 months postpartum in Australia; and 18% at 1 year postpartum in the Netherlands.

Postpartum fatigue is usually most severe in the days after delivery, and its characteristics tend to follow two trajectories: first, the peak is reached from mid-pregnancy to 1 week to 1 month after deliver, and the situation improves after 1 week or 1 month after birth; second, the degree of fatigue does not improve over time, but remains relatively constant.

4. High-risk population and influencing factors of postpartum fatigue

4.1. High-risk population

Maternal women with primipara, elderly, cesarean section, poor sleep quality, anemia, infection, and thyroid disease, etc.

4.2. Influencing factors

4.2.1. Environmental and social factors

Iwata et al. found that in the first 6 months postpartum, sleep quality and maternal fatigue included satisfaction with sleep are the most important factors affecting maternal fatigue, and the results of this study are consistent with the study by Giallo et al. Sleep plays an important role in health. In the early postpartum period, infants’ irregular sleep patterns and frequent feeding can cause maternal sleep disorders. Therefore, in the early postpartum period, nurses should pay attention to changes in maternal sleep, provide effective guidance to their families, and regularly assess and effectively manage sleep disorders to reduce maternal fatigue.

Some environmental and social factors also affect maternal fatigue: maternal daily meal time, economic burden, and social status.

4.2.2. Physiological factors

Postpartum hemorrhage is a serious postpartum complication that can cause iron deficiency anemia in the mother. Güven et al. found that postpartum anemia is associated with postpartum fatigue. Holm and Thomsen et al. performed 12 weeks of iron therapy on women with postpartum anemia. The results of the study showed that after anemia improved, the maternal postpartum fatigue score decreased and the body fatigue was significantly reduced. This conclusion confirms the WHO’s statement that postpartum anemia can lead to postpartum fatigue. During pregnancy and childbirth, doctors and nurses should accurately understand the physical condition of the mother, guide them to a reasonable diet, and if necessary, iron treatment to avoid maternal fatigue caused by anemia.

4.2.3. Psychological factors

Another important factor in postpartum fatigue is the pressure to care for babies. After childbirth, the mother needs to master many new skills, such as infant feeding, infant care, and adapting to new family roles. Because most people have a lack of childcare experience, the psychological stress of the mother is high. Iwata et al. found that in the 6 months after delivery, the pressure to care for the baby will always affect maternal fatigue. Therefore, nurses should provide guidance to feed women and their families with knowledge and skills, avoid unnecessary psychological pressure, and improve maternal fatigue.

Within 6 months of delivery, maternal satisfaction with social support also affects postpartum fatigue. Social support refers to material and spiritual help from various sources obtained through the network. Social support plays an important role in the health of individuals, especially when the requirements for baby care are high in the early postpartum period. According to reports, social support helps prevent postpartum depression, enhances maternal confidence, and manages postpartum fatigue. Health care workers and their families should give appropriate maternity support.
to the mother, understand the needs of the mother, and alleviate postpartum fatigue.

5. Adverse effects

5.1. Adverse effects on puerpera

Sustained postpartum fatigue can affect maternal health. According to reports, it will reduce maternal cognitive function, inhibit maternal self-care behavior, resulting in postpartum depression. The incidence of postpartum depression in China is 14.7%, and postpartum fatigue is an important predictor of postpartum depression. Postpartum fatigue can weaken the maternal ability to take care of themselves, impair the maternal daily life ability, cognitive communication ability, leading to psychological changes, thus jeopardizing maternal physical and mental health.

5.2. Adverse effects on infants

Sustained postpartum fatigue can also affect the physical and mental health of the baby. Studies have shown that it affects the ability of mothers to care for babies, which is harmful to breastfeeding, premature breastfeeding, low infant development, and impaired mother–child interaction.

6. Intervention and nursing measures

6.1. Interventions

6.1.1. Exercise therapy

Exercise is a simple and cost-effective intervention that can maximize its role in health care, improve maternal health, lose weight, increase milk production, and so on. According to the American College of Obstetrics and Gynecology (ACOG), health care professionals have been emphasizing the promotion of postpartum health, and postpartum is the right time for medical staff in obstetrics and gynecology department to treat, care, and promote maternal health behavior. Yang et al. conducted a study on the effects of aerobic gymnastics on maternal postpartum fatigue. The experimental group engaged in aerobic gymnastics with a DVD disc after 6 weeks of delivery (3 times a week, 15 min each time, for 3 months). In this study, aerobic gymnastics exercise compact disc was produced following the ACOG guidelines for exercise during postpartum. Ashrafinia et al. conducted a study of the effects of Pilates on postpartum maternal fatigue, and the experimental group performed Pilates 72 h after delivery (4 times a week, 30 min each time, for 2 months). The results show that aerobic gymnastics and Pilates can improve maternal postpartum fatigue. Aerobic gymnastics and Pilates are safe and feasible aerobic exercise, and medical staff can consider incorporating them into postpartum health promotion programs in order to help postpartum women better cope with postpartum fatigue.

6.1.2. Aromatherapy

The principle of aromatherapy is that the aromatic components of essential oils promote body relaxation by stimulating the hypothalamus to activate the parasympathetic nervous system. Asazawa et al. conducted a study on the effects of aromatherapy on postpartum fatigue. The experimental group used aromatherapy. The subjects were selected from one of the five essential oils (lavender, ylang-ylang, lemon, rose, and sweet orange) and kept at 25°C at room temperature. The researchers applied hand and forearm massage to the subjects for 20 min. The results of the study showed that the scores of the relaxation scale of the experimental group were significantly higher than those of the control group, and the score of the fatigue scale was not significantly decreased.

In this study, aromatherapy was easy to use, although it did not significantly change maternal fatigue, but it can promote maternal relaxation, improve maternal satisfaction, and show a tendency to alleviate fatigue. Effati-Daryan et al. also showed that aromatherapy can improve maternal sleep quality; in the systematic review of Sánchez-Vidana et al., aromatherapy is an effective treatment for alleviating postpartum depression, which is helpful for mother’s relief from depression. Considering the positive effects of aromatherapy on pregnant and postpartum women, its simple use, high subject compliance, and no obvious side effects, medical staff can formulate detailed and feasible aromatherapy treatment and care programs according to the situation of Chinese women and enrich the postpartum fatigue intervention to better manage postpartum fatigue.

6.1.3. Helping U Get Sleep

Helping U Get Sleep (HUGS) is a theory-guided intervention developed from the Individual and Family Self-Management Theory. While the HUGS intervention includes education on knowledge and beliefs about sleep and fatigue, the intervention differs from existing interventions by including the self-management behaviors of goal
setting, action planning, and evaluation. Treatment and attention control interventions were delivered (15 HUGS, 12 comparisons) at a week 3 postpartum home visit and 4 follow-up phone calls. After the intervention, the HUGS group demonstrated significant improvements in subjective fatigue and subjective sleep disturbance relative to the comparison group. HUGS intervention is a new theory-guided intervention for early postpartum implementation that can reduce postpartum fatigue and promote postpartum sleep through maternal self-management. Our health care professionals can make modifications based on the existing interventions and develop personalized care plans for postpartum people in China.

6.2. Nursing measures

6.2.1. Create a comfortable environment

Sleep disorders can affect postpartum fatigue.21 The maternal body is weak and requires a high-level environmental protection. A clean and comfortable environment should be provided, the time and frequency of visits should be reduced, and the doctors and nurses should coordinate the time of treatment and care to avoid unnecessary disturbances and ensure adequate maternal sleep. Family members should also create a warm and harmonious atmosphere to support the mothers, which will help to strengthen maternal confidence and reduce postpartum fatigue.20

6.2.2. Psychological care

Compared with other people, the arrival of newborns, the pressure of child-rearing, and the significant changes in postpartum hormone levels make maternal psychology more vulnerable, so nurses should provide appropriate psychological care for women: (1) timely assessment of maternal psychological state to clearly grasp the psychological characteristics and situation; (2) psychological state to develop personalized psychological guidance based on maternal personality characteristics; and (3) rational use of communication skills to obtain family members' consent and help to eliminate maternal adverse emotions.

6.2.3. Health guidance

Detailed and personalized health education programs were developed based on the different needs of pregnant women in different periods. Detailed guidance on maternity and family knowledge about childbirth helps the mother and family to have a correct understanding and eliminate their negative emotions. In addition, the health education programs guide the childcare and breastfeeding, introduce relevant knowledge and skills, help the mother to adapt to the mother’s role early, and reduce the pressure and burden on the mother. Family members should provide a reasonable diet for the mother, provide foods rich in protein and vitamins, ensure adequate nutrition, and avoid maternal anemia. A reasonable diet can not only promote maternal recovery and reduce postpartum fatigue but also improve maternal and infant resistance and promote infant growth and development.

7. Conclusions

Postpartum fatigue is prevalent in women during pregnancy and postpartum and has a serious impact on women. Foreign studies on postpartum fatigue have gradually heated up, and a professional postnatal fatigue scale and a practically fatigue management guide have been developed.41 Domestic research on postpartum fatigue is relatively rare and still in its infancy. However, there is still a lack of specific diagnostic criteria for postpartum fatigue, a unified assessment tool and no uniform conclusion on the factors leading to fatigue at home and abroad. Future research is suggested that investigators enrich research methods, develop localized, personalized assessment tools, and develop targeted interventions to improve adverse effects.

Ethical approval

Ethical issues are not involved in this article.

Conflicts of interest

All contributing authors declare no conflicts of interest.

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