

# Research on the Demand for Postpartum Health Management and its Influencing Factors in Yulin

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**Abstract:** This study investigated mothers' postpartum health management needs in Yulin City to study ways to improve maternal health management services. An electronic questionnaire survey was conducted on the postpartum follow-up of women in the First People's Hospital of Yulin City, the Red Cross Hospital of Yulin City and the postpartum outpatient clinic of Guinan Hospital of Yulin City. The overall score of postpartum health management needs of the surveyed mothers was  $(4.34 \pm 0.53)$  points. The average score of the required items was from high to low, which were  $(4.42 \pm 0.56)$  points in the dimension of neonatal care needs,  $(4.33 \pm 0.68)$  points in the dimensions of social support needs, and  $(4.27 \pm 0.59)$  points in the dimensions of maternal physical and mental recovery needs. The main factors influencing the need for postpartum health management were education level, delivery experience, pregnancy complications/complications, and postpartum sleep ( $P < 0.05$ ).

**Keywords:** Maternal; Postnatal; Health management needs; Influencing factors

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## 1. Introduction

Since 2010, China's population situation has undergone a turning point, with the total population growth slowing down, the demographic dividend gradually disappearing, and the aging population increasing. To adapt to this changing population development situation, China has continuously optimized the birth policy, from the beginning of the "single second child" (2013) to the "comprehensive second child" (2016) and then to the "three-child policy" (2021), and then gradually shifted to the implementation of the "active birth support policy"<sup>[1-3]</sup>. The adjustment of fertility policy has changed the fertility expectations of women and families, and the change of fertility expectations has led to the strengthening of postpartum health management awareness and demand for women who have given birth for the first time<sup>[4,5]</sup>. In China's public health service system, postpartum health care services mainly include postpartum visit services and postpartum health examinations. The health management services for women in the puerperium are mainly based on postpartum visits, and compared with developed countries such as the United Kingdom and the United States, China only

meets the basic health needs of mothers [6,7].

### **1.1. Postpartum visits**

Foreign countries exert great importance on postpartum visits, and their development started early and matured in continuous improvement and perfection [8]. The United Kingdom has a comprehensive system of postnatal visits, with a dedicated organization and division of labor, and postnatal visits are carried out by health-visiting nurses [8]. The United States has the advantages of comprehensive visit content, integrated evaluation and intervention, flexible visit time limit, and strict access system for visiting personnel [1,2,8]. In China, this group of women is more proactive in postpartum health management because they are more likely to have adverse symptoms such as postpartum complications, mental health problems, and pelvic floor dysfunction than normal-age mothers [9]. High-quality postpartum health management is not only an inevitable requirement for social progress and the development of maternal and child health but also an important measure to realize the “Healthy China” strategy.

### **1.2. Adjustment of the birth policy in China**

The adjustment of birth policy has changed the birth expectations of women and families, and the change of birth expectations has led to the strengthening of postpartum health management awareness and demand for women who have given birth for the first time. For example, the “two-child policy” has promoted the improvement of women’s willingness to have “two children,” and to reduce the risk of reproduction, primiparous women pay more attention to postpartum health management after the first birth [10]. The “two-child policy” and “three-child policy” have encouraged some women over the age of 35 to have children again, and the proportion of elderly women and multiparous women has increased year by year [3,5,7]. Compared with prenatal and intrapartum health care, postpartum health care services are not paid enough attention, and it is difficult for mothers to effectively benefit from postpartum health care services [1]. Failure to achieve an optimal level of postnatal care for individual maternal needs not only increases the incidence of postpartum complications but also affects long-term maternal health and future pregnancy outcomes [1]. Pregnancy and childbirth are particularly important for a woman, and this process is accompanied by very strong physical and psychological stress reactions. If the mother and her family do not pay attention to it, it may increase the probability of postpartum infection, postpartum depression, and other diseases, and then threaten the physical and mental recovery of the mother and the healthy growth of the newborn.

This research mainly aims to the current situation of postpartum health management needs of pregnant women in Yulin City, and studies its influencing factors, to further understand the characteristics of postpartum health management needs of women with different characteristics, and provide a theoretical reference for improving the level of postpartum health management intervention [11]. It is of great significance to investigate the needs of postpartum women in postpartum health management, explore the possible influencing factors, and then put forward constructive suggestions, which is of great significance in improving the health status of postpartum women and promoting the healthy development of newborns.

## **2. Methods**

A four-step process was followed to extract and analyze data from the accreditation reports: (1) data sourcing, (2) data extraction, (3) data labelling, and (4) data analysis (Figure 1).

### **2.1. Data sourcing**

In this study, an electronic questionnaire survey was conducted in the postpartum outpatient clinic of Yulin First People’s Hospital, Yulin Red Cross Hospital, and Yulin Guinan Hospital in March–April 2023 using convenience sampling. Inclusion criteria: maternal age 20 years old and above, full-term delivery with a neonatal weight of 2.5–4 kg, the mother can understand normally and communicate effectively, and voluntarily

participate in this survey. Exclusion criteria: miscarriage, stillbirth, confinement in a confinement center during the puerperium, having a serious organ disease, having a psychiatric disorder.

## **2.2. Data extraction**

It was formulated by consulting a large number of literature, combining the specific local facts of Yulin, and under the guidance of the tutor. This part is composed of the demographic and sociological data of the mother and the data related to the pregnancy and delivery. A total of 14 items included maternal age, education level, marital status, residence situation, per capita monthly household income, mode of delivery, delivery experience, pregnancy complications/complications, infant birth status, infant birth weight, postpartum main caregiver, place of confinement, postpartum depression, and postpartum sleep.

## **2.3. Data labelling**

“Questionnaire on Maternal Postpartum Health Management Needs.” The questionnaire consisted of three different dimensions, namely maternal physical and mental recovery needs, neonatal care needs, and social support needs, with a total of 21 items. Using the Likert 5-level scoring method, the scoring rules are as follows: “very unnecessary” = 1 point, “not needed” = 2 points, “general” = 3 points, “needed” = 4 points, “very needed” = 5 points, the total score is 21–105 points, the higher the score indicates that the greater the mother’s need for postpartum health management, and vice versa.

## **2.4. Data analysis**

The electronic questionnaire is directly imported into SPSS from the background, and SPSS 22.0 statistical software is used for data processing. The mean  $\pm$  standard deviation (SD) was used to describe the measurement data, and the number of use cases and composition ratios were used to describe the counting data. The t-test, one-way ANOVA and multivariate logistic regression analysis were used for analysis. Cronbach’s  $\alpha$  coefficient was used to analyze the reliability, and  $P < 0.05$  indicated that there was a significant difference, and the evaluation of construct validity was mainly carried out by factor analysis.

# **3. Results**

## **3.1. Scale reliability and validity test**

The results showed that the total Cronbach’s  $\alpha$  coefficient was 0.943, and the Cronbach’s  $\alpha$  dimension coefficients of maternal physical and mental recovery, neonatal care, and social support were all greater than 0.6, indicating good internal consistency.

In this study, the evaluation of construct validity was mainly carried out by factor analysis. The results of the Bartlett sphericity test: the chi-square value is 2113.628, which is larger, which proves that the corresponding  $P$  value  $< 0.05$ , so the Bartlett sphericity test is significant. It also shows that the questionnaire data are suitable for exploratory factor analysis. A value of 0.917 for KMO is greater than 0.9, indicating good validity.

## **3.2. Statistics on the demographic characteristics of the study subjects**

Among the 149 women included, 17 (11.4%) were aged 20–25 years old; 26–30 years old, 50 cases (33.6%); 31–35 years old, 43 cases (28.9%); 39 (26.2%) aged 36 years and older. Among the subjects of this study, a college diploma was the most, with 51 cases (12.1%), followed by a bachelor’s degree or above, 42 cases (28.2%); technical secondary school or high school, 38 cases (25.5%); junior high school and below had the least, with 18 cases (12.1%). The study was divided into married and unmarried, divorced or widowed according to marital status. The status of residence is divided into husband and wife living alone and living together with their parents. Among them, 138 cases (92.6%) were married, 11 cases (7.4%) were unmarried/divorced/widowed, 62 (41.6%) lived alone unmarried, and 87 (58.4%) lived with their parents. The

subjects of this study were divided into vaginal delivery and cesarean section according to the mode of delivery. Childbirth experiences are divided into primiparous and multiparous women. Among them, 97 cases (65.1%) had a vaginal delivery and 52 cases (34.9%) had cesarean section, 84 (56.4%) were primiparous women and 65 (43.6%) were multiparous women. Among the 149 subjects in this study, 34 (22.8%) had pregnancy complications and 115 patients (77.2%) had no pregnancy complications. In this survey, 62 cases (41.6%) had mothers-in-law, mothers, or siblings as the main caregivers of postpartum mothers, followed by 43 cases (28.9%) taken care of by the husbands, the number of self-care cases was the same as that of confinement nannies, both of which were 22 cases. Among the 149 subjects in this survey, 29 (29.3%) were pregnant women with postpartum depression, 70 (70.7%) were women without postpartum depression and 50 cases of women who were unsure whether they had postpartum depression were excluded.

### 3.3. Analysis of maternal postpartum health management needs

The scores of postpartum health management needs in each dimension were neonatal care needs, social support needs, and maternal physical and mental recovery needs from high to low. The results showed that there were statistically significant ANOVA results in the dimensions of neonatal care needs, social support needs, and overall needs scores of mothers of different ages ( $P < 0.05$ ). There were differences in the dimensions of maternal neonatal care needs, social support needs, and overall needs of different age groups. Among them, the lower the age group, the higher the total score of postpartum health management needs, which indicates that the younger the age, the greater the postpartum health management needs.

**Table 1.** The influence of age factors on maternal postpartum health management needs

Age (years)	Number of cases	Maternal postpartum health management needs score			
		Maternal physical and mental recovery	Neonatal care needs	Social support needs	Total needs score
20–25	17	4.48 ± 0.69	4.62 ± 0.59	4.73 ± 0.39	4.61 ± 0.52
26–30	50	4.36 ± 0.54	4.56 ± 0.51	4.50 ± 0.58	4.47 ± 0.48
31–35	43	4.25 ± 0.52	4.26 ± 0.60	4.20 ± 0.79	4.24 ± 0.56
≥ 36	39	4.09 ± 0.66	3.32 ± 0.48	4.07 ± 0.67	4.16 ± 0.49
F value		2.196	3.599	5.652	4.704
P value		0.091	0.015	0.001	0.004

The results showed that there was a statistically significant ANOVA in the dimension of physical and mental recovery needs among women with different education levels ( $P < 0.05$ ), that is, there were differences in the scores of physical and mental recovery needs among mothers with different education levels. Except for those with a bachelor's degree or above, the lower the education level, the higher the score of physical and mental recovery needs. The results showed that there was no statistically significant t-test analysis of each dimension of maternal needs of different marital statuses ( $P > 0.05$ ), indicating that different marital statuses did not have a great impact on the needs of postpartum health management, but the scores of unmarried, divorced or widowed were higher than those of married people in the overall demand score. There was a statistically significant ANOVA analysis of the physical and mental recovery needs of mothers with different family per capita monthly income levels ( $P < 0.05$ ), that is, there were differences in the scores of physical and mental recovery needs among women with different family per capita monthly income levels. Those with a per capita monthly income of more than 3,000 yuan scored significantly lower than those with a physical and mental recovery needs score of 3,000 yuan or less. In terms of the overall demand score, the lower the per capita monthly income of the family, the higher the score, that is, the greater the need for postpartum health management.

## 4. Discussion

The results of this study found that the overall score of postpartum health management needs in Yulin City was

(4.34 ± 0.53) points, and the higher the score, the greater the postpartum health management needs. The scores of each dimension of postpartum health management needs were ranked from high to low as neonatal care needs (4.42 ± 0.56) points, social support needs (4.33 ± 0.68) points, and maternal physical and mental recovery needs (4.27 ± 0.59) points. In general, the scores of postpartum health management needs were high in all dimensions, indicating the demand for postpartum health management in Yulin City was relatively strong, and it was recommended to pay attention to the demand for postpartum health management services.

There were differences in the scores of neonatal care needs, social support needs, and overall needs among women of different ages. There was little difference in the total score of postpartum health management needs among women with different education levels, but there were differences in the scores of physical and mental recovery needs, and the lower the education level, the higher the scores of physical and mental recovery needs. The results showed that there was no significant correlation between the per capita monthly income of families and the total score of postpartum health management needs. There were differences in the dimensions of physical and mental recovery needs, neonatal care needs, social support needs, and overall needs among women with different delivery experiences.

Among the different postpartum primary caregivers, the overall score of self-care needs was the highest, followed by mother-in-law, mother or sibling, then husband, and finally confinement nanny. The overall score of self-care needs is the highest, which may be due to the large burden of mothers raising children alone, insufficient postpartum rest, poor physical recovery, and more likely to be “invaded” by loneliness and loss to suffer from depression, and the need for postpartum health management is stronger than that of other women with other postpartum caregivers.

## 5. Conclusion

Through the investigation of the postpartum health management needs of mothers in Yulin City, this paper found that firstly, there were differences in the postpartum health management needs of women with different ages, education levels, per capita monthly family income, childbirth experience, pregnancy complications/complications, postpartum primary caregivers, postpartum depression, and postpartum sleep. With the increase in maternal age, the demand for postpartum health management has gradually decreased. In terms of the differences in the dimension of maternal physical and mental recovery needs, the lower the education level or the lower the per capita monthly income of the family, the higher the score of this demand dimension, and the greater the demand for postpartum health management. There were significant differences in the dimensions of each need dimension and the total score of the needs of women with different delivery experiences, pregnancy complications, and postpartum primary caregivers. There were significant differences in the physical and mental recovery needs, neonatal care needs, and total needs scores of pregnant women with different postpartum depression and sleep conditions.

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## Author contributions

Idea conceptualization – Sisi Huang

Experiment conduction – Tao Jiang

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## Disclosure statement

The author declares no conflict of interest.

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