

Prevalence of postpartum depression in China

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Abstract

In this study, random questionnaire survey and SPSS statistical analysis were used to investigate and evaluate depression, family function, and social support among postpartum women in Fujian, China. To investigate the emotional state and influencing factors of postpartum women, and to reduce the incidence of postpartum depression, and improve postpartum happiness by intervening influencing factors. Through the survey, it was found that family function and social support were the two major influencing factors for postpartum depression in Chinese women. The mean of the total score of total function was the highest in family function, and the mean of total score of subjective support was the highest in social support, which were the main factors affecting postpartum depression. In order to reduce the incidence of depression in postpartum women in China, the following suggestions were summarized: First, improve family function: family members sincerely caring, understanding and supporting each other, division of labor and cooperation, brainstorming, and trying to solve problems with new methods. The second is to improve social support: the society and the government provide material assistance; Bao Ma is supported, understood and respected in family, life and work; Mutual support and help between individuals. This study provides an important guiding direction for reducing the incidence of depression in Chinese postpartum women. Implement family functions, improve social support, and serve to improve postpartum depression.

Keywords: Chinese postpartum woman, depressive mood, family features, social support

Prevalence of postpartum depression in China

1. Introduction

At present, postpartum depression is the most common affective and psychiatric disorder in postpartum women. Patients with postpartum depression often have "three low" symptoms: depression, loss of interest, lack of energy, and may be accompanied by anxiety, lack of concentration, decreased self-evaluation and self-confidence, self-guilt and sense of worthlessness, psychotic symptoms, sleep disorders, loss of appetite and weight, decreased libido, physical discomfort symptoms, etc., and in severe cases, even suicide or infant injury concepts and behaviors.

The internationally recognized prevalence of postpartum depression is about 10%~15%. The prevalence rate of postpartum women in western developed countries is 7%~40%, and the prevalence rate of postpartum women in China is 1.1%~52.1% (Wang et al., 2021). In addition, according to WHO2020 data, in developing countries, the probability of experiencing mental disorders during pregnancy and postpartum is 15.6% and 19.8%, respectively, with depression being the main one. Postpartum depression is more likely to occur within 6 weeks after giving birth and can recover spontaneously within 3~6 months after delivery, but patients with more severe conditions can also last for 1~2 years and can even recur when they are pregnant again (Marconcin et al., 2021). Please review the Manual of APA style of citations, 7th edition for the in-text citations. 15 million newborns are born in China every year, and many women become or become mothers again. This is not only a mental health problem that nearly 10 million mothers will encounter, but also a social problem that cannot be ignored.

Family function refers to the role of the family in the module of human life and social development. The functions of the family in China are basically divided into: production functions, reproductive functions, life functions, emotional communication functions, raising and supporting functions, education functions and entertainment functions, and so on. Social support refers to the fact that socially disadvantaged groups receive free help in terms of spiritual, material, and monetary help, and this help is given by a certain social network. People live in families, and women are important members of the family. For women, the postpartum period is a special time. Whether family members complete family functions, and whether society supports and helps women after childbirth. It is of positive significance to study the effects of these two on postpartum women's depression, improve family function and social support, reduce the incidence of postpartum women's depression, and promote family happiness and social harmony.

Objectives of the Study - This study explored postpartum depression in China, which included the postpartum emotional state, family function state and social support state of Chinese postpartum women.

Theoretical Framework

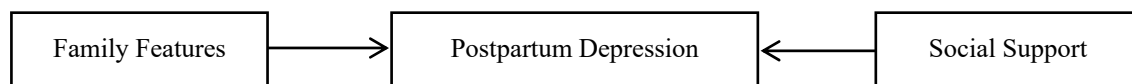


Figure 1. Relational Theory Model

The study leaned toward a psychological theory developed by American psychologist Robert L. Kahn and Thomas J. Duck. This theory mainly studies the relationship between people and the mode of communication. The basic idea of relationship frame theory is that people use different frames to understand the personality, behavior and environment of others in daily communication, and different frames will affect the relationship between people and others, as well as the social group problems occurring in the current period. As an important member of the family, postpartum women have their own factors and the influence of others on their depression. The family function of family members and the social support from all walks of life are realized through the relationship between people. To explore the relationship between these two and postpartum women's depression

is to explore their relationship theory.

Conceptual Framework - SPSS was used to analyze the correlation between postpartum depressive mood and sociological characteristics, family function, and social support, and to analyze the emotional characteristics, family function status, and social support characteristics of Chinese postpartum women, and then further analyze the related factors affecting postpartum depressive mood. The study was conducted through a randomized questionnaire. The design of the questionnaire contains four parts, one is the basic characteristics of sociology, including age, place of residence, family income, education level, mode of conception, mode of delivery, mode of breastfeeding, attitude towards the sex of newborns, and fully considers the influence of common sociological characteristics on postpartum emotional state. The second is the Edinburgh Depression Scale, which investigates the emotional state of mothers and preliminarily detects the incidence of depression. The third is the Family Function Scale, which contains seven dimensions: problem solving, communication, role, emotional responsiveness, emotional participation, behavior control, and overall functioning. The fourth is the social support scale, which contains three dimensions: objective support, subjective support and utilization of social support, and the social support deficiency of mothers is judged by analyzing the survey results of each dimension. Every mother has close contact with her family and society, and family and society are the two major factors affecting her postpartum emotional state.

The data collected by the scale were analyzed for information statistics, descriptive analysis and correlation analysis, and it was found that the depressed mood of pregnant women was not correlated with its sociological characteristics but had a significant correlation with family function and social support. Through this survey, it was found that most Chinese mothers may be depressed, and women with depression have poor family function and social support, so the suggestions put forward according to this characteristic are: First, improve the ability of family members to deal with and solve problems and communicate between family members, in addition, the family division of labor is clear, abide by family rules, and respond to each other's emotions. The second is to improve the material and spiritual support of the community and the government for pregnant women to meet the material needs of their families. The third is the emotional support and help of the mother's relatives and friends.

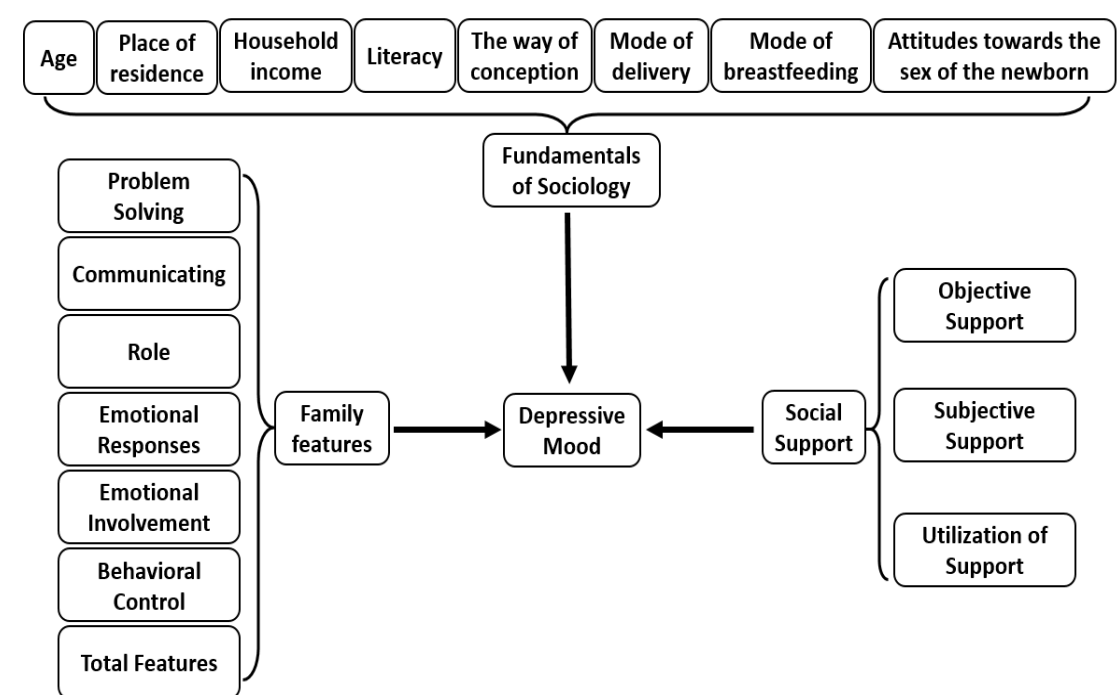


Figure 2. Conceptual Framework

2. Methods

Research Design - This study was conducted using a quantitative study and was conducted through an online questionnaire. The online questionnaire survey is a random questionnaire survey of postpartum women in Fujian, China. The use of the Family Functioning Scale to determine the status of family functioning in postpartum women; the use of social support scales to determine social support for postpartum women; The depression scale was used to determine the emotional state of postpartum women, and then SPSS was used to analyze the correlation between family function and social support and the emotional state of postpartum women, and the corresponding conclusions were synthesized based on the results of on-site interviews, so as to provide theoretical guidance for formulating the health path guidelines of postpartum women in China, improving emotional state and reducing the occurrence of depression.

Setting and Participants - Inclusion criteria: 1) All postpartum were single pregnancy and full-term delivery; 2) The level of clinical indicators in postpartum and newborns is normal; 3) Aged between 20 and 40; 4) With the consent of the mother and her family, and the mother has a certain understanding, communication and execution; 5) The content filled in is in line with the patient's own real situation (Zhong et al., 2023). Exclusion criteria: 1) Unmarried women; 2) There are pregnancy complications or serious complications in pregnant women; 3) Previous maternal history of mental illness, psychological disorders and family history; 4) There are language communication barriers, hearing impairments and inability to cooperate; 5) Newborns with asphyxia, jaundice and other serious diseases (Li et al., 2023).

Data Gathering Instrument - This study used questionnaires to collect information on postpartum women in China. A total of 117 data were collected for analysis. The researchers will develop a data collection checklist as a guide question containing the variables to be measured, formatted according to the specific objectives of the study. Therefore, participants answer the questionnaire formed by questionnaire stars. The questionnaire includes the following contents: a) Basic personal information of postpartum women in China; b) Edinburgh postnatal depression scale (EPDS) to assess depression in postpartum women; c) The Family Function Rating Scale (FFRS) assesses postpartum women's family function; d) The Social Support Rating Scale (SSRS) revised by Xiao Shuiyuan in 1996 assessed postpartum women's social support.

EPDS consists of 10 items, each item is scored in 4 levels (0 ~3 points), the total score is 0~30 points, the total score is less than 9 points is normal; Those with a total score of 9-13 are at high risk of depression and need timely intervention. The total score of ≥ 13 points can be diagnosed as depression; it is recommended to timely comprehensive intervention (Dai et al., 2023).

FFRS has a total of 7 dimensions, 60 items, each content is scored in 4 levels (1 to 4 points), that is, strongly agree (or very like my family) =1 point, agree (or like my family) =2 points, disagree (or unlike my family) =3 points, completely disagree (or completely unlike my family) =4 points, for unhealthy items (with *), its score is 5 minus the actual score. In this way, for all items, 1 point represents healthy, 4 points represents unhealthy, and the average score of each item in each scale is the score of the scale, and the score range of each item is 1-4 points. The total score of the FFRS is 60 to 240, with < 150 being good family function and ≥ 150 being low family function (Luo et al., 2021).

SSRS is divided into three items, 1) Objective support score: the sum of 2, 6 and 7 scores; 2) Subjective support score: sum of 1, 3, 4 and 5 scores; 3) Utilization of support, sum of 8, 9 and 10 scores. Article scoring method: (1) Articles 1-4, 8-10; Choose only one item for each item. Choose 1, 2, 3 and 4 items and score 1, 2, 3 and 4 points respectively. (2) Article 5 points A, B, C, D four points score, each item from "none" to "full support" score 1-4 points, that is, "none" score 1 point, "rarely" score 2 points, "general" score 3 points, "full support" score 4 points. (3) In articles 6 and 7, 0 points are scored if the answer is "no source", and points are scored if the answer is "the following sources". The total score of the scale is the sum of the scores of 10 items. Judging criteria, The higher the score, the higher the degree of social support. Generally, the total score less than

20 is less social support, 20-30 is a general degree of social support, 30-40 is a satisfactory degree of social support (Bai et al., 2023).

Data Collection Procedure - To collect the data needed for this study, the researchers obtained approval from the Lyceum of the Philippines University-Batangas. A letter and a copy of the proposed study was sent to the respective Ethics Review Committee for ethical consideration of the study. After approval, the researchers prepared an informed consent form for the participants, which was given prior to conducting the study. The first stage is to determine the evaluation dimensions of each scale. The evaluation dimensions of the two subscales were determined through literature review. The second stage is to design the questionnaire. Through literature review and integration and guidance from tutors, the scales learned were integrated and the questionnaire format was designed. The contents of the questionnaire included the guiding opinions, the basic situation of sociology, the Edinburgh Depression Scale, the Family Functioning Scale and the Social support Scale. The third stage is a formal online survey. The content of the questionnaire was imported into the questionnaire star, and then the questionnaire star was published, and qualified personnel filled in the online questionnaire. The fourth stage is to sort out and summarize the collected questionnaires, delete the invalid questionnaires, and sort out and input the useful questionnaire information. The fifth stage is to analyze the questionnaire information through SPSS, evaluate the influencing factors of postpartum depression, and conduct in-depth analysis and discussion on the influencing factors.

Reliability Analysis - EPDS was compiled by British scholar Cox et al in 1987, with a total of 10 items, and has been widely used after Chinese. Maternal depression was evaluated with Cronbach's a coefficient of 0.878 (Yang et al., 2023). FAD was developed by Epstein et al. based on the McMaster family function model theory, and consisted of 7 dimensions, namely, problem solving, communication, role, emotional response, emotional intervention, behavioral control and overall function, Cronbach's coefficient of the scale was 0.860(Wang et al., 2021). SSRS was revised by Xiao Shuiyuan in 1996. There were 10 items in total, including 3 dimensions of subjective support, objective support and utilization of social support. The scale scored from 12 to 65, and Cronbach's a coefficient was 0.945(Jing, 2020).

Validity Analysis - The validity of EPDS was evaluated with a half-fraction reliability of 0.88 (Cox et al., 1987), which showed good content validity and structure validity (Ni et al., 2023). The half-reliability of the Chinese Family Function Rating Scale was 0.810, and the correlation between all dimensions was statistically significant. There were significant differences between high and low groups. The family function rating scale had good content and structure validity (Zhang et al., 2023). The CVR value of the SSRS scale was 0.85, indicating that the content validity of the scale was high. The factor loads of the three dimensions are objective support (0.61), subjective support (0.73) and utilization of social support (0.69), indicating that there is a certain degree of independence and correlation among the three dimensions. In addition, by comparing the correlation between the scores of each item and the total score, it is found that the correlation between the items is high, indicating that the structural validity of the scale is good (Li et al., 2023).

Data Analysis - SPSS statistical software was used to analyze the survey data, and then summarize the analysis, and make reasonable reasoning and prediction according to the results, so as to provide a theoretical basis and reference for the conclusion and provide a theoretical basis for reducing the occurrence of depression in Chinese postpartum women.

Ethical Considerations - To ensure that research was conducted in an ethical manner, ethical concerns were prioritized. Before conducting the study, the LPU-Batangas Ethics Review Committee reviewed the study. The study followed protocols established by the University. After obtaining the participants' consent, the investigator began the study with the participants' full consent, which was fully explained all important information about the study while ensuring their privacy and confidentiality.

3. Results and discussion

A total of 117 questionnaires were distributed through the questionnaire star, and 117 valid questionnaires were recovered, with a valid questionnaire rate of 100%. SPSS20.0 was used to analyze the questionnaire data.

3.1 Depression Scale Results

Among the 117 Chinese postpartum women surveyed, 27 (23.1%) had a total score of 9 or less on the Edinburgh Depression Rating Scale, 28 (23.9%) had a total score of 9~13, and 62 (53.0%) had a total score of 13 or more. From the histogram, the total score of the Edinburgh Depression Scale for most women is concentrated in 11~19 points, and only a small number of women have a total score of more than 20 on the Edinburgh Depression Scale. According to the survey results, only a small number of people are in a normal mood after giving birth, nearly a quarter of people have a depressed mood after giving birth, and more than half of the people have reached the level of depression.

As of May 11, 2023, according to epidemiological data, the average prevalence of postpartum depression in China has reached 14.7%, and the survey and analysis of multiple scholars show that the incidence of postpartum depression in China is 10%~20%. The results of the survey suggest that it is necessary to raise the attention of families, society and the government to this special group and the emotional state of the special period, to study the influencing factors of postpartum depression, to intervene and prevent it from the root, to reduce or avoid the appearance of postpartum depression in women, and to prevent the occurrence and development of depression (Li et al., 2023).

Table1

Depression scale

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<9	27	23.1	23.1	23.1
	9~13	28	23.9	23.9	47.0
	>13	62	53.0	53.0	100.0
	Total	117	100.0	100.0	

3.2 Family Functioning Scale Results

Analysis of the total score of family functioning

Among the 117 Chinese postpartum women surveyed, 86 (73.5%) had a total score of less than 150 on the Family Function Scale. There were 31 students with a total score of 150 or above, accounting for 26.5%. From the histogram, it can be seen that the total score of family function of most women is concentrated in 80~120 points, the total score of family function in a small number of families is about 150 points, and the total score of family function in a very small number of families is about 200 points. There are many influencing factors of family function, including family relationship and non-family relationship factors, development stage and life emergency factors, etc., which lead to obvious differences in the family function of the survey subjects under the influence of multiple factors. According to the results of the survey, the vast majority of mothers have normal family functioning and are able to have good family functioning, and about a quarter of women have poor family functioning.

The function of the family is composed of seven parts; each of which has its own element characteristics. Each person in the family can perform their own duties, fulfill their duties, and complete their division of tasks; Emotionally able to comfort each other, caring, support and connect; Able to discuss and solve problems with each other; Ability to communicate with each other; Economically, we can work hard and accumulate together; In short, it is to be able to share hardships and happiness (Cao et al., 2023). Under such a harmonious family relationship, the family can have a better family function, and only with a good family function can a healthy

family relationship and a happy family life be created.

Table 2

Analysis of the total score of family functioning

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<150	86	73.5	73.5	73.5
	≥150	31	26.5	26.5	100
	Total	117	100.0	100.0	

Analysis of the total score of each dimension of family function

The total mean score of family function in Chinese postpartum women was (2.025±0.587), and the total mean score of each dimension was as follows: problem solving (2.104±0.636), communication (2.034±0.645), role (1.834±0.547), affective responsiveness (1.977±0.684), affective involvement (1.985±0.570), behavior control (1.820±0.553), and general function (2.026±0.573) points. Total mean score for problem solving: maximum score is 4.00 points, minimum score is 1.17 points; total mean score for communication: maximum score is 4.00 points, minimum score is 1.17 points; total mean score of role: maximum score is 3.45 points, minimum score is 1.18 points; total mean score of affective responsiveness: maximum score is 4.00 points, minimum score is 1.17 points; total mean score of affective involvement: maximum score is 3.71 points, minimum score is 1.00 points; total mean score of behavior control: maximum score is 3.56 points, minimum score is 0.89 points; the t general function average: maximum score is 4.00 points, minimum score is 1.25 points. In each dimension, the maximum value of the total mean score is problem solving, and the minimum value is behavior control. The histogram was used to investigate the dimensions of family function of postpartum women in China, and the results showed that the average score of problem solving was 1.33~2.00 points. The average communication score was 1.33~1.89; the average score of the role is 1.45~1.64, and the average score of affective responsiveness is 1.33~1.83. The average score of affective involvement was 1.43~1.86 points. The average score of behavior control was concentrated in 1.22~1.67 points. The average score of the general function is concentrated in 1.50~1.92 points.

Table 3

Analysis of each dimension of family function

	Problem Solving Average Score	Communication average	Role Average	Average score for Affective Responsiveness	Average score for Affective Involvement	Mean score for Behavior Control	The General Function average score	Average score for Family Functioning
Mean	2.1041	2.0349	1.8344	1.9768	1.9852	1.8203	2.0255	2.0253
Std. Deviation	.63605	.64532	.54714	.68441	.57036	.55277	.57317	.58710
Variance	.405	.416	.299	.468	.325	.306	.329	.345
Minimum	1.17	1.11	1.18	1.17	1.00	.89	1.25	1.20
Maximum	4.00	4.00	3.45	4.00	3.71	3.56	4.00	3.93

From the histogram of each dimension, the distribution of the total mean score is similar to the positive distribution, and the total mean score is relatively concentrated, and only a small number of families will have a higher total mean score of each dimension. From the analysis results, it can be seen that the vast majority of families have strong problem-solving skills, but their role-playing and behavior control skills are poor. Each has multiple roles. When the baby is born, it will give us another role identity. The emergence of new roles, everyone needs to adapt to the process, the speed of adaptation varies from person to person, so some people adapt quickly to it, which can make their family function better, while some people adapt slowly, which will affect family function to a certain extent (Zou et al., 2022). Among the subjects of the survey, their problem-solving ability in family functions is strong, suggesting that these families can better solve the events encountered in life and tide over difficulties together. However, most families have poor role-playing and behavior control ability, so it is necessary to improve the role adaptation of these families - recognize roles, understand roles, and complete role division of labor; In addition, it is necessary to improve the ability of this part of the family to control their behavior - this can be achieved by constantly adjusting their words and actions, or through mutual supervision

and adjustment between family members. The normal operation of a family is inseparable from the common maintenance of all members, the reasonable division of labor in the family, and the completion of family work. If each person is able to perform his or her own duties and complete family tasks, he or she will be able to make his family have better family functions.

3.3 Social Support Scale total score analysis

Among the 117 Chinese postpartum women surveyed, 30 (25.6%) had a total score of less than 20 points on the Social Support Scale, that is, a low degree of social support. There are 41 people with a total score of 20~30 points, general social support, accounting for 35%; There were 46 people (39.3 per cent) who were satisfied with social support with a total score of 30 or more. From the histogram, it can be seen that the total score of the social support scale of Chinese postpartum women is 18~22 and 34~44. According to the survey results, the vast majority of postpartum women in China have satisfactory social support, and about a quarter of women have poor social support.

Social support includes support from government departments and social organizations for postpartum women, as well as emotional, material, and economic support. The inconsistency of the form and degree of social support makes the social support situation quite different. Different regions in China have different levels of economic development, and different levels of economic development make the social support that the government can provide differently – for example, the lower level of medical care in poor areas will lead to less or poorer community medical services; Poorer areas have less or no economic and material support than government revenues. In addition, the inconsistency of the education level received by the masses makes their cognition of postpartum depression different, the social forces and influences formed are different, and the social support that social organizations can provide will also be different. Everyone is a part of society, and individuals exist in groups, so the support of maternal colleagues and friends is also very important. A true friend is usually honest, loyal, loyal, and considers the other person first. They help each other, for example, by listening to each other's worries and giving each other psychological support. For most people, friends are trusted partners and angels who can help each other. Only friends will lend a helping hand to help you in times of difficulty. The postpartum period is a special period, and increasing communication and help between friends can also effectively improve the social support of mothers (Chen et al., 2022). In addition to the support of friends, more important is the support of the government and social organizations, so it is necessary to improve the awareness of government departments and the public about postpartum depression - enhance the attention of government departments and social organizations to mothers, financial investment, material support, psychological counseling, etc. Only with the joint investment of all parties can we effectively improve the social support of mothers.

Table 4

Social Support Scale Rating Scale

	Frequency	Percent	Valid Percent	Cumulative Percent
	30	25.6	25.6	25.6
Valid	41	35.0	35.0	60.7
	46	39.3	39.3	100.0
Total	117	100.0	100.0	

3.4 Three scales and the analysis of each dimension

The mean score of the Edinburgh Depression Rating Scale is (13.38±4.803) for 117 Chinese postpartum women, with the maximum score is 23 points and the minimum score is 4 points. The mean total score of the Family Function Scale is (121.51±35.231), with the maximum score is 236 points and the minimum score is 72 points. The mean total score of the social support scale is (27.08±9.296), the maximum score is 49 points, and the minimum score is 17 points. The mean of the total scores of each dimension of the Family Functioning Scale

is as follows: problem solving (12.62 ± 3.816) points, the maximum score is 24 points, and the minimum score is 7 points; communication (18.31 ± 5.809) points, the maximum score is 36 points, the minimum score is 10 points; role (22.13 ± 6.508) points, the maximum score is 42 points, the minimum score is 14 points; affective responsiveness (11.86 ± 4.106) points, the maximum score is 24 points, the minimum score is 7 points; affective Involvement (13.90 ± 3.988) points, the maximum score is 26 points, the minimum score is 7 points; behavior control (16.38 ± 4.969) points, the maximum score is 32 points, the minimum score is 8 points; general function score (24.31 ± 6.875), the maximum score is 48 points, the minimum score is 15 points. The mean total score of each dimension of the social support scale was as follows: objective support (5.48 ± 2.136) points, with the maximum value is 11 points, the minimum score is 3 points. Subjective support (15.19 ± 5.082) points, the maximum score is 29 points, the minimum score is 10 points; the utilization of support (6.41 ± 3.135) points, with a maximum score of 12 points, the minimum score is 3 points.

Among the dimensions of the Family Functioning Scale, the maximum value of the mean of the total score is the total function, and the minimum value is the emotional response. In each dimension of the social support scale, the maximum value of the total mean score is subjective support, and the minimum value is objective support. From the table, it can be seen that the total score of the depression scale of 117 Chinese postpartum women was concentrated in 13.38 points, and the fluctuation state was not obvious, the total score of the family function scale was concentrated in 121.51 points, and the fluctuation state was obvious, and the total score of the social support scale was concentrated in 27.08 points, and the fluctuation state was average.

According to the results of the Edinburgh Depression Rating Scale, its score is mainly concentrated in about 13 points, indicating that more women are in postpartum depression. Therefore, regardless of the mother's family function and social support, it is necessary to pay attention to the emotional state of the mother, detect the bad mood in time, and avoid the development of depression. The results of the dimension survey from the functional scale showed that the overall family function of most families was good, but the emotional response in the dimension was poor. Family education and school education should cultivate the expression of their emotions, and the appropriate emotions can be expressed on the right occasions, so as to enhance the feelings between each other. The results of the survey on the dimensions of social support suggest that subjective support is the main one. Postpartum women in China can receive more support subjectively, but their objective support is insufficient, so the overall social support can be improved by strengthening objective support. For example, the objective support of the government and society should be increased to improve the social support of mothers. In addition, maternal use of support needs to be increased.

Table 5

Descriptive statistics of three scales

	Minimum	Maximum	Mean of total scores	Variance
Edinburgh Depression Scale total score	4	23	13.38 ± 4.803	23.064
Family Functioning Scale total score	72	236	121.51 ± 35.231	1241.235
Total Problem Solving Score	3	11	12.62 ± 3.816	4.562
Communication overall score	10	36	18.31 ± 5.809	33.749
The total score of the Role	13	38	20.18 ± 6.015	36.183
Total Affective Responsiveness Score	7	24	11.86 ± 4.106	16.860
Total score for Affective Involvement	7	26	13.90 ± 3.988	15.903
Total score for Behavior Control	8	32	16.38 ± 4.969	24.687
General Function score	15	48	24.31 ± 6.875	47.267
Social Support Scale total score	17	49	27.08 ± 9.296	86.416
Objectively support the overall score	3	11	5.48 ± 2.136	4.562
Subjective support for the total score	10	29	15.19 ± 5.082	25.826
The total score of utilization of support	3	12	6.41 ± 3.135	9.830

3.5 Correlation analysis among the three scales

Sig. values of the total score of the Edinburgh Depression Scale and the total score of the Family

Functioning Scale were 0.000 ($P < 0.05$), so there was a significant correlation between the total score of the Edinburgh Depression Scale and the total score of the family functioning scale. Sig. values of the total score of the Edinburgh Depression Scale and the total score of the social support scale were 0.000 ($P < 0.05$), so there was a significant correlation between the total score of the Edinburgh Depression Scale and the total score of the social support scale. The Sig. value of the total score of the family function scale and the total score of the social support scale was 0.000 ($P < 0.05$), so the total score of the family function scale was significantly correlated with the total score of the social support scale. There is a correlation among the three scales and each other. Depression and depression can be reduced by enhancing family functioning and social support.

Table 6*Correlations*

Spearman's rho		Edinburgh Depression Scale total score	Family Functioning Scale total score	Social Support Scale total score
Edinburgh Depression Scale total score	Correlation Coefficient	1.000	.605**	-.725**
	Sig. (2-tailed)	.	.000	.000
	N	117	117	117
Family Functioning Scale total score	Correlation Coefficient	.605**	1.000	-.732**
	Sig. (2-tailed)	.000	.	.000
	N	117	117	117
Social Support Scale total score	Correlation Coefficient	-.725**	-.732**	1.000
	Sig. (2-tailed)	.000	.000	.
	N	117	117	117

***. Correlation is significant at the 0.01 level (2-tailed).*

3.6 *Basic information of the sample***Table 7***Demographic characteristics*

		Frequency	Percent
The age at which the last child was delivered	20~35 years old	112	95.7
	35 years of age and older	5	4.3
Place of residence	Countryside	32	27.4
	Town	85	72.6
Household income	≤5000	24	20.5
	5000-10000	48	41.0
	≥10000	45	38.5
Education	Junior high school and below	61	52.1
	High school and junior college	17	14.5
	Bachelor's degree or above	39	33.3
The way of conception	Conceive naturally	5	4.3
	Assisted reproduction conception	112	95.7
Mode of delivery	Eutocia	79	67.5
	Cesarean	38	32.5
Attitudes towards the sex of newborns	Satisfied	7	6.0
	Dissatisfied	110	94.0
Feeding method	Breast milk	109	93.2
	Other	8	6.8

Among the 117 Chinese postpartum women surveyed, 112 were aged 20~35, accounting for 95.7%; There were 5 people over the age of 35, accounting for 4.3 percent, 32 people living in rural areas, accounting for 27.4 percent, 85 people living in urban areas, accounting for 72.6 percent, 24 people with a total family income of < 5,000 yuan, accounting for 20.5 percent, 48 people with a total family income of 5,000~10,000 yuan, accounting for 41.0 percent, and a total family income of >45 yuan (38.5%) had an education level of 10,000 yuan, 61 people (52.1%) had an education level of junior high school or below, 17 people had an education level of high school or junior college, accounting for 14.5%, 39 people had a bachelor's degree or above, accounting for 33.3

percent, 112 people had a natural conception method, accounting for 95.7 percent, and 5 people (4.3%) had a assisted reproductive conception method. 79 (67.5%) gave birth vaginally, 38 (32.5%) gave birth by cesarean section, 110 (94.0%) were satisfied with the sex of the newborn, 7 (6.0%) were dissatisfied with the sex of the newborn, 109 (93.2%) were breastfed, and 8 (6.8%) were other breastfeeding.

From the survey results, it can be seen that the vast majority of Chinese women complete childbirth before the age of 35; the proportion of people living in urban areas is relatively high; the vast majority of people have a family income of more than 5,000 yuan; the vast majority of people have an education level of junior high school or below, and one-third of them have an education level of bachelor's degree or above; the mode of conception is mainly natural conception, as long as a small number of people rely on assisted reproduction to conceive; the mode of delivery is mainly natural delivery, but there are still one-third of people who are artificial cesarean section; the vast majority of people are satisfied with the sex of the newborn, and only a small number of people are dissatisfied with the sex of the newborn; the feeding method is mainly breast milk, and only a small number of people choose milk powder or mixed feeding.

3.7 Analysis of the relationship between the basic characteristics of sociology and various functional scales

The Edinburgh Postpartum Depression Scale, Family Function Scale, and Social Support Scale with different demographic characteristics of Chinese postpartum women were not statistically significant ($P>0.05$).

Table 8

Comparison of the basic situation of sociology in three scales

		Average Value (EPDS)	P-value (EPDS)	Average Value (FDA)	P-Value (FDA)	Average Value (SSRS)	P-Value (SSRS)
The age at which the last child was delivered	20~35 years old	13.4	.889	122.9	.000	26.8	.069
	35 years of age and older	13.8		89.0		33.2	
Place of residence	Countryside	13.3	.840	114.8	.209	25.3	.169
	Town	13.4		124.0		27.7	
Household income	≤5000	14.3	.596	130.3	.218	24.1	.259
	5000-10000	13.0		115.0		27.7	
	≥10000	13.32		123.5		27.8	
Education	Junior high school and below	13.8	.680	124.2	.355	25.4	.683
	High school and junior college	13.8		114.9		27.7	
	Bachelor's degree or above	13.0		125.0		27.1	
The way of conception	Conceive naturally	13.3	.271	121.7	.833	27.2	.269
	Assisted reproduction conception	15.4		117.6		23.4	
Mode of delivery	Eutocia	13.2	.503	120.6	.687	26.6	.454
	Cesarean	13.8		123.5		28.0	
Attitudes towards the sex of newborns	Satisfied	13.3	.354	121.7	.829	27.4	.066
	Dissatisfied	14.4		118.7		21.9	
Feeding method	Breast milk	13.4	.951	121.0	.548	27.1	.951
	Other	13.5		128.1		26.9	

This paper introduces the relationship theory into the correlation study of the influencing factors of postpartum depression in China, establishes the theoretical model of the influencing factors of postpartum depression, and designs the corresponding questionnaire according to the characteristics of the scale. Through the questionnaire survey of postpartum women in China, relevant data were collected, and the data were analyzed by SPSS software, and through comparative analysis of different categories and dimensions, it was found that the occurrence of postpartum depression was significantly related to family function and social support.

In the family function scale, the average score of the dimension of problem solving is the highest and the average score of the dimension of role is the lowest. Therefore, most families have strong problem-solving ability, but the role playing of family members is poor or the task assignment of family members is unreasonable, and the task completion degree is poor. In the social support scale, the average score of subjective support is the highest, and the average score of objective support is the lowest, so although the vast majority of Chinese postpartum women can be more respected, supported and understood in the family and society, they have less objective, visible or practical support in life. According to the survey results, it can be concluded that improving family function and social support can effectively reduce the generation of postpartum depression in Chinese women; Through the reasonable division of labor of family members, improving the completion of family tasks can effectively improve the family function; Social support can be effectively enhanced through practical material and emotional support provided by family, community, society and government.

4. Conclusions and recommendations

There are thousands of babies born every year and many women will become mothers or become mothers again. Under the role of multiple factors, many women have the emergence of postpartum depression. Pay attention to women's mental health, and from the family function and social support, the occurrence of women's postpartum depression can be effectively reduced. Family functioning can be divided into seven dimensions: problem solving, communication, role, emotional response, emotional mediator, behavioral control, and general functioning. Starting from these seven aspects and improving the function of each aspect will be able to effectively improve the overall function of the family. For example, the family is able to solve problems or difficulties effectively; Family members are able to communicate effectively and transmit information correctly; Each family member can have his/her own role, the division of tasks is clear, and can seriously complete the task; Each person can have a normal emotional response and can respond to each other; Family members have enough concern and attention for each other's activities and some things, and at the same time, they can participate in each other's activities while giving enough personal independence space. In family activities, everyone can effectively control their own emotional behavior, and give each other enough care and care. Starting from the daily life activities, everyone clear their responsibilities, mutual care, mutual love, care for each other, sharing hardships, will be able to effectively improve family function, improve family happiness (Qiao et al., 2022). Social support can be divided into three dimensions: objective support, subjective support, and the utilization of social support.

Starting from these three aspects and improving the function of each aspect will be able to effectively improve social support. For example, family, community, society, organization, government to give the mother or the mother's family objective, visible or practical support, can be money, can also be material, so that the mother can get direct assistance to meet their needs; Maternal can be respected, supported and understood in the family and society, so that they have better emotional support and better emotional experience; Mothers have more friends and relatives who can give material or emotional support, and mothers are good at receiving support from others. Starting from the three aspects of maternal spirit, emotion and material, it is indeed satisfied, which can effectively improve its social support and reduce the occurrence of depression (Zhao et al., 2022). Postpartum depression occurs under the comprehensive influence of various factors. Starting from the two modules of family and society, giving mothers support in all aspects to make them feel happy and secure their lives can effectively reduce the occurrence of postpartum depression, thus promoting family happiness and social harmony (Yao et al., 2023).

Raise family and society's attention to postpartum depression. At present, the older generation of people in China have received less cultural education, so the overall quality level is low, and the understanding of postpartum depression is insufficient - that giving birth to children is something that women must experience, and postpartum breast milk and taking care of the baby are the tasks that mothers have to perform, and the physical discomfort that women have to experience when they are pregnant with a baby, giving birth to a baby, and raising a baby is considered to be something that women must experience, so the empathy for women will be

weaker, and postpartum is a special stage, and women have to experience the body at this stage. Therefore, it is necessary to raise the attention and publicity of families and society to postpartum depression, so that they can understand and learn the relevant knowledge of postpartum depression - such as setting up a public account that focuses on women's health, or setting up a women's health column on TV, media, and online video, or setting up a women's health section in news and newspapers, and publicizing the relevant knowledge of postpartum depression from time to time; Relevant government departments or social organizations hold publicity activities on postpartum depression in densely populated communities several times a year(Li et al., 2024). In addition, in the mental health education of the school, we also focus on introducing postpartum depression to students, so that they shall know and understand postpartum depression, the difficulties of mothers and women when they are students, so as to improve the awareness and attention of the society to postpartum depression as a whole. Only by making people aware of what postpartum depression is, the impact of postpartum depression on women, and the harm to the family and society, we could really improve the attention to the physical and mental health of mothers, so as to strengthen the care of women's bodies and emotions in this special stage of postpartum.

Improve the overall function of the family. The scores of the four dimensions of role, affective responsiveness, affective involvement and behavior control in most families are relatively low, so we can start from these four aspects to improve the family function of mothers as a whole(Yue et al., 2021). Role function refers to whether the family establishes a behavioral pattern to complete a series of family functions, such as providing adequate sources of livelihood, meeting the nutritional needs of physical health, supporting the development of family members, effectively managing the family, meeting each other's sexual needs, and a fair and reasonable division of family tasks, and each family member can conscientiously complete the task. The meaning of role function is relatively broad, in general, it means that everyone can have a clear division of labor and fulfill their duties. Affective responsiveness refers to the degree to which family members care about and value each other's activities and certain things. Everyone needs to be noticed and valued. When everything done by one of the family members can be valued and recognized by other members, it can effectively improve self-satisfaction, find the value of one's own existence, improve the overall family atmosphere, and strengthen the bond between each other. Affective involvement refers to the degree to which family members care about and value each other's activities and certain things. Everyone needs to be noticed and valued. When everything one of the family members does can be valued and recognized by other members, it can effectively improve self-satisfaction, find the sense of value of their own existence, effectively improve the overall family atmosphere, and strengthen the bond between each other. Behavior control refers to the behavior of a family, and there are different behavior control patterns in different situations. Everyone has a temperament, and everyone will have emotional flashpoints, so we must learn to control our emotions and behaviors, so as to create a harmonious family atmosphere. The family is the smallest social unit, and each family member has a clear division of labor, completes their own tasks, takes care of each other, understands each other, creates a good family atmosphere, and improves the overall function of the family (Zhang et al., 2021).

Increase social support. According to the survey, the scores of the two dimensions of maternal objective support and utilization of support are relatively low, so the overall social support of mothers can be improved through these two aspects. Objective support refers to objective, visible, or actual support. Strengthen the support and assistance of government departments and social organizations for all aspects of maternity, meet the most basic material and living needs of pregnant women after childbirth, and alleviate their economic and living pressure, so as to effectively improve objective support. The use of social support refers to the difference in the use of social support by individuals, some people can receive support but refuse help from others, and the support between people is an interactive process, and a person supports others while also laying the foundation for obtaining the support of others. Therefore, when the government, society, relatives and friends give all kinds of social support, they must learn to accept it. In addition, in daily life, it is necessary to be good at discovering the various types of support that exist, and take the initiative to obtain support from the government and society, so as to increase the overall use of social support. Calling on communities, organizations, governments, and society to give mothers spiritual and psychological, family material support, only by improving social support,

can we essentially solve the source of depression and reduce the occurrence of depression. (Li et al., 2019).

Maternal own mental and psychological state adjustment. Depression is the result of many factors, including external factors and internal factors. External causes need to be solved by the outside world; then internal causes need more of their own adjustment. Strengthen women's understanding of postpartum depression, when their own depression can be found in a timely manner, adjust their mental state - can talk to friends and relatives; Can go out to relax and so on, let yourself in a better psychological state and then return to the family.

Prevention of postpartum depression. Reasonable diet. Ensure the intake of basic vitamins and proteins, maintain balanced nutrition, help balance hormones in the body, and prevent postpartum depression. Appropriate exercise. Proper outdoor exercise can change a person's mood, promote communication with others, and help prevent postpartum depression. Avoid mood swings. Understand the physiological knowledge from pregnancy to childbirth, and do a good physiological examination in advance to avoid anxiety caused by accidents. At the same time, the warmth and harmony of the family, and the husband's verbal care and comfort for his wife also help the mother to maintain a positive attitude.

Treatment of postpartum depression. If postpartum depression has been reached, treatment is needed. Psychotherapy. Take the initiative or be accompanied by family members to a psychologist for psychological treatment to eliminate the patient's bad mood and alleviate the condition. Interpersonal Therapy. Interpersonal communication to help women solve social problems and reduce interpersonal conflicts and difficulties in role change. This helps the mother to better adapt to her new life roles. Medication. For patients with severe disease, take medication as prescribed. Self-regulation and daily care. Pregnant women can carry out some gentle and comfortable activities, such as deep breathing, walking, meditation, meditation, etc., to regulate emotions and stabilize their mind; Pregnant women can think more about their own advantages and look at more beautiful things to improve their bad mentality; Family members can provide a warm and pleasant environment for the mother to spend more time with her family or children, which can help relieve depression. Family members, especially husbands, should give the mother adequate care and support to help her through this difficult time. In short, postpartum depression requires the joint efforts of the mother, family and medical staff, the government and the society to deal with it.

5. References

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