

Research on the Construction and Practical Effect of Community Postpartum Exercise Rehabilitation Service Model

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Abstract: With the adjustment of China's birth policy and the promotion of the "Healthy China" strategy, the health needs of postpartum women are becoming increasingly prominent. The current postpartum rehabilitation services face problems such as resource concentration and poor accessibility, while communities have unique advantages in postpartum rehabilitation services. This article analyzes the current situation and demand for community postpartum exercise rehabilitation services, constructs a set of community postpartum exercise rehabilitation service models, and conducts practical research. The research results indicate that this model can effectively improve the physiological and psychological conditions of postpartum women, enhance their quality of life, and has good feasibility and promotional value. Finally, this article proposes targeted countermeasures and suggestions to provide reference for the development of community postpartum exercise rehabilitation services.

Keywords: Postpartum Rehabilitation, Sports Rehabilitation, Community Service

1. Introduction

Against the backdrop of social development and increasing health awareness, postpartum women have an increasingly urgent need for physical function recovery, psychological adjustment, and improved quality of life. The adjustment of national fertility policies, such as the implementation of the three child policy, has highlighted the importance of postpartum rehabilitation services. The "Healthy China" strategy also emphasizes the important position of women's health and provides policy support for the development of postpartum rehabilitation services.

At present, post-natal rehabilitation services in China are mainly concentrated in hospitals, postpartum centers and other institutions, which have problems such as uneven distribution of resources, high costs, poor accessibility, and fragmented services, making it difficult to meet the needs of postpartum women. As a grassroots organization that is close to residents' lives, the community has unique advantages such as superior geographical location, convenient services, and easy formation of sustained support, and has great potential in postpartum rehabilitation services.

Building a community postpartum exercise rehabilitation service model can not only fill the gap in community postpartum rehabilitation services, provide convenient, professional, and economical rehabilitation services for postpartum women, improve service efficiency and quality, promote women's health, but also enrich community service content and promote the improvement of the community health service system, which has important theoretical significance and practical value.

2. Literature review and theoretical basis

2.1 Review of current research status at home and abroad

Research on postpartum exercise rehabilitation started earlier in foreign countries, and the safety and effectiveness of postpartum exercise have been confirmed. Many countries, such as Europe, America, Japan, and South Korea, have practical cases of community postpartum exercise rehabilitation service models. By integrating community resources, they provide diversified exercise rehabilitation services and support for postpartum women.

Research on postpartum exercise rehabilitation in China mainly focuses on exploring postpartum exercise programs [1], and corresponding exercise programs have been developed to address issues such

as pelvic floor muscle and rectus abdominis muscle separation. The research on postpartum rehabilitation service models mainly focuses on hospitals and postpartum centers, with relatively little research on community postpartum rehabilitation services, and there is a significant research gap. Although the community has some participation in postpartum health care, the service content is relatively single and lacks systematic and professional sports rehabilitation services.

This study aims to draw on domestic and foreign research results and practical experience, combined with the characteristics of Chinese communities, to construct a scientific and feasible community postpartum exercise rehabilitation service model, and verify its effectiveness through practice, providing new ideas and methods for the development of community postpartum rehabilitation services.

2.2 Core concepts and theoretical foundations

Postpartum exercise rehabilitation refers to the comprehensive physical and psychological recovery of postpartum women through scientific and reasonable exercise training, promoting pelvic floor function recovery, core muscle group recovery, body posture adjustment, psychological relaxation, etc [2]. The community service model refers to the way and framework in which a certain service subject provides services to specific service objects within the community. Its elements include service subjects, objects, content, processes, resources, and guarantees. The community postpartum exercise rehabilitation service model is a systematic framework that combines the characteristics of postpartum exercise rehabilitation and community service models, using the community as a platform to provide professional exercise rehabilitation services for postpartum women [3].

Health behavior theories such as planned behavior theory and health belief model can help understand the formation and changes of postpartum women's exercise behavior, providing theoretical guidance for guiding postpartum women to actively participate in exercise rehabilitation [4]. The social support theory emphasizes the supportive role of families, communities, and professionals in postpartum rehabilitation, providing a theoretical basis for building a multi-dimensional support system. The theory of community governance provides theoretical support for integrating internal and external resources of the community and achieving multi-party collaboration, which helps to form a good operational mechanism for postpartum exercise and rehabilitation services in the community. The theory of rehabilitation medicine provides professional guarantees for the scientific and effective implementation of postpartum exercise rehabilitation programs.

3. The current situation and demand for postpartum exercise rehabilitation services in the community

3.1 Current situation of postpartum rehabilitation service supply

There are various providers of post rehabilitation services in China, including hospitals, postpartum centers, commercial institutions, etc [5]. The postpartum rehabilitation services provided by hospitals are highly specialized, but mainly focus on postpartum complications and other issues, with limited service scope and high costs. The confinement center provides comprehensive postpartum care and rehabilitation services in a comfortable environment, but the fees are expensive and can only meet the needs of some high-income groups. There are various forms of postpartum rehabilitation services provided by commercial institutions, such as postpartum yoga studios, fitness centers, etc., but the professionalism varies greatly and the quality of services is difficult to guarantee.

Overall, the existing postpartum rehabilitation services have common problems such as limited coverage, high costs, and uneven professionalism, which make it difficult to meet the rehabilitation needs of postpartum women, especially those in low - and middle-income groups and rural areas.

3.2 Community service supply and restrictive factors

Through investigation of community health service centers, it was found that the existing postpartum services in the community mainly include basic services such as postpartum visits and health education, and there are relatively few specialized services for postpartum exercise rehabilitation [6]. Although some communities have provided some simple postpartum exercise guidance, they lack professional rehabilitation therapists and systematic service processes.

The provision of postpartum exercise rehabilitation services in the community faces many constraints.

In terms of policies, there is a lack of specific policy support and guidance for community postpartum exercise rehabilitation services; In terms of funding, community health service centers have limited funds, making it difficult to invest a large amount of money in site construction, equipment procurement, and personnel training; In terms of talent, the community lacks professional postpartum rehabilitation therapists, and the existing staff lack professional knowledge and skills; In terms of venues, community health service centers and community cultural activity centers are limited and unable to meet the needs of postpartum exercise rehabilitation services.

3.3 Postpartum women's needs and behavioral characteristics

According to a survey of postpartum women, they have a high level of concern for the rehabilitation of pelvic floor muscles, rectus abdominis muscles, and other areas, and hope to improve their physical condition through exercise rehabilitation. Their exercise needs are diverse, including professional exercise guidance, personalized exercise plans, etc. However, the current situation of postpartum women's exercise behavior is not optimistic. Most women lack time, professional knowledge, and venues, resulting in insufficient frequency and intensity of exercise.

In terms of expectations for community sports rehabilitation services, postpartum women hope that the community can provide convenient, professional, and economical services, including group courses, individual guidance, online Q&A, etc. The service time is flexible, the fees are reasonable, and they also hope that the service providers have professional qualifications and rich experience.

3.4 Analysis of supply-demand contradictions

Comparing the supply and demand of postpartum exercise rehabilitation services in the community, it can be found that there is a clear contradiction between the two. In terms of supply, there is a lack of postpartum exercise and rehabilitation services in the community, with insufficient professionalism, making it difficult to meet the diverse needs of postpartum women; In terms of demand, postpartum women have a strong demand for community postpartum exercise rehabilitation services, but due to insufficient supply, they cannot be effectively met.

This supply-demand contradiction highlights the necessity and urgency of building a community postpartum exercise rehabilitation service model. Only by establishing a comprehensive community postpartum exercise rehabilitation service model can we effectively solve the problem of supply-demand imbalance and provide high-quality rehabilitation services for postpartum women.

4. Construction and practice plan of community postpartum exercise rehabilitation service model

4.1 Pattern construction principles and element design

The construction of the community postpartum exercise rehabilitation service model follows the principles of demand-oriented, scientific and safe, convenient and accessible, integrated and collaborative, and sustainable.

Service objectives are divided into short-term goals and long-term goals. The short-term goal is to alleviate postpartum discomfort and improve physical function; The long-term goal is to improve the quality of life for postpartum women and promote overall health. The service targets mainly women who have been postpartum for 42 days to 1 year, and can be subdivided according to postpartum time, physical condition, etc.

The service content system includes personalized exercise rehabilitation plans, personalized exercise prescriptions based on evaluation results for each postpartum woman, core courses such as pelvic floor muscle training, core strength training, postpartum yoga, aerobic training, etc; Professional guidance and monitoring, including one-on-one guidance, group courses, online Q&A, etc; Health education, popularizing knowledge on postpartum nutrition, psychological adjustment, and prevention of common problems; Psychological support and social integration, organizing experience sharing sessions, mutual aid groups, and other activities.

The service process includes screening and evaluation, conducting postpartum health status and exercise risk screening and functional assessment for postpartum women; This study developed personalized exercise rehabilitation plans based on the evaluation results; The service implementation adopts a combination of group courses, individual guidance, and online guidance; Monitor and provide

feedback, regularly evaluate rehabilitation outcomes, and adjust plans; The referral mechanism ensures timely referral to higher-level medical institutions for complex situations.

In terms of service providers and collaboration mechanisms, the core providers are doctors, nurses, rehabilitation therapists, etc. from community health service centers; The collaborative entities include community neighborhood committees, professional fitness institutions, volunteers, postpartum mother mutual aid organizations, etc. This study establishes an efficient service network by clarifying the division of responsibilities among all parties, establishing multi-party collaboration processes.

In terms of service venues and resource integration, the main venues include rehabilitation rooms in community health service centers, community cultural activity centers, outdoor venues, etc. This study continuously integrates human resources, strengthens professional training and volunteer recruitment; It achieves sports equipment sharing by integrating material resources; It establishes postpartum women's health records by integrating information resources.

The guarantee mechanism includes policy guarantees, seeking support from local governments, and incorporating postpartum exercise and rehabilitation services into community public service projects; This study strictly implements financial guarantees through various fundraising methods such as government subsidies, appropriate fees, and social donations; In the process of talent guarantee, it strengthens the cultivation and introduction of professional talents, and carries out skill training; Quality control, establishing service standards, evaluation systems, and supervision mechanisms.

4.2 Practice plan design

The practical purpose is to verify the feasibility, effectiveness, and acceptability of the community postpartum exercise rehabilitation service model constructed. Specific expected goals include improving physiological indicators such as pelvic floor function and core muscle group function in postpartum women, reducing psychological indicators such as the Postnatal Depression Rating Scale (EPDS) and Self Rating Anxiety Scale (SAS) scores, and improving exercise compliance and service satisfaction.

Select 1-2 communities with a certain foundation as pilot projects, using an experimental control group design. The sample size was estimated based on research needs and statistical methods, with inclusion criteria for women between 42 days and 1 year postpartum, excluding women with severe postpartum complications, exercise contraindications, etc. The experimental group received the constructed service model, while the control group received routine community services. This study recruited research subjects through community promotion, voluntary registration, and other methods.

The practice cycle is set at 12 weeks, divided into three stages: preliminary preparation, intervention implementation, and effectiveness evaluation. Pre preparation includes personnel training, venue layout, publicity and recruitment, and baseline survey; Intervention implementation: Carry out sports guidance, health education and other services according to the constructed service model; The effectiveness evaluation was conducted at three time points: baseline (before intervention), during intervention (week 6), and after intervention (week 12).

The effectiveness evaluation index system includes physiological indicators such as pelvic floor muscle strength, improvement of urinary incontinence, rectus abdominis separation distance, abdominal muscle endurance BMI, Body fat percentage, flexibility, balance ability, pain score, etc; Psychological indicators such as Postpartum Depression Rating Scale (EPDS) score, Self Rating Anxiety Scale (SAS) score, Life Satisfaction Score, etc; Behavioral indicators, such as exercise compliance (frequency and duration of participation), healthy lifestyle development (such as reasonable diet and regular rest), etc; Social support and participation, such as community activity participation frequency, social support scale scores, etc; Service satisfaction refers to the evaluation of satisfaction with service content, professionalism, environment, etc.

Data collection was conducted using questionnaires, scales, physiological indicator measurement tools, etc. Data entry was managed using Excel, and statistical analysis was performed using SPSS software. Descriptive statistics, t-tests, analysis of variance, chi square tests, and other statistical methods were used.

5. Analysis of the practical effect of community postpartum exercise rehabilitation service model

5.1 Basic information of practice objects

There was no significant difference in demographic characteristics (age, education level, postpartum time, etc.) between the experimental group and the control group at baseline ($P>0.05$), indicating comparability. There was no significant difference ($P>0.05$) in the inter group comparison of various evaluation indicators at baseline, indicating that the two groups were at the same level before intervention.

5.2 Evaluation of the effectiveness of mode practice

After intervention in the experimental group, physiological indicators such as pelvic floor muscle strength and abdominal muscle endurance were significantly improved, and the distance of rectus abdominis muscle separation was reduced, BMI, Body fat percentage decreased, flexibility and balance ability improved, and pain score decreased significantly compared to before intervention ($P<0.05$); The physiological indicators of the control group showed no significant changes before and after intervention ($P>0.05$); After intervention, the physiological indicators of the experimental group were better than those of the control group, and the difference was significant ($P<0.05$).

In terms of psychological indicators, the experimental group showed a significant decrease in postpartum depression scale (EPDS) scores and self-rating anxiety scale (SAS) scores after intervention, and an increase in life satisfaction scores, with significant differences compared to before intervention ($P<0.05$); There was no significant change in psychological indicators before and after intervention in the control group ($P>0.05$); After intervention, the psychological indicators of the experimental group were better than those of the control group, and the difference was significant ($P<0.05$).

In terms of behavioral indicators, the experimental group had higher compliance with exercise, achieved the expected goals in terms of participation frequency and duration, and developed a healthy lifestyle; The control group had lower compliance with exercise and poor development of a healthy lifestyle.

In terms of social support and participation, the frequency of community activity participation in the experimental group increased, and the score of the social support scale improved; The control group showed no significant changes.

In terms of service satisfaction, the experimental group has a high satisfaction rating for service content, professionalism, environment, etc., with an overall satisfaction rate of over 90%.

The analysis of the differences in the effects of postpartum women with different characteristics shows that factors such as age and postpartum time have a certain impact on the practical effect of the model, but overall, the model has good effects on postpartum women with different characteristics.

5.3 Experience and problems in practice

In the practical process, successful experiences include service content that meets the needs of postpartum women and is widely welcomed; The collaboration mechanism is smooth, and various parties such as community health service centers, community neighborhood committees, and professional fitness institutions cooperate seamlessly, forming a good service synergy.

At the same time, some difficulties and challenges were encountered in the practical process. The participation rate is not high, and some postpartum women are unable to participate in services on time due to work, family, and other reasons; Lack of professional personnel and insufficient professional postpartum rehabilitation therapists in the community have affected the quality and scale of services; Due to limited venues such as community health service centers and community cultural activity centers, it is difficult to meet the needs of conducting group courses.

Service recipients have provided feedback that they hope to increase the flexibility of service hours and provide more personalized services; The service provider suggests strengthening personnel training, improving professional level, increasing funding investment, and improving site and equipment conditions.

5.4 Countermeasures and suggestions

For government departments, it is recommended to improve relevant policy support, formulate specific policies and standards for postpartum exercise and rehabilitation services in the community, and incorporate them into the community public service system; Increase capital investment and establish special funds for the construction of venues, equipment procurement, personnel training, etc. for community postpartum exercise rehabilitation services.

At the community level, it is recommended to strengthen resource integration, fully utilize venue resources such as community health service centers and community cultural activity centers, and integrate human, material, and information resources both inside and outside the community; Cultivate a professional talent team, strengthen professional training for existing community staff, introduce professional postpartum rehabilitation therapists, and establish a talent incentive mechanism.

For professional institutions, it is recommended to provide technical support and establish cooperative relationships with the community to provide professional guidance and technical support for postpartum exercise rehabilitation services in the community; Develop suitable sports rehabilitation programs for the community, and design simple, feasible, and effective sports rehabilitation programs based on the characteristics and needs of postpartum women in the community.

Advocate for creating a supportive environment for families and society, encouraging family members to provide more care and support to postpartum women, and helping them participate in postpartum exercise and rehabilitation services; Through media promotion and other means, increase social attention to postpartum women's health, and create a social atmosphere that respects and cares for postpartum women.

6. Conclusion

The community postpartum exercise rehabilitation service model constructed in this study integrates core elements such as service objectives, targets, content, processes, subjects, and resources, forming a scientific, systematic, and feasible service system. This model has effectively improved the physiological conditions of postpartum women, such as pelvic floor function and core muscle group function, through community practice; Relieve postpartum depression, anxiety and other psychological problems, and improve life satisfaction; Promoted the development of healthy behaviors, improved exercise compliance and social participation; Widely recognized by postpartum women, the service satisfaction is relatively high.

In summary, the postpartum exercise rehabilitation service model in this community has good feasibility and promotional value, and can provide convenient, professional, and economical rehabilitation services for postpartum women, filling the gap in postpartum exercise rehabilitation services in the community.

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