

Satisfaction and Perceived Effectiveness on Herbal Decoctions for Postpartum Care: a cross-sectional survey of mother's experience

Min Kyung Hyun¹, Jang Kyung Park², Sung Yoon Oh^{3*}

¹Department of Preventive Medicine, College of Korean Medicine, Dongguk University, Gyeongju, Republic of Korea

²Division of Clinical Medicine, School of Korean Medicine, Pusan National University, Yangsan, Republic of Korea

³Soldam Hospital of Korean Medicine, Jeju, Republic of Korea

Received February 7, 2023

Reviewed March 6, 2023

Accepted May 19, 2023

*Corresponding Author

Sung Yoon Oh
Soldam Hospital of Korean Medicine,
3055 1100-ro, Jeju 63078, Republic of
Korea
Tel: +82-64-746-1075
E-mail: pkomrd@hanmail.net

Objectives: In East Asia, postpartum care has traditionally been considered important for maternal health; however, studies on this are still insufficient. Therefore, we examined the satisfaction and perceived effectiveness of herbal decoctions used in postpartum care in a city in the Republic of Korea (ROK).

Methods: We analyzed anonymized secondary data obtained from a retrospective cross-sectional survey of women who had taken herbal decoctions provided by the support service for women giving birth in a local city in ROK. The questionnaire items consisted of basic information regarding childbirth, the need for the herbal decoction support service, satisfaction, and the effectiveness of the service received.

Results: A total of 68 women were included in the study, and those aged 30-39 accounted for 73.13%. Of the 68 women, 79.37% visited within 3 weeks of childbirth. Women's satisfaction regarding herbal decoction support for postpartum care was 76.47%, and most women (98.53%) responded that they needed it more than twice. More than 50% of women showed improvement in puerperal wind disorders, weight gain, and delayed eliminated lochia.

Conclusion: A large proportion of women who took herbal decoctions reported satisfaction and perceived effectiveness when used to treat puerperal wind disorders. Nevertheless, future well-designed clinical studies are needed to provide information on whether herbal decoctions effectively prevent and treat puerperal wind disorders.

Keywords: postpartum care, herbal decoction, traditional Korean medicine, patient-reported outcome

INTRODUCTION

Maternal health care includes antenatal care, delivery, and postnatal care [1]. Appropriate postpartum care is essential for the long-term health and well-being of the mother and child [2, 3]. The postpartum period, especially during the first few weeks after childbirth, is a time when many mothers feel vulnerable. In the puerperium, mothers are exposed to rapid physical and emotional changes and often feel overwhelmed by new social roles in parenting. Many women believe that poor postpartum care is related to health problems they experience for the rest of

their lives. Therefore, evaluation of postpartum recovery, sleep, fatigue, pain, depression, anxiety, and breastfeeding is important for women after childbirth, and appropriate postpartum care services should be provided [4, 5].

Certain areas and countries worldwide have culturally unique postpartum care, with some even using complementary alternative medicine for postpartum healthcare [6, 7]. Indeed, in a cross-sectional study conducted in 2010, 95.4% of postpartum Palestinian women used medicinal plants for postpartum healthcare [8]. Moreover, a 2007 National Health Interview Survey study in the United States showed that 28% of postpartum

women used complementary and alternative medicine (CAM), while an analysis of Infant Feeding Practices Study II (2005-2007) data showed that 16% used herbs or other botanicals [9, 10]. Furthermore, a systematic review of randomized controlled trials found that herbal medicine is a safe and effective therapeutic method for treating postpartum depression [11, 12].

In addition to physical and emotional postpartum care, postpartum social care is a key factor in preventing postpartum depression, and postpartum social support can play an important role in enhancing maternal confidence [7, 13]. In East Asia, postpartum care has traditionally been carried out at home [8, 9]. However, the emergence of the nuclear family has led to insufficient care and support for mothers at home [14].

Community care is a policy led by the local community, which provides services such as health care, caring, nursing, and living support to meet the needs of residents [15]. In the Republic of Korea (ROK), a community care policy is being promoted, with priority given to older adults and people with disabilities, which aims to provide services to anyone who needs care by expanding the scope of service provision [16]. The Korean medical system covers both traditional Korean medicine (TKM) and Western medicine are covered together, and TKM services are provided at public health centers [17].

In 2019, a study on the status of health promotion programs provided by public health centers as community care services revealed that health promotion services for women, such as postpartum care, were provided as a combination of TKM treatment and health promotion, but their effectiveness was not evaluated [18].

Since 2012, a local city in the ROK has been providing health care for postpartum women through local community cooperation with the private and public sectors. This policy allows a woman who lives in this city and reports a birth to receive a voucher and submit it to the TKM clinic to receive a discount on herbal medicines dispensed for postpartum care, although the outcomes of this policy are yet to be reported. Therefore, in this study, we sought to investigate the necessity, satisfaction, and perceived effectiveness of women who took herbal decoctions for postpartum care through this service, with the aim to help establish healthcare policies to provide postpartum care services in community care based on relevant evidence.

MATERIALS AND METHODS

1. Data source

This study analyzed anonymized secondary data obtained from a retrospective cross-sectional survey of herbal decoction support services. A survey questionnaire was drafted after reviewing the literature, and the final edition was completed through discussion with Korean medical doctors participating in the project. The questionnaire items consisted of basic information regarding childbirth, the need for the herbal decoction support service, satisfaction, and the effectiveness of the service received. The Korean medicine clinics and researchers who participated in the project collected data through a survey. This study was approved by the Institutional Review Board of Dongguk University, Gyeongju (DGU20160008).

2. Study participants and prescribed herbal decoctions

Any woman who has registered a child's birth to the local city can receive a herbal decoction voucher for postpartum care within 6 months of delivery. Sixty-eight women who had accessed the herbal decoction support service for postpartum care from January to June 2016 agreed to respond to the questionnaire. The service was conducted mainly through public institutions, public health centers, and websites (Fig. 1).

The herbal decoction support service for women's postpartum care is provided once, with no limitations on the type of herbal decoction prescribed. Moreover, the prescription of herbal decoction for postpartum care of each woman depends on the diagnosis and treatment decisions of the TKM doctors.

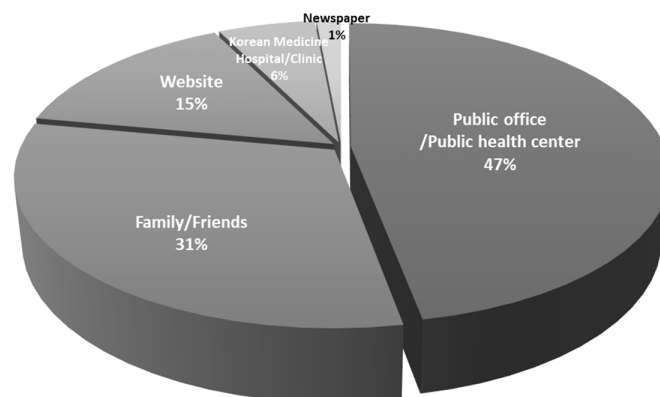


Figure 1. How women know the herbal decoctions support service for postpartum care.

The most commonly prescribed herbal decoctions were Boher-tang, Ssanghwa-tang, Gunggwijohyeol-eum, and Danggwijag-yak-san.

3. Statistical analysis

The baseline characteristics were summarized using descriptive statistics, and continuous variables were categorized based on their distributions. Multivariate logistic regression was used to identify the factors associated with improved puerperal wind disorder symptoms after taking herbal decoction. A two-sided p -value < 0.05 was considered significant. All data manipulation and statistical analyses were performed using Stata/MP version 17 (StataCorp LP, College Station, TX, USA).

RESULTS

1. Characteristics of the respondents

Among the 68 women who participated in the study, 73.13% were 30-39 years of age, and 54.41% had two or more births. The mean and median periods from childbirth to visiting the KM clinic for postpartum care was 17.24 and 10 days, respectively. The percentage of women who visited 22 days after childbirth was 20.63%. Additionally, 17.65% of respondents reported that their perceived health status was poor (Table 1).

2. Perceived effectiveness of herbal decoction on puerperal wind disorders

Overall, 52.94% of postpartum women showed weight gain and joint pain, 13.24% complained of weakness, and 11.75% complained of delayed elimination of lochia before treatment. After taking the herbal decoctions, 62.50% reported improved elimination of lochia, 58.33% reported improved weight gain,

44.55% reported improved strength, and 30.56% reported improvement in joint pain (Table 2).

3. Satisfaction and necessity of herbal decoction support

Overall, 76.47% of the women surveyed were satisfied with the herbal decoction support, and 61.76% responded that they would recommend it to other women. Additionally, 98.53% of women responded that they required more than two rounds of support services.

Table 1. Characteristics of the respondents (n = 68)

	n	%
Age*		
Mean, SD	33.34	4.69
Median, IQR	33	5
20-29	10	14.93
30-39	49	73.13
≥ 40	8	11.94
Childbirth experience		
1	31	45.59
≥ 2	37	54.41
Period from childbirth to visit to the clinic (days)**		
Mean, SD	17.24	20.24
Median, IQR	10	15
0-7	24	38.10
8-14	14	22.22
15-21	12	19.05
≥ 22	13	20.63
Perceived health status		
Good	19	27.94
Average	37	54.41
Poor	12	17.65

*n = 67; **n = 63; SD, standard deviation; IQR, interquartile range.

Table 2. Perceived effectiveness of herbal decoctions on puerperal wind disorders

	Pre-treatment symptomatic women		Post-treatment improved woman	
	n	% of total	n	% of improved
Weight gain	36	52.94	21	58.33
Joint pain	36	52.94	11	30.56
Weakness	9	13.24	4	44.44
Delayed elimination of lochia	8	11.76	5	62.50

Duplicate responses are possible.

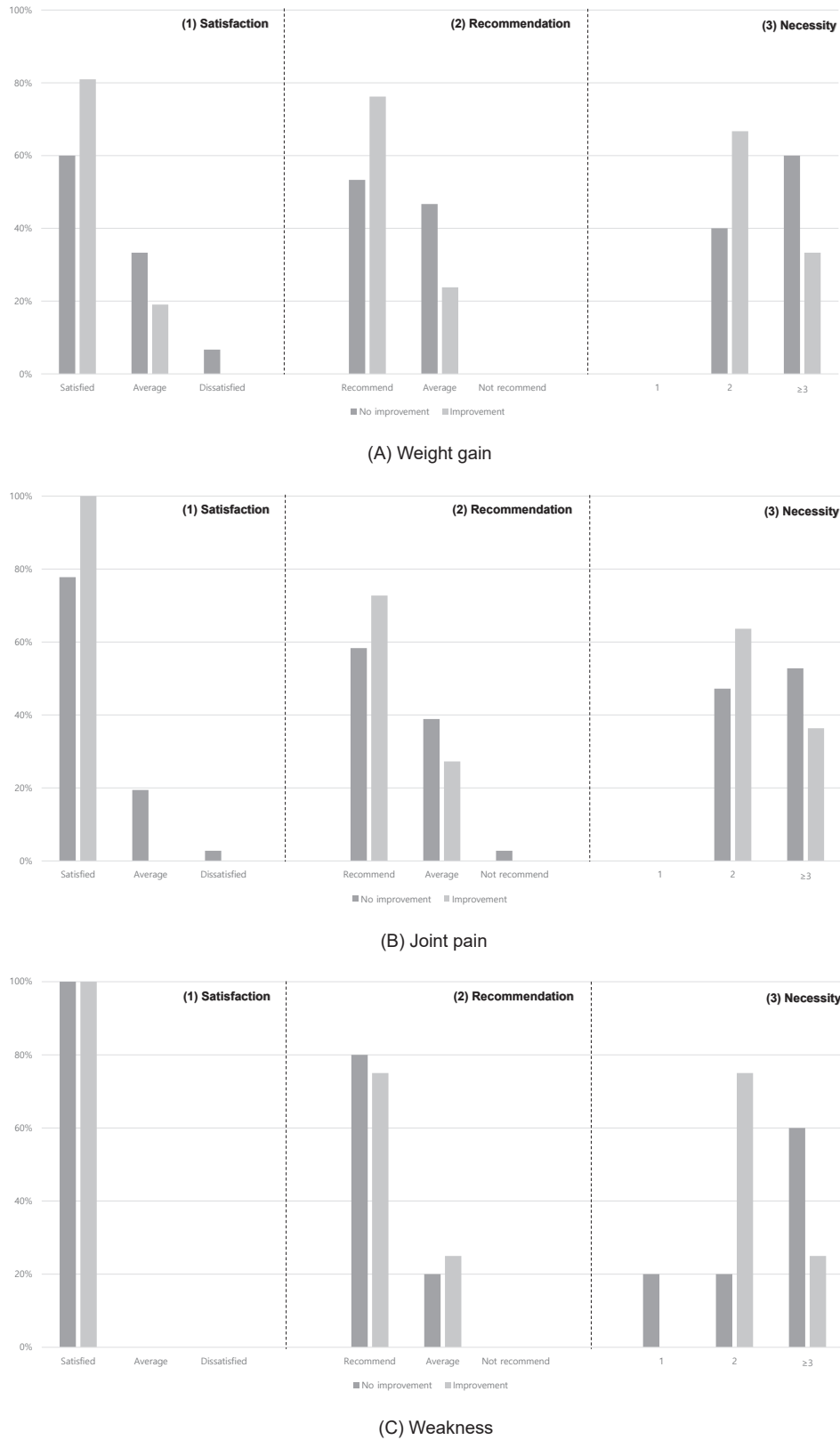
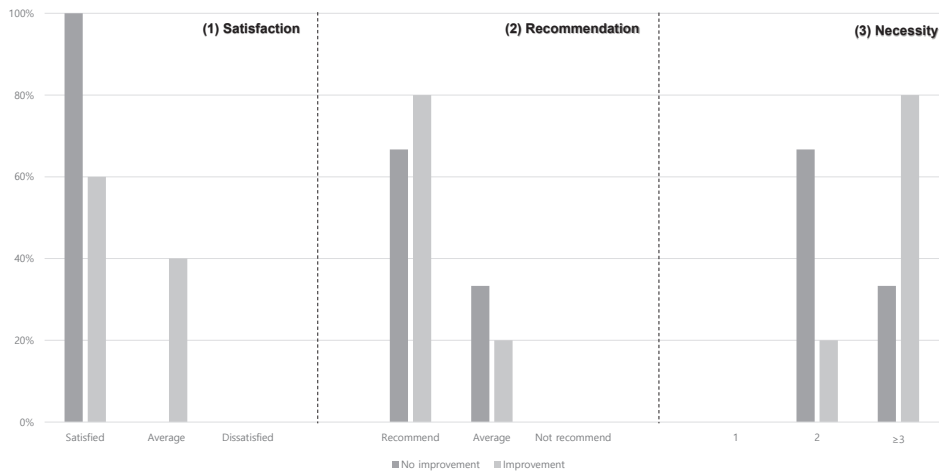


Figure 2. Satisfaction and necessity of support for taking herbal medicine: subgroup analysis for each symptom of puerperal wind disorders.



(D) Delayed elimination of lochia

Figure 2. Continued.

Table 3. Factors associated with improvement of puerperal wind disorders after herbal decoctions

	Improvement (n = 34)		Multivariate		p
	n	%	aOR	95% CI	
Age					
20-29	4	11.76	Ref.		
30-39	26	76.47	0.78	0.15-4.58	0.776
≥ 40	4	11.76	0.86	0.08-8.87	0.896
Childbirth experience					
1	13	38.24	Ref.		
≥ 2	21	61.76	2.95	0.88-9.85	0.079
Period from childbirth to visit to the clinic (days)*					
0-7	12	36.36	Ref.		
8-14	7	21.21	1.05	0.24-4.60	0.949
15-21	7	21.21	1.48	0.27-8.10	0.654
≥ 22	7	21.21	0.87	0.16-4.72	0.876
Perceived health status					
Good	8	23.53	Ref.		
Average	16	47.06	1.23	0.31-4.85	0.764
Poor	10	29.41	9.35	1.22-71.34	0.031

*n = 33; aOR, adjusted odds ratio; CI, confidence interval.

Subgroup analysis for each symptom of puerperal wind disorders (weight gain, joint pain, weakness, and delayed elimination of lochia) showed no significant difference in service satisfaction, service recommendation intention, and the number of service provisions between the self-reported symptom improvement and non-improvement groups (Fig. 2).

4. Factors associated with the improvement of puerperium-associated disorders after taking herbal decoctions

The improvement of puerperal wind disorders was significantly associated with poor perceived health status (adjusted odds ratio: 9.35; 95% confidence interval: 1.22-71.34) (Table 3).

DISCUSSION

The results of the survey data analysis obtained from the herbal decoction support service conducted in a local city in the ROK revealed that women's self-evaluation of the herbal decoction support service for postpartum care was good in terms of satisfaction and necessity. Moreover, most women thought they required more than two rounds of support services. However, the improvement rate of puerperal wind disorders only exceeded 50% for weight gain and delayed the elimination of lochia.

The most commonly prescribed herbal decoctions were Boher-tang, Ssanghwa-tang, Gunggwijohyeol-eum, and Danggui-jakyak-san. According to Donguibogam, which has historical value in TKM, Boher-tang is commonly used to tonify qi and blood after childbirth [19]. Gunggwijohyeol-eum and Dangguijakyak-san have also been introduced as prescriptions for puerperal wind disorders during pregnancy and postpartum. Some researchers have provided evidence for the effectiveness of commonly used traditional herbal decoctions for postpartum care [20-25]. Ssanghwa-tang is described as a decoction for postpartum care in the traditional Chinese medicine bible, *Yi zong jin jian*, to promote blood circulation, remove blood stasis, and warm channels to relieve pain, and is the most commonly used herbal decoction during the postpartum period in Taiwan [26, 27].

In developing countries, maternal postpartum care focuses on reducing maternal and child mortality [28-30]. In developed countries, many studies have been conducted on postpartum depression [31, 32]. A systematic review of randomized controlled trials showed that herbal medicine alone or as a component of collaborative care was more effective and safer than conventional treatments alone for treating postpartum depression [11, 12, 33]. Moreover, several studies have examined postpartum breastfeeding [34] and emotional and physical health problems following postpartum hemorrhage [35]. Additionally, a study of meridian acupressure massage on weight and subjective fatigue symptoms was published [36].

Some Asian women believe that postpartum care is crucial for preventing puerperal wind disorders. Moreover, Korean women are concerned about being diagnosed with puerperal wind, including symptoms such as pain, weakness, and sweat, caused by poor care during the postpartum period [37, 38]. In the ROK, although postpartum care is available through private postpartum care centers or at home, it is not covered by national health insurance. Therefore, some local city have programs

such as public postpartum care centers to support postpartum care. Other local city have supported the prescription of herbal decoctions for postpartum care through TKM clinics as part of the medical welfare support service for women. In this support service, women can receive one discount ticket that enables a prescription of herbal decoction for postpartum care for 3 months, which is valid from the 30th week of pregnancy until 4 months after delivery.

A previous case report showed that herbal medicine is effective in treating puerperal pain [39, 40]. However, the duration of visits to TKM centers after birth varied between previous studies and the present study. A previous study found that 6.73% of patients visited the hospital within 10 days, whereas in this study, 60.32% visited within 14 days [40]. This difference is likely because the discount ticket for herbal decoction provided by the herbal decoration support service has an expiration date. Moreover, in this study, improvement in puerperal wind disorders was not significantly associated with the period from childbirth to clinic visits. Nevertheless, confirming the effectiveness of herbal decoction support services for postpartum care will require identifying the optimal time for the care of puerperal wind disorders after childbirth in a future study with a larger sample size. Additionally, it is necessary to provide an appropriate period of care by differentiating the frequency of support provided by herbal decoctions according to the severity of symptoms and to develop service manuals and educational resources for target recipients and providers.

This study had some limitations regarding the interpretation of results. First, various maternity support statuses after childbirth may influence the perceived effectiveness and satisfaction with herbal decoctions used for postpartum care. In future studies, it will be important to collect information on the effectiveness of aid for nursing care, support for babysitting, and support for household chores after childbirth. Second, it is necessary to develop and apply tools and diagnostic methods to objectively evaluate the accuracy and clinical effectiveness of herbal decoctions. Third, as the data used in the current study are the results of a survey of participants who agreed to participate in this study, the representativeness of the survey sample may be low. Fourth, the data used in this study were collected from a cross-sectional survey conducted using a self-report questionnaire; thus, well-designed clinical studies are required to evaluate their effectiveness accurately. Finally, this study focused on the evaluation of postpartum physical symptoms, but there was no evaluation of emotional symptoms. In the future,

assessment of maternal emotional symptoms, such as depression and anxiety, should be included.

Despite these limitations, the results of this study will be useful for the development and implementation of healthcare policies such as community care. Mothers who give birth need care and social support; however, the use of maternal care can vary according to socioeconomic status, residential area, race, and ethnic minority [13, 41-43]. In Korean society, as the number of married migrant women in rural areas increases, the need for support increases [44]. Moreover, the incidence of postpartum depression and physical and emotional stress in married migrant women is higher than that in their native counterparts [45]. If care services for mothers using TKM are extended to the community, vulnerable women should be considered first, and services targeting married migrant women would help them with recovering their postpartum health and raising their children.

Most healthcare programs, including CAM, are evaluated in various ways so that evidence-based policies can be implemented. Healthcare services may then need to be expanded or modified depending on the results of these objective assessments. Therefore, this study on herbal decoction support services for postpartum care has provided meaningful results in terms of the patients' satisfaction and perceived effectiveness of these services. Nevertheless, further studies are needed to confirm the findings and address the limitations of the present study.

CONCLUSION

This study evaluated the patients' satisfaction and perceived effectiveness of herbal decoctions in postpartum care. Many women who participated in the study provided positive evaluations based on their personal preferences. However, more evidence of the effectiveness of such treatments, including the prescription frequency and timing, is needed to confirm the effectiveness of the program. Therefore, additional studies are required to provide clinical information on the effectiveness of herbal decoctions in the prevention and treatment of postpartum diseases.

ACKNOWLEDGMENTS

The authors would like to thank all women and KM doctors who cooperated with the collection of research data for this study.

AUTHORS' CONTRIBUTIONS

Conceptualization, Hyun and Oh performed the analysis, Hyun; writing—original draft preparation, Hyun and Park; writing—review and editing, Hyun, Park, and Oh; project administration, Oh. All authors have read and agreed to the published version of the manuscript.

CONFLICTS OF INTEREST

The authors declare no conflicts of interest with respect to the authorship and/or publication of this article.

FUNDING

The authors received no financial support for the research, authorship, or publication of this article.

ORCID

Min Kyung Hyun, <https://orcid.org/0000-0003-0212-8633>

Jang Kyung Park, <https://orcid.org/0000-0002-4323-278X>

Sung Yoon Oh, <https://orcid.org/0000-0001-8195-5586>

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