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Discharge readiness and its associated factors among first-time mothers undergoing cesarean section in China

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Mingfei Ran, Praneed Songwathana*, and Jintana Damkliang

Faculty of Nursing, Prince of Songkla University, Thailand

Abstract

Background: Helping first-time mothers who have just undergone cesarean section and transitioning from hospital to home with their infant is a complex process. Therefore, understanding what contributes to discharge readiness is necessary.

Objective: This study aimed to determine discharge readiness level and its associated factors among first-time mothers who have undergone cesarean section.

Methods: A descriptive cross-sectional study was conducted among 233 first-time mothers who had undergone cesarean sections selected using quota sampling from the two largest referral centers in China. Data were collected from March to June 2021 using a demographic characteristics form, Readiness for Hospital Discharge Scale-New Mother Form (RHDS-NMF), and Quality Discharge Teaching Scale-New Mother Form (QDTS-NMF). Descriptive and inferential statistics were used for data analysis.

Results: The discharge readiness of the respondents was at a moderate level. Age (r = -0.129, p = 0.049) and complications after cesarean section (r = -0.136, p = 0.038) had a negative correlation with discharge readiness. In contrast, the subscales of QDTS-NMF, particularly the content (r = 0.519, p = 0.000) and delivery (r = 0.643, p = 0.000), had a positive correlation with discharge readiness.

Conclusion: The findings enable nurses, midwives, and other healthcare professionals to understand discharge readiness and its related factors among first-time mothers undergoing cesarean section. It is also suggested that the quality of discharge teaching with a comprehensive assessment of first-time mothers preparing for discharge from the hospital and following the guideline to prevent post-cesarean section complications should be reinforced.

Keywords

cesarean section; discharge readiness; patient discharge; hospital to home transition; China

***Corresponding author:**
Assoc. Prof. Dr. Praneed Songwathana
Faculty of Nursing, Prince of Songkla University, Songkhla 90110, Thailand
Email: praneed.s@psu.ac.th

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Background

Cesarean section rates vary widely around the world from 4 to 60 %, and one-third of them are primary cesarean section (Betran et al., 2021; Nagy & Papp, 2021), and gradually increase at 4% per year (Boerma et al., 2018). In China, the overall cesarean section rate during 2015-2016 was 38.9% (95% CI 38.6–39.3%), one of the world's highest cesarean delivery rates (Zhang et al., 2022). However, due to significant differences in geography, economy, and living environment, the cesarean section rate varies from 4% to 68 % in 31 provinces across the country (Zhang et al., 2022). Therefore, an increase in initial cesarean deliveries and a decrease in vaginal deliveries is a high concern (Boerma et al., 2018; Nagy & Papp, 2021; Zhang et al., 2022).

Although the cesarean section is the most common and safe surgical procedure performed worldwide, when it is medically indicated, it results in both short-term and long-term complications in women (Antoine & Young, 2021; Nagy & Papp, 2021). Other adverse effects of cesarean section, if it is a lack of good preparation, are an increased rate of advanced postpartum hemorrhage, post-traumatic stress disorder (PTSD), postpartum depression, breastfeeding problems, and infant care skills (Malouf et al., 2019; Weiss & Lokken, 2009). Furthermore, compared to multiparous women experiencing cesarean section, first-time mothers share the same physical difficulties and need to transition into motherhood. In addition, it requires confidence and training skills, which are inversely associated with stress anxiety and postpartum depression (Sun et al., 2019).

However, since the COVID-19 pandemic, hospital stays have been shortening worldwide (Handley et al., 2022). As a result, first-time mothers must be discharged from the hospitals to their homes and continue their recovery after short and fragmented postpartum care (McLeish et al., 2020; Smith et al., 2022). A transition period is then essential for first-time mothers. Meleis's middle-range transition theory noted that a transition process in which changes in health status, role relationships, expectations, or abilities will lead to a period of vulnerability (Meleis et al., 2000). Therefore, the early discharge policy and successfully preparing discharge from hospital to home for mothers undergoing cesarean section

remained important. The quality of health services with adequate resources and limited time for maternal and infants, especially first-time mothers, are further challenged (Hellerstein, 2017; Hou et al., 2017; Zhang et al., 2022). Likewise, discharge is divided into three stages during this transition period: (1) the hospitalization phase during which discharge preparation occurs; (2) the discharge when short-term outcomes of the preparatory process can be measured; and (3) the post-discharge period when patients' perceptions of their ability to cope with the demands of care at home and their needs for support and assistance from family and health services. The care during this transition period provides evidence of positive outcomes among mothers and babies. However, even under similar circumstances, people experience different transitions (Meleis, 2010), which would have various levels of discharge readiness.

In China, in the early postpartum period, first-time mothers experience a variety of physical discomfort and are anxious about the body changes and healing process they are experiencing, including wound pain caused by cesarean section (Xia et al., 2022; Xiao et al., 2020), nipple pain caused by breastfeeding, and waist and wrists pain, recovery of basin muscles, whether lochia is normal (Xiao et al., 2020). In addition, other concerns include their poor knowledge of nutritional supplements and ability to care for their infant, including feeding, defecation, rashes, and crying as well as husbands' lack of postnatal support and infant care skills (Xiao et al., 2020). However, the most concern is the insufficient postnatal care resources, such as busy postnatal wards, insufficient time for adequate support, and communication and attitude of staff prevent mothers and families from receiving meaningful support for infant care and feeding, especially for first-time mothers who are required time for preparation (Dol et al., 2019; Malouf et al., 2019; Smith et al., 2022; Xia et al., 2022). As a result, it is essential to understand the factors to help mothers and their infants move safely home from the hospital and promote early postnatal health outcomes in the face of shorter hospital stays (Lemyre et al., 2018).

Many factors may influence the discharge readiness of mothers having delivery or postpartum mothers, including discharge teaching (Malagon Maldonado et al., 2017; Yanikkerem et al., 2018; Zhou et al., 2019); postpartum support (Senol et al., 2017; Yanikkerem et al., 2018), and parenting sense of competence (Xia et al., 2022). In addition, some socio-demographic characteristics of mothers (i.e., age, education level), marital status, economic status, having a private payer source (Malagon Maldonado et al., 2017)) and mother's reproductive characteristics, such as the number of pregnancies (Malagon Maldonado et al., 2017; Senol et al., 2017) are also related to discharge readiness. In addition, discharge readiness among postpartum mothers is also associated with infant feeding (Malagon Maldonado et al., 2017; Xia et al., 2022; Zhou et al., 2019), pediatricians characteristics (Bernstein et al., 2013), lack of prenatal and postnatal services women with a history of chronic disease and complication (Bernstein et al., 2013), and intraoperative pain degree (Xia et al., 2022). However, most of those studies targeted all postpartum mothers, and very few focused on the factors related to the discharge readiness of first-time mothers experiencing cesarean section. Therefore, some factors associated with discharge readiness are selected in this study for further examination among first-time mothers. These factors are the mode of cesarean section delivery, infant feeding methods, mother's characteristics (i.e., age, educational background), mother's complication, discharge teaching, and discharge readiness. Our study aimed to identify the discharge readiness level and associated factors among first-time mothers after cesarean section. It will provide essential information for planning interventions and strategies to improve the quality of postpartum care and promote first-time mothers after cesarean section and infants' health outcomes.

Conceptual Framework

Helping a first-time mother who has just undergone a cesarean section and transitioning from hospital to home with her infant is considered a complex process, including the discharge transition and the transition to motherhood which is regarded as cultural and psychosocial importance. Meleis's middle-range situation-specific theory (Weiss & Lokken, 2009) provides a relevant conceptual framework for first-time mother adaptation to changes in discharge factors during the transition home after a cesarean section. This theory highlights the four key elements of transition: the nature of transition, transition conditions, nursing therapeutics, and patterns of response (Meleis, 2010).

In this study, the nature of the transition is the mother's age and educational background. Secondly, transitional conditions refer to the individual or entity conditions that promote the transition of health, including the characteristics of patients. Furthermore, the transitional conditions in this study include the mode of cesarean section delivery (planned and unplanned), the feeding methods (breastfeeding only, bottle feeding only, and mixed breastfeeding and bottle feeding), and the mother's complication. Thirdly, nursing therapeutics pay attention to the healthy outcome through a quality discharge teaching process to respond to a new role and carry out new skills before the patients discharge from the hospital. In this study, first-time mothers reported the quality of discharge teaching on their discharge day as a measure of all health education contents and nurses' delivery skills during their stay in the baby-friendly ward, normally within four hours before discharge (Weiss et al., 2011). It is described as a combination of all discharge-related teaching which mainly includes content (the amount of content received, the differences in content needed and received) and delivery (Weiss & Lokken, 2009) that were measured in previous studies (Malagon Maldonado et al., 2017; Weiss & Lokken, 2009; Weiss et al., 2017; Yanikkerem et al., 2018; Zhou et al., 2019). Fourthly, response patterns are the development of the patient's understanding of disease diagnosis, treatment, medication, preventive care, and rehabilitation, as well as strategies for managing health problems, patient confidence in recovery and self-care, and a sense of connection between support staff and the health care community. This pattern reflects the patient's readiness for discharge, an essential intermediate outcome in the transition period from hospital care to returning home among first-time mothers and their infants. It includes four subscales: personal status, knowledge, coping ability, expected support, and services after discharge (Weiss et al., 2007). In addition, some factors or conditions may facilitate or inhibit transition readiness (Meleis et al., 2000). The factors that could be

associated with maternal post-cesarean section readiness are the mode of cesarean section delivery, the infant's feeding methods, characteristics of the mother (i.e., age, educational background), the mother's complication, and discharge teaching. These factors have not been explored in China, which is one of the highest records of mothers undergoing cesarean section.

Methods

Study Design

A cross-sectional correlation study was conducted in two of the four largest referral centers for high-risk pregnancies in Guiyang city, Guizhou province, China. The two hospitals (A and B) were selected as its highly responsible for all over the provinces, where patients in the surrounding areas come to use the services. According to the National Bureau of Statistics (2020), the number of infants delivered in Guizhou province in 2020 was 526 thousand, and around five to ten thousand were delivered in hospitals A and B. However, because of the COVID-19 situation, access to more hospitals was restricted.

Samples/Participants

The sample size was determined using G*power analysis (Faul et al., 2007), with a significance level of 0.05, a power of 0.80, and an average correlation was around 0.2. Thus, the required sample size was 194. In addition, 20 percent (i.e., 39 samples based on the calculated sample size 194) of the additional samples were added considering the probability of refusal of mothers to participate in this study. The estimated sample size was equal to 233. A nearly equal number of samples (i.e., 117 from hospital A and 116 from hospital B) were taken from both hospitals using the quota sampling technique. The inclusion criteria were the first-time mother undergoing cesarean section whose (1) age were > 18 years old, (2) could communicate with the researcher, (3) were admitted and discharged with their infant from a baby-friendly ward.

Instruments

The instrument used to collect data consisted of three parts.

Part 1: Demographic and other Information. It was developed by the researcher based on relevant literature (Malagon Maldonado et al., 2017; Yanikkerem et al., 2018; Zhou et al., 2019), which consisted of maternal age, marital status, education background, family income, postpartum support, social support, feeding methods, and problem/difficulty breastfeeding. In addition, information regarding diagnosis on discharge day, length of hospital stays, mode of cesarean section delivery, and the complications after cesarean section were collected from the medical record.

Part 2: Readiness for Hospital Discharge Scale-New Mother Form (RHDS-NMF). This version was developed by Weiss and Lokken (2009) and modified from RHDS (was specifically used to measure postpartum mothers' perception of discharge readiness). There were 22 items in RHDS-NMF, composed of four subscales: personal status (8 items), knowledge (7 items), coping ability (3 items), and expectation support (4 items) with Cronbach's α reliability of 0.82, 0.84, 0.86 and 0.81 respectively. A Chinese version of the RHDS-NMF was tested for its reliability and validity (Chen et al., 2020). It was a 10-point Likert- scale format from 0 (not at all) to 10 (totally). A higher score indicates a higher level of readiness (Weiss & Lokken, 2009). In this study, RHDS-NMF scoring was categorized into and interpreted for four levels representing 9–10 (very high), 8–8.9 (high), 7–7.9 (moderate), and <7 (low), respectively (Weiss et al., 2014).

Part 3: The Quality Discharge Teaching Scale-New Mother Form (QDTS-NMF) was a patient's self-report tool developed by Weiss and Lokken (2009) to measure postpartum mothers' discharge education preparation. It mainly measures whether the maternity receives sufficient content from the nurses during the hospital stay or on the day of discharge. There were 20 items consisting of two subscales (content and delivery). The content scale includes seven parallel questions on content received and content needed. The delivery subscale consists of 13 items. The Cronbach's α reliability coefficient for the postpartum mother sample in the Midwestern United States were 0.85 and 0.84 for the content and delivery subscales, respectively. A content difference subscale was generated by subtracting content needed from content received, creating a score that reflects the amount of informational content received in excess of the reported need. It was then used as an alternative to the content received subscale with Cronbach's α coefficient was 0.88 (Weiss & Lokken, 2009). This content difference subscale was then recommended to use instead of the total score in relation to discharge outcome (Weiss & Lokken, 2009). The Cronbach's α coefficient of the total score of QDTS-NMF was tested in a Chinese population of postpartum mothers yielding 0.96, and the subscale of content and delivery were 0.98 and 0.94 (Li et al., 2021). The score of QDTS was a 10-point Likert- scale format from 0 (none) to 10 (a great deal). The higher subscales score indicates the higher content need and content received and higher quality discharge teaching.

In this study, all instruments were validated by three experts: a methodologist, an obstetric care specialist, and language professionals achieving a CVI value of 0.99. The reliability test among 20 postpartum mothers for RHDS-NMF and QDTS-NMF was 0.96 and 0.97, respectively.

Data Collection

The investigation was divided into the preparation stage and the implementation stage. In the preparation stage, the Principal Investigator (PI) explained the purpose and procedure of the study to the head of the scientific research management department and the head nurse of the baby-friendly ward of the two hospitals and obtained permission and assistance to approach the participants. A research assistant in each hospital's baby-friendly ward was trained in advance to assist the PI in data collection. Data were collected from March to June 2021. The participants who were introduced by the head nurses or nurses of the baby-friendly ward and willing to participate were approached four hours before the mother left the hospital on the discharge day. If their physical condition allowed, they were asked to complete an anonymous questionnaire survey at wards that took about 20 minutes.

Data Analysis

IBM SPSS 23 (IBM Corp, Armonk, New York) version software was used for data analysis. The significant level of alpha was set at ≤ 0.05. Descriptive statistics were used to describe the

demographic and cesarean section-related characteristics of first-time mothers and the level of RHDS-NMF. Assumptions of Spearman Rank Order Correlation (*rho*), Point-biserial correlation, and Pearson product-moment correlation coefficient (*r*) were tested to determine the correlation between discharge readiness and independent variables. The level of statistical significance was set as p <0.05.

Ethical Considerations

This study was approved by the Center for Social and Behavioral Sciences Institutional Review Board, Prince of Songkla University, Thailand (No. 2021-St-Nur 014), and the Affiliated Hospital of Guizhou Medical University, China (No. 2021-152). All potential participants were informed about research objectives, confidentiality and anonymity issues, the right to withdraw without repercussions, and a request to sign a consent form prior to study inclusion.

Results

Characteristics of the Participants

Two hundred thirty-three first-time mothers who participated in this study had a mean age of 29.63 years (*SD* = 4.40). Most participants had completed a university level or above (75.1%) and had an average family income of 1607$ (*SD* = 1049.32). Most first-time mothers had post-discharge support (76.4%), mainly from their families (86.3%). More than half of the participants opted for mixed breastfeeding and bottle feeding (55.4%), but some had problems/difficulty in breastfeeding (34.8%). Their gestational age when delivery was 38.52 months (*SD* = 1.66), and about half received a planned cesarean section (58.4%). The mean length of hospital stay was 4.88 days (*SD* = 1.99), and only 3% of participants had complications after cesarean section (**Table 1**).

Table 1 Demographics characteristics of first-time mothers (*N* = 233)

Characteristics	*n*	%	Mean (*SD*) Min-Max
Age			
18-34	201	86.3	*M* = 29.63 (*SD* = 4.40)
≥35	32	13.7	Min-Max = 19-46
Education background			
Primary and Secondary	58	24.9	
University level or above	175	75.1	
Family income			
<760 $	28	12.0	*M* = 1607.6 (*SD* = 1049.316)
760-1520 $	83	35.6	Min-Max = 155-7795
1521-2280 $	69	29.6	
2281-3040 $	21	9.0	
≥3040 $	32	13.8	
Family support			
Yes	201	86.3	
No	32	13.7	
Social support			
Yes	178	76.4	
No	55	23.6	
Feeding methods			
Breastfeeding only	14	6.0	
Bottle feeding only	90	38.6	
Mixed breastfeeding and bottle feeding	129	55.4	
Problem/difficulty breastfeeding			
Yes	81	34.8	
No	152	65.2	
Gestational age			
28-36 weeks	15	6.4	*M* = 38.52 (*SD* = 1.657)
>37 weeks	218	93.6	Min-Max = 28-41
Length of hospital stay			
1-3 days	44	18.9	*M* = 4.88 (*SD* = 1.986)
4-5 days	126	54.1	Min-Max = 1-19
＞5 days	63	27.0	
Mode of cesarean section			
Planned	136	58.4	
Unplanned	97	41.6	
Having the complications of cesarean section			
No	226	97	
Yes (Postpartum Hemorrhage (PPH) and Surgical Site Infection (SSI))	7	3	

Level of First-Time Mothers' Discharge Readiness

Table 2 shows that discharge readiness was at a moderate level (7.40 ± 1.63). On the sub-scales, the "personal status" (7.70 ± 1.63) and "coping ability" (7.31 ± 1.91) were found at moderate, while "knowledge" was low (6.84 ± 2.20) and "expected support" was high (8.14 ± 1.81).

Table 2 Range, mean, standard deviation, and level of discharge readiness of participants (*N* = 233)

Discharge readiness	Range	*M*	*SD*	Level
Personal status	2-10	7.70	1.63	Moderate
Knowledge	0-10	6.84	2.20	Low
Coping ability	1-10	7.31	1.91	Moderate
Expected support	2-10	8.14	1.81	High
RDHS Total Score	3-10	7.40	1.63	Moderate

Note: *M* = Mean, *SD* = Standard deviation

Factors Associated with Discharge Readiness

The study revealed that only having the complications of cesarean section (r = -0.136, p <0.05) (see **Table 3**) and the mother's age (r = -0.129, p <0.05) (see **Table 4**) had significant and negative relationships with discharge readiness. In addition, the content (r = 0.519, p <0.01) and delivery (r = 0.643, p = <0.01) subscale of quality of discharge teaching showed a significant and positive relationship with discharge readiness (**Table 4**). The remained other factors showed no significant relationship with discharge readiness.

Table 3 The relationship between the mode of cesarean section delivery, education background, the complications of cesarean section, feeding methods, and discharge readiness (*N* = 233)

Variables	Correlation with discharge readiness	
	r	*p*
Mode of cesarean section delivery (planned, unplanned) [a]	-0.038	0.564
Education background (primary and secondary, university level or above) [a]	-0.031	0.643
Having the complications of cesarean section - PPH &SSI (yes, no) [a]	-.0136	0.038*
Feeding methods (Breastfeeding only, Bottle feeding only, Mixed breastfeeding and bottle feeding) [b]	-0.020	0.757

Note: [a] = Point-biserial correlation | [b] = Spearman Rho correlation | *Correlation significant at .05 level (2-tailed)

Table 4 The relationship between the mother's age, quality of discharge teaching scale, and discharge readiness (*N* = 233)

Variables	Correlation with discharge readiness	
	r	*p*
Mother's age	-0.129	0.049*
QDTS content subscale	0.519	0.000**
QDTS delivery subscale	0.643	0.000**

Note: Pearson product-moment correlation
* Correlation significant at .05 level (2-tailed)
** Correlation is significant at the .01 level (2-tailed)
QDTS = Quality of Discharge Teaching

Discussion

The study revealed that discharge readiness among first-time mothers was at a moderate level, with a total item mean score of 7.40 (*SD* = 1.63). This finding was similar to a previous study in China that included first-time and multipara mothers who had cesarean section and vaginal delivery (Zhou et al., 2019). The possible reasons may be as follows. Firstly, most mothers are cared for by family members during hospitalization and after discharge. It is a typical Chinese tradition, especially in the first 30 days after giving birth, called "doing in month". Therefore, most mothers are taken care of and receive support from family members. Secondly, the samples were recruited from the same context of resources where two tertiary hospitals usually provide similar high-quality medical and nursing care for maternal services and follow the procedure/guideline and routine care after cesarean section. Thirdly, the samples had similar education levels (a university level or above) and were better at understanding and receiving medical information. However, the other reason for the moderate level of discharge readiness found in previous studies is that first-time mothers would lack the knowledge and skills to care for themselves and their infants after delivery compared to multiparas (Senol et al., 2017; Weiss & Piacentine, 2006).

Furthermore, a moderate level was found in the personal status and coping difficulty subscale of discharge readiness, except in the knowledge subscale, which showed a low level. After the initial physical recovery of the first-time mothers who have undergone cesarean section meets the discharge criteria, participants reported being ready for discharge with the support of their family, the staff doing the month hotel, and the month maid was expected. However, the discharge readiness score was not high among the first-time mothers in this study partly due to a lack of knowledge and information, which were mainly about caring for the baby, who and when to call if there were problems after returning home, and services and information available in the community after discharge home.

Regarding the relationship between factors, discharge teaching, and discharge readiness among first-time mothers, the results revealed that participants' ages, complications after cesarean section, and discharge teaching were significantly related to discharge readiness.

The first factor was age, and current research shows that the different age groups of first-time mothers reported different discharge readiness scores. The older the person was, the lower the discharge score (r = -0.129, p <0.05). This is similar to previous studies that reported the discharge readiness score was related to age groups (Senol et al., 2017; Zhou et al., 2019). The possible reason for this finding was that most first-time mothers were of reproductive age and completed at the university level or above, pursuing higher education and career development outside the family. A prior study also addressed that women who became pregnant for the first time after the age of 35 were considered to be at high risk, leading to many maternal and infant complications during pregnancy and delivery (Shan et al., 2018). This would affect discharge readiness. Moreover, first-time mothers may have different

discharge readiness perceptions in making the appropriate discharge decision. They were more likely to think they were unprepared to bring their infant back home, especially if they did not receive adequate prenatal care and in-patient education (Shan et al., 2018).

Complications after cesarean section regarding having PPH/SSI were related to low discharge readiness. This study shows that 3% of the sample population had complications of cesarean section. In an additional analysis, those first-time mothers with PPH tended to report lower discharge readiness scores than none. This may be related to the belief in Traditional Chinese Medicine that childbirth is associated with a great transformation of a woman's energy and body. According to the principle of Yin and Yang in Traditional Chinese medicine, pregnancy and childbirth are believed to deplete a woman's Yang, leaving her in a temporary state of imbalance between Yin and Yang, just like a disease. Yin, originally meant dark, is associated with cold winter and dark phenomena; It symbolizes femininity, inner inferiority, and negativity. Yang, translated as sunny, is associated with heat, summer, and brightness; It indicates masculinity, externality, superiority, and positivity. PPH after cesarean section is thought to alternate the state of Yin and Yang imbalance (Ding et al., 2018), and first-time mother lacks the experience to restore the balance of Yin and Yang (Ding et al., 2018; Xiao et al., 2020).

In addition, the quality of discharge teaching significantly explained discharge readiness in this study, which were congruent with studies conducted in Iran, Turkey, China, and the United States (James et al., 2020; Weiss & Lokken, 2009; Yanikkerem et al., 2018; Zhou et al., 2019). Teaching is essential for inexperienced first-time mothers and should be provided by an interdisciplinary team, including nurses, lactation consultants, doctors, practice nurses, and midwives (James et al., 2020; Yanikkerem et al., 2018). According to Bollag et al. (2021), the ideal discharge teaching routine should start from pre-pregnancy care. Besides emphasizing patients' self-care initiatives, it also emphasizes postpartum supporters' participation in education. In routine care of cesarean section, parents and families were provided with consistent discharge planning and teaching for the mother-baby during hospitalization to increase satisfaction and confidence, reduce confusion and stress, and provide possible ongoing breastfeeding teaching support.

In this study, first-time mothers reported less content received than needed, and the content difference was negatively correlated with discharge readiness. Some reasons might be related to the sample population of this study regarding inexperienced first-time mothers and the quality of discharge teaching delivery skills on routine care. In addition, the majority of participants had families to support first-time mothers recovering and caring for infants, and their service started from hospitalization. Therefore, nurses at busy wards may provide similar nursing care to all postpartum mothers and may not recognize the first-time mothers who need more supportive care after cesarean section.

In this study, there was no significant statistical relationship between discharge readiness score and other factors (mode of cesarean section delivery, feeding method, education level). This might be partly related to the fact that most of the participants in this study had completed the university level or above. In addition, China's maternity insurance was 100 percent coverage, and all mothers who gave birth to a live child received a maternity subsidy from the government. The mothers who had planned or unplanned cesarean sections received similar care and services, which found no relationship with discharge readiness.

Strengths and Limitations of the Study

This is the primary study to identify the level of discharge readiness of first-time mothers who have undergone cesarean section and found some selected factors related to discharge readiness. The results of this study can provide a basis for further design of interventions in improving the quality of discharge teaching and supportive care of first-time mothers. In addition, the standard tool on discharge readiness and discharge teaching having acceptable psychometric properties in prior studies were used for data collection. However, this study has some limitations regarding the samples, which only included women who gave birth in two tertiary perinatal hospitals in one region of China. Also, data were collected during the COVID-19 period, which may limit the universality of the survey results in terms of psychosocial support factors. In addition, this was a cross-sectional survey that may not use to assess causality.

Implications of the Study

The study results provide valuable baseline information and evidence to be applied to nursing practice, health policy, and further research. To improve discharge readiness among first-time mothers after cesarean section, discharge teaching content should focus on their needs after discharge home, information-delivering skills following the cesarean section practice guidelines, and a comprehensive assessment of first-time mothers preparing for discharge from the hospital. Notably, the hospital stakeholders should address the importance of the quality of discharge teaching in the postpartum period and have a support system to encourage discharge education provided by nurses and nurse-midwives. Finally, an intervention study is necessary to improve the discharge readiness of first-time mothers in cesarean section via discharge teaching quality.

Conclusion

The discharge readiness of first-time mothers who underwent cesarean section was at a moderate level. Regarding sub-scales of discharge readiness, the ability to perceive their physical condition and to cope with the demands of themselves and the infant's care at home was moderate. In contrast, knowledge and skills in the care for self and infants were low. Only expected assistance and support during the initial transition were high. The discharge readiness of first-time mothers after the cesarean section was not only related to the discharge information received from nurses at discharge but also to the maternal age group and complications after cesarean section. In addition, this supports the concepts and relationships proposed by transition theory which guides this study.

Declaration of Conflicting Interest

The authors declared no conflict of interest.

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Authors' Contributions

All authors contributed to the final manuscript. PS and MR designed the study, wrote, and revised the manuscript. PS and MR analyzed the data and drafted and revised the manuscript. JD contributed to the study design and manuscript draft. All authors met the authorship criteria and were accountable at each study stage. All authors also agreed to the final version of the article to be published.

Authors' Biographies

Mingfei Ran, RN, BS is a Master of Nursing Science Student at the Department of Adult and Gerontological Nursing, Prince of Songkla University, Thailand.

Praneed Songwathana, RN, PhD is an Associate Professor and Committee of the PhD Program at the Faculty of Nursing, Prince Songkla University, Thailand. She is interested in Trauma and Surgical Nursing, Transcultural Nursing, Continuing Care, and Qualitative Research.

Jintana Damkliang, RN, PhD is an Assistant Professor at the Faculty of Nursing, Prince of Songkla University, Thailand.

Data Availability

The datasets generated during or analyzed during the current study are available from the corresponding author upon reasonable request.

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