

An Analysis of the Variables That Impact the Preparedness of Parents to Release Their Premature Babies from the Hospital

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ABSTRACT

Background: The thorough preparation of preterm babies for release home is strongly linked to the decision-making process about their discharge and has a significant impact on their health outcomes. It is crucial in facilitating a seamless transition from the hospital to their home environment.

Methods: This paper examines the concept, research significance, assessment, and factors that affect the readiness of preterm infants to be discharged from the hospital. Specifically, we will focus on the impact of various factors, including the infants' characteristics, carers', hospital, and social factors. The goal is to provide a valuable reference for clinical practice.

Results: The factors influencing discharge family readiness can be divided into four areas, which are factors related to preterm infants, factors related to parents, factors related to the hospital, and issues related to the social environment.

Conclusion: Ensuring families receive adequate support and assessing their readiness for discharge is vital. Additionally, using personalized guidance techniques is also crucial for protecting the well-being of premature newborns and improving the overall health outcomes for their families.

Keywords: Preterm babies; Hospital discharge; Family readiness; Influencing factors; Research progress

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INTRODUCTION

Statistics indicate that the worldwide prevalence of preterm birth is around 9.9 percent, with China seeing a preterm birth rate of roughly 6.1% (1). With advancements in neonatal intensive care technology, the survival rate of preterm infants has notably improved in recent years. However, compared to full-term infants, preterm infants are highly susceptible to a range of health issues and require treatment in neonatal intensive care units (NICUs). Presently, the majority of neonatal intensive care units (NICUs) in China continue to operate under a closed management model, which restricts parental involvement in the comprehensive care of their premature infants. The occurrence of parent-child separation hinders parents from comprehending the fundamental circumstances of their preterm infants, heightens their anxiety and depression, and intensifies their feelings of uncertainty regarding the illness. Simultaneously, the incapacity to directly engage in the day-to-day care of preterm infants postpones the parents' chance to adjust to the role of carers (2-3). Research has demonstrated that the absence of parental caregiving competency is a crucial element in the development of the caregiver. Research has indicated that parents who lack the necessary caregiving skills and have poor psychological well-being may increase the risk of complications, such as infections, diarrhea, and hospital readmission, for preterm infants after they are discharged (4). Adequate preparation for discharge can significantly assist parents in transitioning from the hospital to home and reduce the likelihood of readmission (5). Therefore, it is crucial to enhance the readiness of families caring for preterm infants upon discharge. The present clinical practice and research condition focuses on the preparedness of preterm babies for discharge from home (6-7). This paper aims to provide a comprehensive overview of the factors that influence the readiness of preterm infants to be discharged from the hospital. Specifically, we will focus on the impact of preterm infants' characteristics, carers', hospital, and social factors. By summarising the concepts, research significance, assessment, and influencing factors, this paper aims to serve as a valuable reference for clinical practitioners.

Introduction to Hospital Discharge Family Readiness

According to the Knowledge Networks database, the concept of hospital release home ready was initially suggested by the Canadian Paediatric Society (8). It pertains to the extent to which the primary carer in the family is mentally capable and has the necessary knowledge and abilities to take care of the premature newborn upon their release from the hospital. The issue of family preparedness for discharge has garnered significant interest among healthcare practitioners globally, as it is seen as a crucial measure to ensure a seamless transition for babies and their parents back to their homes (9). The significance of this is acknowledged. Preterm newborns, being a key area of attention in neonatal intensive care medicine, continue to provide ongoing challenges in daily treatment owing to their unique physiological characteristics. Following discharge from the hospital, parents become the primary caretakers of their preterm infants (10). They must be responsible for independently caring for their infants for an extended duration. However, due to insufficient preparation, parents may be confident in their ability to provide proper care, resulting in challenges in parenting and the possibility of readmission to the hospital.

METHODS

Assessment of Discharge Family Readiness

Objects of Assessment

Assessment of family preparedness for discharge focuses on the principal carer within the family. The Wanfang and Google databases revealed that the primary focus of evaluation in current national and international studies involves the parents of premature infants (11). However, the single-parent caregiving paradigm is seen as more suitable under China's traditional caregiving framework. Contrary to the conventional care model in China, single-parent care is uncommon, while a composite care model involving parents and elders is increasingly prevalent. Therefore, it is recommended to consider the preparedness of the seniors in the family while assessing the situation.

Assessment of Implementers

Healthcare experts and parents undertook the evaluation of preterm newborns' preparedness since preterm infants are incapable of self-reporting. The assessment of family readiness for discharge was approached differently by various providers. Healthcare professionals primarily emphasized the professional aspects of the assessment, such as physiological stability and functional development. On the other hand, parents were primarily concerned with how their caregiving abilities and beliefs would affect the growth and development of their preterm infants after discharge (12). Currently, there is a limited amount of research conducted in China and other countries about the participation of healthcare professionals in evaluating the preparedness of premature newborns for hospital release. Research conducted on pediatric and adult patients revealed a negative correlation between nurses' evaluation of patient's readiness for hospital discharge and the likelihood of readmission. This assessment can effectively identify potential risks related to patients' or carers' understanding of healthcare and lack of familial social support, ultimately reducing readmission rates (13-14). Nurses play a crucial role in coordinating patient discharge and possess the ability to evaluate the preparedness of preterm children and their parents objectively. Therefore, it is advisable to include nurses in current evaluation procedures.

Content of The Assessment

These factors encompass (a) the ability of parents to provide care, including primary home care skills, nutrition and feeding, prevention of common diseases, and nursing care; (b) the psychological well-being of parents, such as their ability to adapt to their role, levels of anxiety, depression, uncertainty about the disease, and other emotional states; (c) the support provided by the family and social network, including economic situation, family relationships, family support, and access to community health care services; and (d) the quality of guidance provided at the time of discharge from the hospital, precisely the level of health education given by health care professionals to parents. The extent of health education assistance provided to parents by healthcare workers at the discharge of preterm newborns (15).

Assessment Tools

At present, there are limited options available for evaluating the preparedness of premature infants to leave the hospital. These include the Parents' Readiness to Discharge Scale for Fragile Infants and Young Children (16), the Parents' Readiness to Discharge Scale (17), and the Self-Assessment of Readiness to Discharge for Preterm Infants (18). Current assessment tools need to be more comprehensive to provide a comprehensive evaluation of the readiness of preterm infants to be discharged from the hospital due to variations in cultural backgrounds and NICU management practices between different countries. Future improvements are necessary to develop a more scientifically and effectively designed assessment tool considering China's specific national conditions (19-20)

RESULTS

Factors Influencing Discharge Family Readiness

Preparing for discharge is complex and requires consideration of many elements, which may be categorized into four broad areas: factors related to preterm infants, factors related to parents, factors related to the hospital, and issues related to the social environment

Premature Infant Factors

The primary determinant of preterm outcomes is the health condition of the premature newborn. Experts have recommended that criteria for releasing premature newborns include stable physiological parameters, recuperation from sickness, the capability to consume food orally, and a consistent progression in body weight. However, due to their premature birth, preterm infants have underdeveloped systems and are frequently affected by multiple complex diseases. This leads to unstable vital signs, prolonged recovery, feeding difficulties, slow weight gain, failure to meet discharge criteria, and an extended hospital stay. These factors often hinder parents' preparedness for hospital discharge (21). Research has shown a negative correlation between the gestational age at delivery and the discharge readiness score of the mother. Specifically, a more minor gestational age is associated with a lower score

(22). Research has shown that stabilizing the physiological condition of premature newborns somewhat enhances their readiness ratings for discharge as assessed by their families (23). The research demonstrates that the intensity of the illness and the duration of hospitalization are both variables that increase the likelihood of parents being prepared to leave the hospital. As the condition of the preterm baby worsens, the parents face increasing pressure, resulting in a lack of confidence in caring for their baby. However, as the hospitalization period lengthens, the parents communicate more with healthcare personnel, enhancing their knowledge and skills in baby care. This ultimately improves their readiness level. This demonstrates that the parents' preparedness for the preterm baby's condition is essential for their readiness to be discharged. Healthcare professionals should enhance communication with the parents to ensure they are well informed about the preterm baby's recovery, growth, and development. This will help improve the parents' understanding and readiness for the baby's discharge.

Parental Factors

Parental considerations include both psychological well-being and the ability to provide care. Historically, neonatal intensive care medicine has mostly prioritized enhancing preterm newborns' survival rate and long-term well-being. In contrast, parents' emotional support and care requirements have been relatively neglected. Preterm babies that have a young gestational age, serious medical issues, and a lousy prognosis, together with parents who lack basic information about the illness and caring abilities, often experience adverse psychological effects owing to many uncertainties (24-25). Research has shown an inverse relationship between ambiguity about disease and effectiveness in parenting, where greater levels of parental health literacy are linked to improved preparedness for leaving the hospital (26). Research has demonstrated that inadequate mental health is a distinct risk factor for mothers' negative self-perceptions and perceptions of their children. It also leads to fear of a negative outcome for their child and a lack of confidence in their ability to care for them, resulting in insufficient preparedness for discharge (27). Additionally, mothers who are susceptible to depression often possess insufficient knowledge and skills in caring for

their preterm babies, which negatively impacts their ability to develop practical parenting skills. In the same vein, dads, being the fundamental support of the family, must attend to the well-being of both the mother and the kid in their day-to-day existence, and the burden they carry should not be overlooked. Research has shown that dads also need expert psychological therapy and assistance, along with timely instruction on caring. This may help ease their stress and simultaneously lessen the strain on the mother. Ultimately, it is crucial to establish tailored and specialized guidance strategies for parents of preterm infants during hospitalization. These strategies should not only offer standardized knowledge and skill-based guidance but also prioritize the psychological well-being of parents and provide effective psychological support. This approach is essential in ensuring that parents of preterm infants are adequately prepared for discharge from the hospital.

Hospital Factors

Hospital variables include the caliber of discharge planning and the clarity of discharge instructions. The discharge preparation service is a comprehensive healthcare service that should commence upon admission and extend throughout the post-discharge period. It necessitates collaboration among medical professionals, including doctors, technicians, and nurses. The effectiveness of discharge preparation depends on the hospital's discharge plan and instructions aligning with the patient's requirements (28-29). The majority of parents need to be equipped for discharge, primarily due to an insufficient understanding of preterm newborns and a lack of training in caring knowledge and abilities. Discharge teaching, an integral component of the discharge plan, is seen as a proactive intervention that enhances parents' preparedness for release and indicates future outcomes for their children after discharge. Based on robust evidence, Cheng L et al. devised a discharge plan and personalized teaching instructions for parents of premature infants (30). The study demonstrated that parents' readiness scores before discharge were significantly higher than their admission scores. This intervention effectively enhanced the level of readiness among parents of premature infants, aligning with the findings of Zhang Hong et al.'s research (30). However, compared to studies conducted abroad,

preparing preterm infants for hospital discharge in China primarily relies on nurses, and a collaborative multidisciplinary approach has yet to be established. Additionally, there needs to be a standardized and comprehensive education manual and evaluation system, which should be enhanced in the future.

Social Factors

Social considerations include the extent of social assistance and the availability of community healthcare facilities. The degree of social support is strongly correlated with the parents' preparedness for hospital discharge. Parents of preterm babies face numerous pressures and desperately seek support and assistance. The presence and understanding of family members and friends can provide emotional support and encouragement, easing the uncertainty and negative emotions associated with the illness. Additionally, family members can share the responsibility of caring for the preterm babies after they leave the hospital, thus relieving some of the burden on the parents. The release of preterm newborns is a crucial assurance for parents (31-32). Furthermore, upon their release from the hospital, parents are solely responsible for the care of their premature infants, and a majority of parents expressed a need for expert help from healthcare experts. Studies conducted abroad have shown that increased availability of community healthcare services may adequately address the requirements of patients post-discharge and significantly enhance their preparedness for release (33). Nevertheless, in China, the availability of community medical resources and technical expertise is comparatively limited, and there needs to be more adequately trained healthcare staff, particularly in the field of preterm baby care. Consequently, meeting the demands of parents becomes challenging. Therefore, it is evident that community services play a significant role in assessing the readiness of preterm infants to leave hospitals and should be included in the evaluation process. Governmental departments must enhance the development of community health services, allowing the benefits of hospital discharge readiness to extend to families and individuals.

CONCLUSIONS

To summarise, providing sufficient assistance to families and evaluating their readiness for

discharge is crucial while using personalized guiding techniques. This approach is essential for safeguarding premature newborns' well-being and enhancing their families' overall health outcomes. The "Healthy China 2030" planning program explicitly states three main goals: to promote the growth of the health industry, encourage healthy lifestyles, and improve the well-being of all individuals(34). As part of the strategic objective to develop the health industry, the program recognizes the significance of mother and child care services. This recognition provides valuable policy support for advancing preterm baby discharge home readiness services in China's Neonatal Intensive Care Units (NICUs). The study on the preparedness of preterm newborns to be sent home in China is still in the preliminary stage. Moving forward, it is essential to focus on the following aspects: (a) Given the present state of NICU management in China, develop an optimal intervention model and implementation strategy for discharge preparation services, additionally, establish a complete discharge readiness evaluation system and instructional guides; (b) Formulate a multidisciplinary team for discharge preparation services, clearly define the duties of each department, and maximize the critical contributions of medical and nursing personnel in preparing preterm babies for release; (c) Enhancing communication with parents and offering tailored discharge guidance that considers the psychological state and knowledge requirements of parents of preterm infants, to enhance parents' preparedness for discharge; (d) Enhancing the connection with community health services, elevating the quality of community healthcare, prioritizing the training of healthcare professionals in preterm infant care, and providing parents of preterm infants with expert guidance for post-discharge family care.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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