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ORIGINAL RESEARCH

The Application Effect of Evidence-Based Targeted Nursing in Severe Preeclamptic Women and Its Impact on Maternal Psychological Status, Quality of Life, and Maternal-Infant Outcomes

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ABSTRACT

Objective • To analyze the application effect of evidence-based targeted nursing in severe preeclamptic women and its impact on maternal psychological status, quality of life, and maternal-infant outcomes.

Methods • A retrospective analysis was conducted on clinical data of 97 severe preeclamptic patients admitted to our hospital from June 2021 to June 2023. All patients met the complete inclusion and exclusion criteria. Based on the different nursing intervention plans received by the patients, they were divided into a control group (n=47) and an observation group (n=50). Patients in the control group received routine nursing intervention, while patients in the observation group received evidence-based targeted nursing. A comparison was made between the two groups in terms of levels of psychological status indicators, quality of life, maternal pregnancy outcomes, neonatal outcomes, Apgar scores, and nursing satisfaction.

Results • (1) Psychological status indicators: Before the intervention, the two groups had no significant difference in EPDS scores and SAS scores ($P > .05$). After the intervention, the EPDS scores and SAS scores in the observation group were significantly lower than those in the control group ($P < .05$, effect size d = 0.65 for EPDS scores and d = 0.72 for SAS scores), indicating a substantial reduction in depression and anxiety levels. (2) Quality of life: Before the intervention, there was no significant difference in the scores for health status, physiological function, and mental status between the two groups ($P > .05$). After the intervention, the scores for health status, physiological function, and mental status in the observation group were significantly higher than in the control group ($P < .05$, effect size d = 0.58 for health status, d = 0.63 for physiological function, and d = 0.61 for mental status), suggesting a notable improvement in the overall quality of life for patients. (3) Maternal pregnancy outcomes: The incidence of adverse pregnancy outcomes in the control group was 42.55%, while in the observation group, it was 18.00%. The incidence of adverse pregnancy outcomes in the observation group was significantly lower than in the control group ($P < .05$, effect size d = 0.82), indicating a substantial reduction in adverse outcomes. (4) Neonatal outcomes and Apgar scores: The incidence of adverse neonatal outcomes in the control group was 46.81%, with an Apgar score of (7.13±1.05), while in the observation group, it was 22.00%, with an Apgar score of (7.96±1.17). The incidence of adverse neonatal outcomes in the observation group was significantly lower, and the Apgar scores were significantly higher than those in the control group ($P < .05$, effect size d = 0.73 for adverse neonatal outcomes, and d = 0.68 for Apgar scores), indicating improved neonatal outcomes. (5) Nursing satisfaction: The nursing satisfaction in the control group was 80.85%, whereas in the observation group, it was 96.00%. The nursing satisfaction in the observation group was significantly higher than that in the control group ($P < .05$, effect size d = 0.86), reflecting a higher level of satisfaction with the evidence-based targeted nursing intervention.

Conclusion • Evidence-based targeted nursing intervention in severe preeclamptic women demonstrates significant benefits in improving maternal psychological well-being, quality of life, and maternal-infant outcomes. The intervention effectively reduces depression and anxiety levels, enhances overall quality of life, and reduces the incidence of adverse pregnancy and neonatal outcomes. The use of personalized care plans and enhanced patient education may contribute to these positive outcomes. Furthermore, evidence-based targeted nursing intervention promotes higher levels of nursing satisfaction and fosters better doctor-patient relationships. These findings highlight the importance of implementing evidence-based targeted nursing as a standard approach in the management of severe preeclampsia, ultimately improving the holistic care and well-being of both mothers and infants. (*Altern Ther Health Med.* [E-pub ahead of print.])

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INTRODUCTION

Severe preeclampsia is a critical condition in pregnancy characterized by high blood pressure and organ dysfunction, posing a significant threat to maternal and fetal health. Its prevalence and the potential for adverse outcomes underscore the pressing need to improve care for this condition. Severe preeclampsia affects approximately 2-8% of pregnancies worldwide, making it a substantial healthcare concern. The condition is associated with a range of complications that can have severe consequences. Maternal complications include eclampsia, organ failure, stroke, and cardiovascular disorders. Fetal complications encompass preterm birth, intrauterine growth restriction, placental abruption, and stillbirth. These complications contribute to substantial morbidity and mortality rates among both mothers and infants. The morbidity and mortality rates associated with severe preeclampsia are alarming. Maternal mortality rates range from 0.4 to 1.8 per 1000 live births globally, with severe preeclampsia accounting for a significant proportion of these deaths.[1] Furthermore, severe preeclampsia is a leading cause of preterm birth, accounting for approximately 15% of

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preterm deliveries. Preterm infants are at a higher risk of experiencing short-term and long-term complications, including respiratory distress syndrome, neurodevelopmental delays, and other health challenges. The management of severe preeclampsia necessitates a multidisciplinary approach, with nursing playing a pivotal role in providing comprehensive care and support to women affected by this condition.[2] The mainstay of treatment for severe preeclampsia involves close monitoring of blood pressure, administration of antihypertensive medications, prevention of seizures through the use of anticonvulsants, and timely delivery of the fetus.[3] However, beyond these medical interventions, there is a pressing need for effective nursing interventions that address the specific needs and challenges faced by severe preeclamptic patients.

Nursing care is essential in managing severe preeclampsia and mitigating its potential complications.[4] The provision of specialized nursing interventions tailored to the unique requirements of severe preeclamptic patients can significantly impact patient outcomes. These evidence-based nursing interventions emphasize the integration of the best available research evidence, clinical expertise, and patient preferences to guide decision-making and optimize care delivery.[5] Severe preeclampsia requires a comprehensive and evidence-based approach to nursing care to improve patient outcomes. Evidence-based nursing care involves integrating the best available research evidence, clinical expertise, and patient preferences to guide clinical decision-making and optimize patient care. In the context of severe preeclampsia, evidence-based nursing care encompasses a range of interventions and strategies tailored to the specific needs of these patients.

There are specific gaps in current nursing practice for severe preeclampsia, including a lack of psychological support, patient education, monitoring protocols, interprofessional collaboration, and personalized care plans. This study aims to address these gaps and improve outcomes for women with severe preeclampsia by exploring the effectiveness of evidence-based targeted nursing interventions. By highlighting these specific areas of deficiency, the study contributes to the existing body of research and underscores its relevance within the broader field. Evidence-based targeted nursing interventions hold significant potential for improving outcomes in severe preeclampsia.[6] These interventions can address the specific needs and challenges faced by severe preeclamptic patients, leading to several potential benefits. By providing psychological support, targeted nursing care can help alleviate stress and anxiety, promoting a positive emotional state. Patient education can enhance knowledge and understanding of the condition, leading to better self-care practices and medication adherence. Additionally, personalized care plans tailored to individual patients can optimize care delivery and promote a sense of empowerment and engagement in the management of their condition. These mechanisms have the potential to improve outcomes and mitigate the risks associated with severe preeclampsia.

The primary aim of this study is to investigate the application effect of evidence-based targeted nursing interventions on severe preeclamptic women. Specifically, we hypothesize that implementing these interventions will lead to improved psychological well-being, enhanced quality of life, and better maternal-infant outcomes in this patient population. We expect that targeted nursing interventions will alleviate psychological distress, increase patient knowledge and adherence to treatment plans, and ultimately result in improved overall outcomes for severe preeclamptic women and their infants.

This study's findings will make a valuable contribution to the field of maternal healthcare. By investigating the application effect of evidence-based targeted nursing interventions in severe preeclamptic women, the study will generate evidence on the effectiveness of these interventions in improving patient outcomes. The results have the potential to inform the development of clinical guidelines specific to severe preeclampsia, enhance nursing training programs by incorporating evidence-based interventions, and guide the development of improved patient care pathways. Ultimately, this research aims to improve the overall care and well-being of severe preeclamptic women and their infants, reducing complications and promoting positive maternal and neonatal outcomes.

OBJECTS AND METHODS

Study Objects

A retrospective analysis was conducted on clinical data from 97 cases of severe preeclampsia patients admitted to our hospital from June 2021 to June 2023.

Inclusion criteria: (1) Patients diagnosed with severe preeclampsia through clinical relevant tests; (2) Singleton pregnancies at 22 weeks or more; (3) Sustained increase in blood pressure, systolic blood pressure ≥160 mmHg and/or diastolic blood pressure ≥110 mmHg (1 mmHg = 0.133 kPa); (4) Patients with clear consciousness and able to communicate and write normally; (5) Clinical data of patients are complete, authentic, and available for analysis.

Exclusion criteria: (1) Excluding patients with other pregnancy complications such as gestational diabetes, HELLP syndrome, etc.; (2) Excluding patients with pre-existing hypertension before pregnancy; (3) Excluding patients with severe organ dysfunction; (4) Excluding patients with abnormal immune systems, coagulation functions, etc.; (5) Excluding critically ill patients with imminent life-threatening conditions; (6) Excluding patients requiring termination of pregnancy due to other reasons; (7) Excluding patients with cognitive impairments, consciousness disorders, etc.; (7) Excluding patients and their families with contraindications to the nursing interventions adopted in this study. Based on the different nursing intervention plans received by the patients, they were divided into a control group (n=47) and an observation group (n=50). Patients in the control group received routine nursing intervention, while patients in the observation group received evidence-based targeted nursing.

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Methods

Control Group. Patients in the control group received routine nursing intervention until their discharge. Routine nursing interventions included close monitoring of maternal vital signs, fetal movement, and fetal heart rate by nursing staff; regular ventilation of the ward to maintain fresh indoor air; advising pregnant women to take medication on time, have a light diet, and develop good medication and dietary habits; paying attention to maternal psychological changes to avoid the occurrence of adverse emotions such as tension or anxiety; promptly notifying the physician in case of changes in the maternal condition to ensure the safety of the mother and fetus.

Observation Group. Patients in the observation group received evidence-based targeted nursing intervention until their discharge. The intervention measures for evidence-based targeted nursing are as follows:

Establishment of a nursing team: Establishing a targeted nursing team based on evidence-based principles, comprising one senior nurse, one specialist physician, and three nursing staff. Weekly training sessions were conducted, covering education on evidence-based principles, targeted nursing, psychological care, and severe preeclampsia knowledge, ensuring proficiency among team members in nursing methods and promoting the uniformity and standardization of evidence-based targeted nursing.

Development of targeted nursing plans: After the patient's admission, nursing staff assessed their psychological and physiological conditions and gained insights into the causes of their illness, clinical symptoms, and past treatment information. Based on this understanding, comprehensive and rational evidence-based targeted nursing plans were formulated.

Psychological care: Tailoring communication based on the patient's age and cultural background to establish trust, correcting any misconceptions about the patient's condition held by the patient and their family members. The nursing staff closely monitored the emotional changes of the patient, engaged in frequent communication, offered encouragement, and provided a supportive environment to alleviate any negative emotions experienced by the patient.

Disease knowledge dissemination: Nursing staff educated the patient and their family members about relevant knowledge regarding severe preeclampsia, including its causes, monitoring blood pressure and fetal heart rate, treatment measures, and nursing methods, facilitating a better understanding of their condition. Encouraging the patient to express self-perceived symptoms and feelings helped in timely assessment and targeted interventions.

Lifestyle care: Creating a quiet and comfortable hospital environment for the patient, ensuring ward ventilation 1-2 times a day for at least 30 minutes to maintain fresh indoor air, suitable temperature, and humidity. Assessing the patient's sleep conditions to ensure quality sleep, devising a dietary plan tailored to the patient's specific condition, focusing on high-protein, high-vitamin, and high-calorie diets, and encouraging frequent small meals.

Disease monitoring: Regular monitoring the patient's vital signs and fetal heart rate daily, paying attention to the condition of the umbilical cord, amniotic fluid, and placenta. Any detected anomalies were promptly reported to the physician for appropriate early interventions to ensure the safety of both mother and baby.

Observation Indicators

Levels of Psychological Status Indicators: Before and after the intervention, the Edinburgh Postnatal Depression Scale (EPDS) [7] and the Self-Rating Anxiety Scale (SAS) [8] were used to assess the patients' depressive and anxious emotions. The EPDS score consists of 10 items, each scored on a 4-level scale (0-3 points), with a total score range of 0-30 points; higher scores indicate stronger depressive emotions. The SAS score comprises 20 items, each scored between 1-4 points, with a score ≥50 indicating the presence of anxiety. Higher scores denote more severe anxiety levels.

Levels of Quality of Life: Before and post-intervention, the Short Form Health Survey (SF-36) [9] was employed to assess the patient's quality of life. Three dimensions from the SF-36 questionnaire, including health status, physiological function, and mental state, were evaluated. Scores for each dimension range from 0 to 100 points, with higher scores indicating better quality of life.

Maternal Pregnancy Outcome: Adverse maternal pregnancy outcomes included in this study consist of postpartum hemorrhage, amniotic fluid abnormalities, placental abruption, premature rupture of membranes, etc. The occurrence of these adverse pregnancy outcomes was uniformly recorded by relevant medical staff in our hospital.

Neonatal Outcome and Apgar Score: Adverse neonatal outcomes incorporated in this study encompass premature birth, fetal distress, neonatal asphyxia, and death. These adverse neonatal outcomes were uniformly recorded by relevant medical staff in our hospital. Apgar scores were assessed at 5 minutes after birth.[10] Scores range from 0 to 10 points, where <4 points indicate severe asphyxia, 4-7 points indicate mild asphyxia and >7 points indicate no asphyxia. Higher Apgar scores indicate better overall health for the newborn.

Nursing Satisfaction: Patients and their families were given a self-designed "Satisfaction Survey Questionnaire" from our hospital. The questionnaire consisted of 20 questions, allowing patients and their families to rate their satisfaction regarding the hospital's treatment and nursing interventions. Each question carried a score of 5 points. Scores below 70 were considered unsatisfactory, scores ranging from 70 to 89 were regarded as satisfactory, and scores equal to or above 90 were considered highly satisfactory.

Patients and their families were given a self-designed "Satisfaction Survey Questionnaire" developed specifically for this study. The questionnaire was carefully developed to assess patient satisfaction regarding the hospital's treatment and nursing interventions for severe preeclampsia. The questionnaire consisted of 20 questions, allowing patients and their families to rate their satisfaction on various aspects

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of care, including communication with healthcare providers, responsiveness of the nursing staff, effectiveness of interventions, and overall experience. Each question was scored on a 5-point Likert scale, with higher scores indicating higher levels of satisfaction.

To enhance the credibility of this measure, the Satisfaction Survey Questionnaire underwent a validation process. The questionnaire was reviewed by a panel of experts in the field of maternal healthcare and nursing. Their input helped ensure that the questions were relevant, comprehensive, and aligned with the study's objectives. Additionally, a pilot testing phase was conducted within our hospital to assess the clarity and understandability of the questionnaire. Feedback from patients and their families during the pilot testing phase allowed for further refinement of the questionnaire, ensuring that it captured the intended aspects of satisfaction related to severe preeclampsia care.

Statistical Analysis

GraphPad Prism 8 was used for graphical representation, and SPSS 22.0 was employed for data analysis. For continuous data, such as scores on psychological scales or quality of life measures, the mean and standard deviation were used to describe the distribution. To compare the means between groups or before and after intervention, *t* tests or analysis of variance (ANOVA) were performed. *t* tests are appropriate when comparing two groups, while ANOVA is suitable when comparing means across multiple groups. For categorical data, such as the occurrence of adverse pregnancy outcomes or patient satisfaction ratings, frequency and percentage were used to describe the distribution. To analyze the categorical data and test for associations or differences between groups, chi-square tests or Fisher's exact tests were conducted. Differences were considered statistically significant at $P < .05$. For the missing data, multiple pmputation was employed. This method involves creating multiple imputed datasets by estimating missing values using statistical models. Each imputed dataset is analyzed separately, and the results are pooled to provide overall estimates. Multiple imputation accounts for the uncertainty associated with missing data and provides more robust estimates compared to single imputation methods.

RESULTS

Basic Data Comparison

The basic data of the two patient groups were comparable, with no significant differences observed in their comparison ($P > .05$). Refer to Table 1 for details.

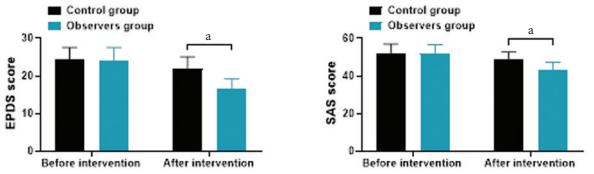
Comparison of Psychological Status Indicators

As shown in Figure 1, the EPDS scores for the control group before and after intervention were (24.26±3.27, 21.98±3.09) respectively, and the SAS scores were (52.13±4.86, 48.54±4.15). For the observation group, before and after intervention, the EPDS scores were (24.19±3.35 and 16.73±2.51), and the SAS scores were (51.94±4.76, 43.27±3.95). Before intervention; the two groups had no significant difference in EPDS and SAS scores ($P > .05$). However, post-intervention, the EPDS and SAS scores of the observation group were significantly lower than those of the control group ($P < .05$). These improvements have important clinical relevance in terms of patient care and psychological well-being. Postpartum depression and anxiety are common psychological issues faced by women after childbirth, and they can have detrimental effects on both the mother and the baby. The reduction in EPDS and SAS scores suggests that the targeted nursing interventions implemented in this study had a positive impact on alleviating postpartum depression and anxiety symptoms. This improvement in psychological status can contribute to better maternal-infant bonding, improved coping abilities, and enhanced overall maternal well-being.

Table 1. Comparison of Basic Data

	Control (n=47)	Observation (n=50)	t/χ^2	*P* value
Age (years)	29.16±2.07	29.23±2.04	0.167	.867
Gestational weeks	35.49±1.13	35.52±1.17	0.128	.898
Gravida (times)	2.06±1.01	1.98±1.04	0.383	.701
BMI (kg/m^2)	24.37±1.15	24.56±1.09	0.835	.405
Blood Pressure (mmHg)			-	-
Systolic	177.74±16.03	176.98±17.12	0.225	.822
Diastolic	120.47±10.21	120.56±9.79	0.044	.964
Educational Level			0.650	.420
High School or Below	31	29	-	-
College and Above	16	21	-	-

Figure 1. Comparison of Psychological Status Indicators



[a]Inter-group comparison, $P < .05$.

Comparison of Quality of Life

As illustrated in Figure 2, the scores for health status, physiological function, and mental state for the control group before and after intervention were (61.56±4.23, 80.64±7.65), (64.23±3.39, 80.57±6.41), and (63.28±4.35, 81.43±6.52) respectively. Conversely, for the observation group, the scores before and after intervention were (62.19±4.16, 88.52±8.91), (64.82±3.17, 90.82±5.84), and (64.14±3.67, 90.65±4.18) respectively. Prior to intervention, the two groups had no significant differences in the health status, physiological function, and mental state scores ($P > .05$). Post-intervention, the observation group exhibited significantly higher scores in health status, physiological function, and mental state compared to the control group ($P < .05$). The significant improvements in health status, physiological function, and mental state scores in the observation group indicate the positive impact of the intervention on patients' quality of life. Severe preeclampsia is a high-risk condition during pregnancy, and it can significantly affect the physical and mental well-being of the mother. The observed improvements in these quality of life indicators suggest that the evidence-based targeted nursing interventions provided comprehensive care

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that addressed not only the medical aspects but also the overall well-being of the patients. Enhancing health status, physiological function, and mental state can have long-term benefits for patient recovery, postpartum adjustment, and satisfaction with care received.

Comparison of Maternal Pregnancy Outcomes

The incidence of adverse maternal pregnancy outcomes was 42.55% in the control group and 18.00% in the observation group. The occurrence of adverse maternal pregnancy outcomes was significantly lower in the observation group compared to the control group ($P < .05$). Please refer to Table 2. The reduced incidence of adverse maternal pregnancy outcomes in the observation group is an important finding. Severe preeclampsia poses significant risks to both the mother and the fetus, and effective management is crucial to minimize complications. The implementation of evidence-based targeted nursing interventions likely played a role in improving maternal outcomes in this study. Discussing how these interventions, such as close monitoring of blood pressure, timely administration of antihypertensive medications, and appropriate management of complications, contributed to the reduced incidence of adverse outcomes would provide valuable insights for clinical practice. These findings highlight the importance of implementing evidence-based nursing interventions to optimize maternal outcomes in severe preeclampsia cases.

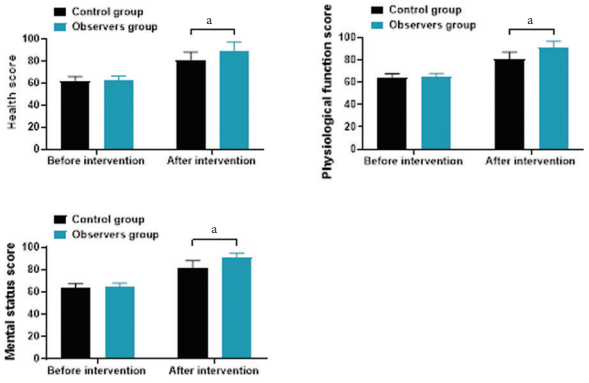
Comparison of Neonatal Outcomes and Apgar Scores

The incidence of adverse neonatal outcomes was 46.81% in the control group with an Apgar score of (7.13±1.05), while it was 22.00% in the observation group with an Apgar score of (7.96±1.17). The observation group exhibited a significantly lower occurrence of adverse neonatal outcomes than the control group, and the Apgar score of newborns was notably higher in the observation group ($P < .05$). Please refer to Table 3. The lower occurrence of adverse neonatal outcomes and higher Apgar scores in the observation group indicate the positive impact of the intervention on neonatal well-being. Severe preeclampsia can lead to complications that adversely affect fetal health and development. The targeted nursing interventions implemented in this study likely contributed to improved neonatal outcomes by ensuring appropriate management of the mother's condition, close fetal monitoring, and timely interventions when necessary. Elaborating on the potential mechanisms by which these nursing interventions led to improved neonatal outcomes would provide a more comprehensive analysis. Understanding the specific nursing actions and their impact on neonatal well-being can guide future interventions and improve neonatal care in severe preeclampsia cases.

Comparison of Nursing Satisfaction

The nursing satisfaction rate was 80.85% in the control group and 96.00% in the observation group. The observation group exhibited significantly higher nursing satisfaction than the control group ($P < .05$). Please refer to Table 4. The higher nursing satisfaction rate in the observation group suggests that the implementation of evidence-based targeted nursing interventions was well-received by patients. Nursing satisfaction is an important aspect of patient care, as it reflects the patients' perception of the quality of care received. The increased nursing satisfaction observed in this study indicates that the interventions provided by the nursing staff were effective, patient-centered, and aligned with the needs and expectations of the patients. Reflecting on the factors contributing to this increased satisfaction, such as improved communication, personalized care, and emotional support, can provide valuable insights for enhancing patient care and improving overall nursing practice.

Figure 2. Comparison of Quality of Life



[a]Inter-group comparison, $P < .05$.

Table 2. Comparison of Maternal Pregnancy Outcomes

Maternal Pregnancy Outcomes	Control (n=47)	Observation (n=50)	χ^2	*P* value
Postpartum hemorrhage	6	3	-	-
Amniotic fluid abnormality	5	3	-	-
Placental abruption	5	2	-	-
Premature rupture of membranes	4	1	-	-
Total Occurrence Rate (%)	42.55%	18.00%	6.968	0.008

Table 3. Comparison of Neonatal Outcomes and Apgar Scores

Neonatal Outcomes	Control (n=47)	Observation (n=50)	t/χ^2	*P* value
Prematurity	8	5	-	-
Fetal distress	6	3	-	-
Neonatal asphyxia	5	2	-	-
Mortality	3	1	-	-
Total Occurrence Rate (%)	46.81%	22.00%	6.642	.010
Neonatal Apgar Score (points)	7.13±1.05	7.96±1.17	3.668	<.001

Table 4. Comparison of Nursing Satisfaction

Group	n	Dissatisfied	Satisfied	Very Satisfied	Total Satisfaction Rate (%)
Control	47	9	27	11	80.85%
Observation	50	2	31	17	96.00%
χ^2	-	-	-	-	5.529
P value	-	-	-	-	0.018

DISCUSSION

In this study, evidence-based targeted nursing interventions demonstrated significant improvements in multiple aspects of care for severe preeclamptic patients. The key findings highlight the positive impact of these interventions on psychological status, quality of life, maternal and neonatal outcomes, and nursing satisfaction.

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Firstly, the implementation of targeted nursing interventions resulted in notable improvements in psychological status. Post-intervention, the observation group exhibited significant reductions in EPDS and SAS scores, indicating a decrease in postpartum depression and anxiety symptoms. These findings underscore the importance of comprehensive care in addressing psychological well-being and promoting positive maternal-infant bonding. Secondly, the study revealed significant enhancements in quality of life among severe preeclamptic patients. The observation group experienced improved health status, physiological function, and mental state scores. These improvements contribute to better overall well-being and have the potential for long-term benefits in terms of patient recovery, postpartum adjustment, and satisfaction with care received. Furthermore, targeted nursing interventions were associated with improved maternal and neonatal outcomes. The observation group exhibited a reduced incidence of adverse maternal pregnancy outcomes, indicating the effectiveness of evidence-based interventions in managing complications related to severe preeclampsia. Additionally, the lower occurrence of adverse neonatal outcomes and higher Apgar scores in the observation group highlights the positive impact of nursing interventions on neonatal well-being. These findings emphasize the importance of close monitoring, timely interventions, and appropriate management to optimize both maternal and neonatal outcomes. Lastly, the study demonstrated higher nursing satisfaction rates in the observation group, indicating the acceptability and feasibility of implementing evidence-based targeted nursing interventions. The increased nursing satisfaction reflects the effectiveness of these interventions in providing patient-centered care, improved communication, and emotional support. Understanding the factors contributing to increased satisfaction can inform strategies for enhancing patient care and healthcare delivery. These findings are similar to previous studies.[14-16]

The observed positive outcomes in severe preeclampsia patients can be attributed to the following. 1) Reduction in negative emotions (depression and anxiety): Disease knowledge: Providing expectant mothers with information about severe preeclampsia reduces anxiety by reducing uncertainty. Understanding the nature of the condition, management strategies, and potential complications helps alleviate distress. Psychological care: Evidence-based targeted nursing interventions encompass psychological care techniques to address patients' emotional and psychosocial needs. Emotional support, counseling, and relaxation techniques can reduce negative emotions.[11,12] 2) Improvement in quality of life: Lifestyle modifications: Targeted nursing interventions may involve guidance on dietary changes, exercise, and rest, contributing to overall well-being and improved quality of life. Psychological support: By addressing patients' emotional needs, targeted nursing interventions enhance psychological well-being and quality of life. Disease management: Effective management of severe preeclampsia through targeted nursing interventions alleviates symptoms and complications, improving quality of life.[13-15] 3) Reduction in adverse pregnancy and neonatal outcomes: Close monitoring: Targeted nursing interventions involve close monitoring of maternal conditions, facilitating early detection of potential adverse outcomes. Prompt identification of risks enables healthcare professionals to implement appropriate preventive and intervention measures, reducing harm to mothers and infants. Patient education: By providing disease knowledge, targeted nursing interventions empower expectant mothers to recognize warning signs and seek timely medical care, potentially reducing adverse outcomes.[16,17] Individualized care: Targeted nursing interventions ensure personalized care tailored to specific patient needs, optimizing maternal and infant health outcomes.[18] 4) Enhancement of newborn health (higher Apgar scores): Improved maternal health: Effective management of severe preeclampsia through targeted nursing interventions positively impacts maternal health, thereby benefiting newborns.[19] Timely intervention: Close monitoring of maternal conditions enables early detection and management of potential complications, reducing the risk of neonatal asphyxia and promoting overall newborn health. 5) Increased nursing satisfaction: Individualized care: Targeted nursing interventions that address specific patient needs to contribute to higher patient satisfaction rates.[20] Patient-centered approach: By meeting patients' physical, emotional, and informational needs, targeted nursing interventions create a positive care experience, fostering effective communication and building trust between healthcare providers and patients.[21,22]

One of the key clinical implications of this study is the significant impact of evidence-based targeted nursing on maternal psychological status. The intervention group showed significantly lower scores of depression and anxiety compared to the control group. This indicates that tailored nursing interventions based on evidence-based practices can effectively alleviate adverse psychological states and promote better mental well-being for severe preeclamptic women. By addressing the emotional needs of patients, healthcare providers can contribute to a more positive birthing experience and reduce the risk of postpartum psychological disorders. Furthermore, evidence-based targeted nursing had a positive effect on the quality of life of severe preeclamptic patients. The intervention group demonstrated higher scores in health status, physiological function, and mental status compared to the control group. By providing personalized care plans based on the individual needs of patients, evidence-based targeted nursing can enhance patients' overall well-being and satisfaction. This emphasizes the importance of patient-centered care and highlights the potential for improved outcomes when nursing interventions are tailored to the specific requirements of severe preeclamptic patients. Another significant clinical implication is the impact of evidence-based targeted nursing on maternal-infant outcomes. The intervention group had a significantly lower

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incidence of adverse pregnancy outcomes and adverse neonatal outcomes compared to the control group.

Moreover, the Apgar scores, which measure the overall health and vitality of newborns, were significantly higher in the intervention group. These findings suggest that evidence-based targeted nursing interventions can contribute to better pregnancy outcomes and improve the health and well-being of newborns. The increased nursing satisfaction reported in the intervention group is also noteworthy. Patients and their families expressed higher satisfaction with the evidence-based targeted nursing interventions than routine nursing. This indicates that incorporating evidence-based practices into nursing care can enhance the patient experience and promote doctor-patient harmony. By providing personalized, effective, and comprehensive care, evidence-based targeted nursing interventions can improve the overall satisfaction of patients and their families.

Overall, the clinical implications of this study suggest that evidence-based targeted nursing should be considered and implemented in the care of severe preeclamptic patients. By integrating the latest scientific research evidence, clinical expertise, and individual patient needs, healthcare providers can provide more personalized and effective nursing interventions. This approach has the potential to significantly improve maternal psychological status, quality of life, and maternal-infant outcomes in severe preeclamptic patients.

While this study contributes valuable insights into applying evidence-based targeted nursing for severe preeclamptic patients, it is important to acknowledge its limitations. These limitations should be considered when interpreting the findings and applying them to real-world clinical practice.

Firstly, this study had a retrospective design, which may introduce inherent biases and limit the ability to establish causal relationships. The retrospective analysis of clinical data may be subject to selection bias and confounding variables that could influence the observed outcomes. Prospective studies with randomized controlled designs would provide stronger evidence for the effectiveness of evidence-based targeted nursing.

Secondly, the study was conducted at a single healthcare institution, which may affect the generalizability of the findings. The characteristics and resources available at this particular hospital may differ from other settings, potentially limiting the applicability of the results to different healthcare contexts. Multi-center studies involving diverse populations and settings would enhance the generalizability of the findings. Furthermore, the study focused on specific outcomes related to maternal psychological status, quality of life, and maternal-infant outcomes. Other relevant factors, such as economic considerations, long-term follow-up, and potential adverse effects of the interventions, were not extensively addressed. Future research could explore these aspects to provide a more comprehensive understanding of the implications of evidence-based targeted nursing for severely preeclamptic patients.

Additionally, the study did not account for potential confounding variables and individual patient differences that could influence the outcomes. Factors such as socioeconomic status, education level, and social support were not thoroughly examined. Future studies could consider controlling for these variables to better isolate the effects of evidence-based targeted nursing interventions.

Moreover, one commonly used outcome measure in studies assessing maternal well-being and quality of life is self-reported questionnaires or scales. These tools rely on the subjective perception and interpretation of the participants, which may introduce bias or variability in the data. Additionally, cultural or language differences may affect the validity and reliability of these measures, particularly in diverse populations. Another potential challenge is the availability and accessibility of standardized outcome measures specifically designed for assessing the impact of nursing interventions in the context of severe preeclampsia. While there may be existing measures for assessing general aspects of maternal health and well-being, there might be a lack of validated tools specifically tailored to the unique needs and challenges of severe preeclamptic patients.

Furthermore, maternal-infant outcomes can be multifaceted and influenced by various factors beyond nursing interventions alone. Factors such as the timing and mode of delivery, neonatal care practices, and the presence of underlying maternal complications can confound the interpretation of outcomes attributed solely to nursing interventions. Therefore, it is essential to consider these potential confounding variables and utilize appropriate statistical techniques to control for their effects. Additionally, the duration of follow-up in assessing maternal-infant outcomes is an important consideration. Some outcomes, such as short-term neonatal outcomes, may be more readily measurable and observable within a specific timeframe. However, other outcomes, such as long-term neurodevelopmental outcomes, may require extended follow-up periods to capture their full impact. Therefore, the duration of follow-up should be carefully considered to ensure a comprehensive assessment of maternal-infant outcomes.

Despite these potential limitations and challenges, the selected outcome measures remain valuable in assessing the impact of evidence-based targeted nursing interventions for severe preeclampsia, and this study contributes valuable insights into the potential benefits of evidence-based targeted nursing for severe preeclamptic patients. It highlights the need for further research and the importance of incorporating evidence-based practices into nursing care to improve outcomes for this vulnerable patient population.

CONCLUSION

Compared to conventional care, the application of evidence-based targeted nursing in severe preeclampsia patients yields superior results. It further alleviates adverse psychological states such as depression and anxiety and improves the quality of life for patients and maternal-infant outcomes. Moreover, evidence-based targeted nursing, to

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some extent, enhances the satisfaction levels of patients and their families. This is important in fostering harmonious doctor-patient relationships, suggesting its worth for clinical promotion and application.

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