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ORIGINAL RESEARCH

Development and Preliminary Evaluation of a Structured Narrative Nursing Log for Conscious Patients in the Intensive Care Unit

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Objective: This study aimed to develop a structured narrative nursing log, grounded in narrative nursing theory, for use with conscious patients in the intensive care unit (ICU), and to conduct a preliminary clinical evaluation of its effectiveness.

Methods: A structured narrative nursing log was developed through literature review, group brainstorming, and expert consultation. A quasi-experimental design was adopted. The study included 90 conscious ICU patients from a Class III Grade A hospital in Nantong, Jiangsu Province, selected via convenience sampling. Participants were assigned to either the control group (n = 46), in which nurses documented care using a blank nursing log, or the intervention group (n = 44), in which nurses utilized the structured narrative nursing log developed in this study. Primary outcome measures included patient-reported anxiety levels, perceived caring, time spent by ICU nurses on narrative nursing, and nurses' sense of professional fulfillment.

Results: Patients in the intervention group exhibited significantly lower anxiety levels and significantly higher perceived caring compared to those in the control group ($p < 0.05$; 95% CI, 2.33–3.72). The average time spent on narrative nursing was also significantly lower in the intervention group (25.05 ± 1.94 minutes) than in the control group (34.07 ± 3.93 minutes) ($p < 0.05$; 95% CI, 7.71–10.33). Among the 43 participating ICU nurses, a statistically significant increase in self-reported professional fulfillment was observed following implementation of the structured log ($p < 0.05$; 95% CI, –10.95 to –6.40).

Conclusion: The structured narrative nursing log shows promise in reducing anxiety-related symptoms, improving patients' perception of care, and enhancing nurses' sense of professional accomplishment. These findings suggest its potential value in refining nursing practices for conscious patients in intensive care settings.

Keywords: conscious patients, Delphi method, ICU, narrative nursing, nursing logs, nursing efficiency

Introduction

Patients in the intensive care unit (ICU) commonly experience critical illness, and upon regaining consciousness, they are frequently affected by significant psychological distress. Contributing factors include isolation, separation from family members, diminished capacity for self-care, and concerns regarding the severity and prognosis of their medical condition. Sustained psychological stress may impede recovery, delay therapeutic progress, and adversely impact patients' overall outlook on life. Previous research has indicated that the prevalence of depressed mood and fear among conscious patients in the ICU is 66.3% and 38.7%, respectively.[1] These emotional disturbances are often attributed to feelings of guilt toward family members and concerns about resuming daily life and occupational responsibilities. The cumulative effect of these psychosocial stressors may exacerbate psychological vulnerability and increase emotional sensitivity.[2]

In routine clinical practice, ICU healthcare professionals prioritize the management of complex, rapidly evolving physiological conditions, with the primary objective of improving survival outcomes. However, this focus on physical

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stabilization may lead to insufficient recognition of patients' psychological and emotional needs, potentially diminishing their perceived level of care.[3,4] Furthermore, nurse-patient communication in ICU settings is frequently inadequate, particularly in relation to the exchange of information, validation of emotional experiences, and mitigation of psychological distress.[5] As healthcare systems increasingly move toward personalized and patient-centered models of care, nursing practice must more fully incorporate psychosocial support, with the aim of addressing the holistic needs of patients.[6] Enhancing the quality of emotional care within the ICU setting may not only improve patient outcomes but also strengthen the therapeutic nurse-patient relationship.[7]

Nurses in ICU maintain the most consistent and direct contact with patients who are critically ill and play a central role in providing psychological and emotional support.[8] In response to this need, a structured narrative nursing log was designed by the research team based on narrative nursing theory, intended for use with conscious patients in the ICU. The framework includes pre-intervention assessment and preparation, the intervention process, and post-intervention evaluation. The objective of implementing this structured approach is to deliver individualized, comprehensive, and humanistic care, thereby enhancing the hospitalization experience and improving the overall quality of nursing care in the ICU.

Methods

Development of a Structured Narrative Nursing Log for Conscious Patients in the ICU Based on Narrative Nursing Theory

Formation of the Research Team

The research team comprised 15 members: 2 physicians from the department, 1 expert in psychology, 1 clinical nursing specialist in critical care, 10 nurses working in critical care, and 2 graduate students in nursing with training in evidence-based practice. The physicians provided professional oversight and clinical guidance. The psychology expert contributed to the development of the structured narrative nursing log and assisted in the design of the narrative intervention. The clinical nursing specialist supervised the development of the log and was responsible for quality control during the intervention process. Narrative interventions were implemented by the critical care nurses. The graduate students conducted literature reviews, assisted in the development and iterative refinement of the nursing log, and participated in data collection and analysis. All members of the team were actively involved in collaborative discussions and brainstorming sessions throughout the development phase.

Design of the Expert Consultation Questionnaire

Literature Review

A comprehensive electronic search was conducted across both Chinese and English academic databases, including CNKI, Wanfang, VIP, CBM, PubMed, Embase, and Web of Science. For Chinese-language databases (eg, CNKI), the search strategy employed the following terms: (["Subjects = Patients in ICU"] OR ["Subjects = The Awake Patients in ICU"]) AND (["Subjects = Psychological Nursing"] OR ["Subjects = Psychological Intervention"] OR ["Subjects = Narrative Nursing"]). For English-language databases (eg, PubMed), the keywords included: ([Patients in ICU] OR [Conscious patients in the ICU] AND ([Mental nursing care] OR [Psychological nursing intervention] OR [Narrative nursing]). The search covered literature from the inception of each database through April 2024. As no studies addressing the clinical application of structured narrative nursing logs were identified, the literature review focused on extracting core concepts related to narrative nursing and identifying reference points for the development of log content.

On-Site Observation and Group Brainstorming

Prior to drafting the structured narrative nursing log, five nurses working in critical care conducted direct observations of ICU workflows to identify practical challenges in the delivery of narrative nursing. Observations included the timing, methods, and content of existing narrative practices, as well as deficiencies in current approaches. Each nurse observed a minimum of three patients throughout the nursing process to gather qualitative data for initial log development.

Findings from the observations were reviewed and discussed during three group brainstorming sessions conducted by the research team. The discussions integrated observational data with findings from the literature review to define the intervention content and formulate specific entries for the structured narrative nursing log.

Developing the Initial Draft of the Structured Narrative Nursing Log

Drawing from both the literature review and group brainstorming outcomes, the research team developed the initial draft of the structured narrative nursing log using narrative nursing theory as its guiding framework. The standard nursing process—assessment, planning, implementation, and evaluation—was used to structure the log. The resulting version comprised 4 Level 1 indicators and 16 Level 2 indicators.

To evaluate the initial draft, an expert consultation questionnaire was designed. The questionnaire consisted of three components:

Introduction: Provided a brief overview of the study's background, objectives, and methodology.

Main Body: Detailed each indicator, followed by an importance rating using a 5-point Likert scale (1 = very unimportant to 5 = very important). Space was included for open-ended comments and additional suggestions.

Expert Information and Authority Assessment: Collected demographic and professional background information from participating experts. The authority of the experts was evaluated based on their self-reported familiarity with the log's content and the criteria used to inform their judgments.

Delphi Method for Expert Consultation

Selection of Experts

Experts were selected based on the following inclusion criteria: (1) professional expertise in comprehensive nursing management, clinical critical care nursing, or psychology; (2) possession of an associate senior professional title or higher; (3) a minimum of 10 years of clinical experience; and (4) willingness to participate in the consultation process.

Implementation of Expert Consultation

In July 2024, expert consultation questionnaires were distributed and collected via WeChat and Email platforms. Following the first round of consultation, responses were compiled and analyzed by two graduate students. Revisions to the structured narrative nursing log were made based on expert ratings and qualitative feedback, which informed the development of a second-round questionnaire. The two consultation rounds were conducted with a one-week interval. Consensus among experts was achieved after the second round, marking the completion of the consultation process.

Entry inclusion criteria for the final version of the log were defined as a mean importance rating greater than 3.5 and a coefficient of variation less than 0.25.[9]

Statistical Methods

Data analysis was performed using Microsoft Excel and SPSS version 26.0. Categorical variables are summarized as frequencies and percentages. Continuous variables with normal distribution are expressed as mean ± standard deviation (SD). The coefficient of variation and Kendall's coefficient of concordance were used to assess the level of agreement among experts. The effective response rate was calculated to evaluate expert engagement. Expert authority was assessed using the arithmetic mean of self-reported familiarity scores and judgment criteria. A p-value of < 0.05 was considered statistically significant.

Expert Consultation

Demographic Characteristics of Experts

A total of 17 experts participated in and completed both rounds of consultation. The experts were affiliated with tertiary care hospitals located in Jiangsu, Henan, and Shaanxi provinces. Among the participants, 3 specialized in comprehensive nursing management, 1 in psychology, 11 in clinical critical care nursing, and 2 in narrative medicine. The mean age of the experts was 46.71 ± 2.39 years, with an average of 24.12 ± 2.60 years of professional experience. The panel included 8 senior-level experts and 9 associate senior-level experts. In terms of educational background, 10 held a master's degree, while 7 held a bachelor's degree. A summary of expert characteristics is provided in Table 1.

Expert Engagement, Authority, and Consensus

In each round of the Delphi consultation, 17 questionnaires were distributed and all were returned, resulting in a 100% response rate. The expert authority coefficient was calculated at 0.880, indicating a high level of reliability in expert

Table 1 Demographic Characteristics of Experts (n = 17)

Item	n	Percentage/%	Item	n	Percentage/%
Sex			Title		
Male	8	47.0	Deputy Senior	9	53.0
Female	9	53.0	Advanced level	8	47.0
Age (years)			Years of service		
41~50	15	88.0	15~20	1	5.0
≥51	2	12.0	21~25	11	65.0
Discipline field			26~30	5	30.0
Intensive care	11	65.0	Region (Province)		
Nursing management	3	18.0	Jiangsu	8	47.0
Psychology	1	5.0	Henan province	4	23.0
Narrative medicine	2	12.0	Shaanxi	3	18.0
Educational background			Shandong	2	12.0
Undergraduate	7	41.0			
Master	10	59.0			

judgment. The coefficients of variation for the two consultation rounds ranged from 0.047 to 0.228 and from 0.068 to 0.222, respectively. Kendall's coefficients of concordance were 0.322 in the first round and 0.369 in the second round ($\chi^2 = 103.957$ and 142.921, respectively), indicating a satisfactory degree of consensus among experts across both rounds.

Summary of Consultation Outcomes

Following the first round of consultation, the structured narrative nursing log was revised based on expert feedback and quantitative ratings. Experts recommended that Item 1.1 include classifications for types of significant events, along with corresponding prompts. This suggestion was discussed and incorporated into the revised version.

Within the nurse preparation section, multiple experts emphasized the importance of acquiring a comprehensive understanding of the patient's condition. Accordingly, the relevant entry was revised to: "Maintain a professional appearance and attitude, and fully understand the patient's condition, treatment, and background."

Regarding Item 2.4, experts highlighted the need to distinguish between situations that can be addressed immediately and those requiring deferred action. This item was revised as follows:

Item 2.4(1): If positive physiological and psychological concerns have been resolved

Item 2.4(2): If concerns remain that require delayed response

No additional qualitative feedback was provided after the second round of consultation. Minor adjustments were made to the sequence of Items 2.8 and 2.9. The finalized structured narrative nursing log included 4 Level 1 indicators and 16 Level 2 indicators. Details of the final version are provided in Table 2.

Table 2 Structured Narrative Nursing Log

Content	Importance Assignment (Score, $\bar{x} \pm s$)	Importance Coefficient of Variation
1. Evaluation and preparation stage	4.88±0.33	0.068
1.1 Patient: If there are any special events that need to be handed over (social, cultural, family background, etc.).	4.47±0.72	0.160
1.2 Medication: Sedatives, analgesics, or vasoactive drugs are regulated within a reasonable range.	3.76±0.83	0.221
1.3 Environment: Reasonable temperature and humidity control, noise control, and instrument alarm settings.	4.59±0.71	0.155

(*Continued*)

Table 2 (Continued).

Content	Importance Assignment (Score, $\bar{x} \pm s$)	Importance Coefficient of Variation
1.4 Nurse: Maintaining a dignified demeanor and positive attitude, and fully understanding the condition, treatment, and background of the patient.	4.82±0.39	0.081
2. Narrative implementation process	4.76±0.44	0.092
2.1 Attention: If there are any physiological, psychological, or emotional issues present.	4.71±0.47	0.100
2.2 Understanding: Understand the situation and physiological and emotional needs of the patient.	3.82±0.81	0.212
2.3 Reflection: What are the ways to solve the existing problems, and do family members or doctors need help?	3.59±0.71	0.199
2.4 Timely response: ① If positive physiological and psychological concerns have been resolved ② If concerns remain that require delayed response	3.94±0.75	0.190
2.5 Delayed response: After delaying the response, re-evaluate whether the problem has been resolved or if assistance is needed.	4.06±0.90	0.222
2.6 Protecting patient privacy During the narrative process, pay attention to protecting patient privacy, and the communication time and content should be acceptable to the patient.	4.06±0.75	0.184
2.7 Pay attention to nonverbal communication Pay attention to changes in the demeanor and movements of the patient, strengthen eye contact, and cooperate with supportive movements.	3.82±0.81	0.212
2.8 Timely termination When the emotions of the patient are out of control or the condition worsens, terminate the session and take corresponding measures.	4.88±0.33	0.068
2.9 Reflect on whether there are any shortcomings in this narrative from the perspectives of patients and narrators.	4.88±0.33	0.068
3. Effect evaluation	4.12±0.70	0.169
3.1 By communicating and inquiring about the feelings of the patient, assess the effectiveness of the narrative and identify potential issues.	4.06±0.75	0.184
3.2 Objective evaluation of the narrative effect using relevant scales after the narrative ends.	3.47±0.62	0.180
4. Nurse's experience	4.29±0.69	0.160
4.1 Nurse's experiences, areas for improvement, or key points to be noted during the narrative process.	3.76±0.75	0.200

Note: A "√" can be placed after the corresponding situation in the remarks, and the problems that have occurred in the current stage can be recorded in text. The time required for implementing narrative nursing in this class: Nurse:

Preliminary Application of the Structured Narrative Nursing Log for Conscious Patients in the ICU

Study Participants

Participants were recruited using a convenience sampling method from the ICU of a tertiary hospital in Nantong, Jiangsu Province, between May and October 2024.

Inclusion criteria were as follows: Age ≥ 18 years; Conscious state, defined as a Richmond Agitation-Sedation Scale (RASS) score between –1 and +1 and a negative result on the Confusion Assessment Method for the ICU (CAM-ICU); Expected ICU stay of ≥ 7 days.

Exclusion criteria were: Documented history of mental illness; Unstable vital signs; Declined participation.

Withdrawal criteria were defined as: Withdrawal from the study due to voluntary discharge, death, or other reasons; Clinical deterioration preventing continuation of the intervention.

Sample size calculation was performed using a two-sample mean comparison formula. A two-sided α of 0.05 and a one-sided β of 0.10 were used, assuming $\delta/\sigma = 0.80$. Allowing for a 20% dropout rate, the required sample size was estimated at 82 participants. The final sample included 105 patients, with 54 assigned to the control group (recruited between May and July 2024) and 51 to the intervention group (recruited between August and October 2024).

All participants provided informed consent and voluntarily participated in the study. Ethical approval was obtained from the hospital's ethics committee (Approval No.: 2022KT132).

Intervention Methods

Control Group Protocol

Participants in the control group received routine narrative nursing interventions, during which nurses documented care using blank narrative logs. The intervention followed a standardized structure comprising the following components:

Pre-Intervention Assessment and Preparation. Patient Assessment: Each patient's clinical condition, the surrounding physical environment, and the optimal timing for intervention were evaluated. Eligibility required that patients be conscious, hemodynamically stable, capable of communication via body language, written language, or speech, and receptive to receiving humanistic nursing care. Dosages of sedative and analgesic agents were adjusted as clinically appropriate.

Environmental optimization: Adjustments were made to ensure suitable temperature and humidity levels. Alarm parameters were standardized to reduce unnecessary noise.

Timing considerations: Interventions were scheduled during periods without active treatment or diagnostic procedures to minimize interruptions.

Nurse preparation: Nurses received standardized training in narrative nursing principles and humanistic care theory and skills.

Material preparation: Documentation materials included a blank narrative nursing log and a pen, used by nurses to record observations and narrative interactions.

Humanistic Care Implementation Process. Attention: Medical records were reviewed prior to interaction. Nurses assessed any immediate sources of physical discomfort, such as pain, thirst, or hunger, and inquired about psychological concerns including anxiety and fear. Positive developments in the patient's clinical condition were highlighted, and open communication was initiated using active listening techniques to explore and address emotional needs.

Understanding: Empathy was demonstrated by considering each patient's unique context, including their clinical condition, family dynamics, educational background, religious beliefs, and personal interests.

Timely reflection: Positive emotional responses from the patient were explored to identify their underlying causes. This reflective analysis guided the selection of appropriate, individualized nursing interventions.

Timely response: Narrative nursing strategies were applied to enhance positive physiological and psychological responses. Patients were encouraged to recall meaningful past experiences, engage in positive behaviors, or reflect on successful treatment outcomes. For issues requiring further input, support was sought from physicians or family members. If immediate resolution was not feasible, a delayed response strategy was planned.

Delayed response: Unresolved patient concerns were addressed using evidence-based approaches, such as targeted literature review or expert consultation. Additional input from physicians and family members was incorporated as needed to ensure comprehensive follow-up.

Reflection: The overall effectiveness of the humanistic care process was evaluated and areas for improvement were identified.

Precautions During Implementation. Privacy protection: Patient confidentiality was strictly maintained. Each communication session was limited to approximately 15 minutes and adjusted according to the patient's clinical status and tolerance.

Nonverbal communication: Nurses closely observed patients' facial expressions and body language during interactions. Supportive nonverbal behaviors, including appropriate eye contact and gestures, were used to facilitate connection.

Emergency management: If signs of emotional distress or clinical deterioration were observed, the session was terminated immediately, and appropriate medical or psychological interventions were initiated.

Intervention Group Protocol

Participants in the intervention group received narrative nursing interventions using the structured narrative nursing log, in addition to routine care.

Preparation Stage. Nurses adjusted the surrounding environment and ensured they were in an appropriate mental and physical state prior to initiating the intervention. Attention was given to patient-specific information, including family and cultural background, to facilitate more effective communication. Special medications prescribed to the patient were reviewed, and medication management, preparation, and replacement were completed in advance.

Implementation Stage. Issues that could not be addressed immediately were documented, and external support was sought promptly to ensure adequate preparation for subsequent nursing care. During narrative interactions, patient inquiries were addressed from the patient's perspective as much as possible. Efforts were made to help patients develop a positive coping style by referencing relevant examples or case experiences.

Evaluation Stage. Patients' existing physical and psychological problems were assessed objectively and in a timely manner.

Evaluation Indicators

Self-Rating Anxiety Scale

The Chinese version of the Generalized Anxiety Disorder 7-item scale (GAD-7), originally developed by Spitzer et al based on the diagnostic criteria of the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (DSM-IV), was used to assess anxiety symptoms in study participants.[10] This brief self-assessment tool consists of seven items, each rated on a four-point Likert scale: 0 = "not at all" 1 = "several days" 2 = "more than half the days" and 3 = "nearly every day."

In a study by Wang et al, the Chinese version of the GAD-7 was validated among hospitalized patients in general hospitals across China.[11] The correlation coefficient between individual items and the total score ranged from 0.734 to 0.820. The Cronbach's α coefficient was 0.90, indicating strong internal consistency and reliability of the instrument in the Chinese clinical context.

Caring Behavior Scale

The Caring Behavior Scale, developed by Chaojin et al, consists of three dimensions and corresponding items: Respect and Connection (Items 1, 2, 3, 4, 5, 6, 7, 8, 13, 14), Knowledge and Skills (Items 9, 10, 11, 12, 23), and Support and Assurance (Items 15, 16, 17, 18, 19, 20, 21, 22, 24).[12]

The scale demonstrated high internal consistency, with a Cronbach's α coefficient of 0.959 for the total scale. The Cronbach's α coefficients for the three dimensions were 0.897, 0.906, and 0.928, respectively, indicating strong reliability and validity.

Time Spent on Narrative Nursing

The duration of time nurses dedicated to narrative nursing during each shift was used as an indicator to evaluate the implementation efficiency of the structured narrative nursing log. This information was extracted from the completed narrative nursing logs. A comparative analysis was conducted to assess differences in time allocation between the intervention and control groups.

The time spent per patient per shift was calculated using the following formula:

Time per patient = total time spent on narrative nursing for the patient / number of narrative nursing sessions (Sessions were determined by the number of completed entries in the narrative nursing log).

Nurses' Professional Fulfillment Self-Rating Scale

The Nurses' Professional Fulfillment Scale, developed by Jing et al, comprises of 29 items distributed across 5 dimensions: positive professional perception, nurse-patient relationship, family and friends' recognition, team belonging, and personal growth. The scale employs a Likert 5-point scoring system (1 = strongly disagree, 5 = strongly agree), with total scores ranging from 29 to 145.[13] Higher scores reflect greater levels of professional fulfillment.

The scale demonstrated strong internal consistency, with a Cronbach's α coefficient of 0.958 for the overall questionnaire. The Cronbach's α coefficients for the individual dimensions ranged from 0.821 to 0.893, indicating good reliability and validity.

Quality Control of the Implementation Process

Prior to the commencement of the study, all researchers involved in the intervention received standardized training to ensure consistency in intervention delivery and uniformity in data collection procedures.

Patient anxiety levels were assessed using the GAD-7 upon regaining consciousness and again prior to discharge. Nurses' professional fulfillment was evaluated using the Nurses' Professional Fulfillment Scale after completion of the intervention in both the control and intervention groups. Time spent on narrative nursing was recorded in the structured narrative nursing log.

All patient- and nurse-completed evaluation instruments were administered on-site and collected immediately to preserve data integrity. Upon study completion, all collected data underwent a verification process through double-checking before final entry to ensure accuracy.

Statistical Methods

Excel and SPSS 26.0 were used for data collection and analysis. Normally distributed measurement data are expressed as mean ± standard deviation ($\bar{x} \pm s$). Intergroup comparisons were conducted using independent samples *t*-tests, while intragroup comparisons were conducted using paired samples *t*-tests.

Categorical data are reported as frequencies and percentages (%), with intergroup comparisons analyzed using chi-squared tests and Wilcoxon rank-sum tests, as appropriate. A p-value < 0.05 was considered statistically significant.

Results

Comparison of General Characteristics Between Groups

A total of 105 patients were initially recruited for the study, with 54 assigned to the control group and 51 to the intervention group. Due to changes in patient conditions, including clinical deterioration, transfers, or discharge, the final sample comprised 46 patients in the control group and 44 in the intervention group (Figure S1).

No statistically significant differences were found between the two groups in terms of baseline demographic or clinical characteristics ($p > 0.05$). Detailed comparisons are provided in Table 3.

Table 3 Comparison of General Characteristics Between Groups (n = 90)

Item	Control Group (n = 46) (%)	Intervention Group (n = 44) (%)	Statistical Value (x^2/Z)	*p* value
Sex				
Male	27(56.8)	28(64.3)		
Female	19(43.2)	16(35.7)		
Degree of Education			−0.679[a]	0.479
Elementary school and below	11(25.0)	7(14.3)		
Junior high school	11(22.7)	13(40.5)		
High school or Vocational school	16(31.8)	14(26.2)		
College degree or above	8(20.5)	10(19.0)		
Artificial airway condition			−0.230[a]	0.818
N/A	20(36.4)	18(30.9)		
Endotracheal intubation	20(50.0)	20(54.8)		
Tracheotomy	6(13.6)	6(14.3)		
Do you have underlying diseases?			1.500[b]	0.221
Yes	29(65.9)	33(76.2)		
No	17(34.1)	11(23.8)		

(*Continued*)

Table 3 (Continued).

Item	Control Group (n = 46) (%)	Intervention Group (n = 44) (%)	Statistical Value (x^2/Z)	*p* value
Main caregiver			−0.917[a]	0.359
Spouse	27(56.8)	25(54.7)		
Father and mother	5(11.4)	8(16.7)		
Children	14(31.8)	11(28.6)		
Age (years)	42.96±11.33	41.98±13.84	0.368[c]	0.714
ICU length of stay (d)	14.70±4.03	15.16±4.75	−0.499[c]	0.619
Intervention days (d)	10.09±3.04	9.36±2.55	1.220[c]	0.226

Notes: [a]: Rank sum test; [b]: chi-squared test; [c]: *t*-test.

Comparison of Anxiety and Perceived Caring Scores Before and After Intervention

Following the implementation of the structured narrative nursing log, patients in the intervention group demonstrated significantly lower anxiety scores and a higher perceived sense of caring compared to those in the control group. In particular, scores related to the dimensions of *Respect and Connection* and *Support and Assurance* were significantly higher in the intervention group. Detailed data are presented in Table 4.

Table 4 Comparison of Anxiety and Perceived Care Scores Before and After Intervention (Score, x ± s)

Group	Number of cases	Generalized Anxiety Disorder scale score		*t*-Values	*p*-Values
		Before intervention	After intervention		
Intervention group	44	15.26±1.44	9.39±1.79	21.957	<0.001*
Control group	46	15.35±1.32	12.41±1.51	11.020	<0.001*
t-values		0.414	8.663		
p-values		0.680	<0.001*		
Group	Number of cases	Caring Behavior Scale score		*t*-Values	*p*-Values
		Before intervention	After intervention		
Intervention group	44	95.66±3.47	103.84±3.52	−10.847	<0.001*
Control group	46	93.37±4.22	98.48±4.85	−9.377	<0.001*
t-values		2.805	5.977		
p-values		0.006*	<0.001*		
Group	Number of cases	Respect and Connection dimension score		*t*-Values	*p*-Values
		Before intervention	After intervention		
Intervention group	44	39.05±2.26	44.00±1.84	−12.486	<0.001*
Control group	46	38.89±1.83	41.65±2.09	−9.568	<0.001*
t-values		0.356	5.644		
p-values		0.722	<0.001*		
Group	Number of cases	Knowledge and Skills dimension score		*T*-Values	*p*-Values
		Before intervention	After intervention		
Intervention group	44	21.84±2.77	21.77±2.10	0.131	0.896
Control group	46	20.96±2.81	20.52±3.11	0.853	0.398
t-Values		1.502	2.226		
p-Values		0.137	0.029*		

(*Continued*)

Table 4 (Continued).

Group	Number of cases	Support and Assurance dimension scores		*t*-Values	*p*-Values
		Before intervention	after Intervention		
Intervention group	44	34.77±2.24	38.07±2.49	−9.469	<0.001*
Control group	46	33.52±4.22	36.30±4.85	−10.275	<0.001*
t-Values		2.532	3.594		
p-Values		0.013*	0.001*		

Note: * p <0.05.

Comparison of Time Spent on Narrative Nursing Between Groups

The average time spent on narrative nursing per session in the intervention group was 25.05 ± 1.94 minutes, which was significantly shorter than the 34.07 ± 3.93 minutes recorded in the control group (t = 13.709, p < 0.001). These results indicate that use of the structured narrative nursing log improved time efficiency in narrative nursing.

Comparison of Nurses' Professional Fulfillment Scores

Following implementation of the structured narrative nursing log, both the total professional fulfillment scores and the scores across all five dimensions in the intervention group increased compared to pre-intervention levels. Each dimension was assessed using a 5-point Likert scale, with response options ranging from 1 = strongly disagree to 5 = strongly agree. Respondents rated each item based on their individual perceptions and experiences. Detailed results are provided in Table 5.

Discussion

Scientific Validity and Practicality of the Structured Narrative Nursing Log for Conscious Patients in the ICU

A structured narrative nursing log for use with conscious patients in the ICU was developed in this study, guided by narrative nursing theory. The development process included a comprehensive literature review, group brainstorming sessions, and two rounds of expert consultation.

Experts involved in the Delphi consultation were affiliated with tertiary hospitals or public universities, held associate senior professional titles or above, and possessed over 10 years of relevant clinical, managerial, or academic experience. Their contributions were grounded in both theoretical knowledge and practical expertise.

The response rate for both consultation rounds was 100%, and the authority coefficient was calculated at 0.880, indicating high reliability of expert judgment. The coefficients of variation ranged from 0.047 to 0.228 in the first round and from 0.068 to 0.222 in the second round, remaining within acceptable limits (p < 0.25). Kendall's coefficients of concordance were 0.322 and 0.369 for the first and second rounds, respectively (both p < 0.001), reflecting good agreement among experts.

Table 5 Comparison of Nurses' Professional Fulfillment Scores Before and After Using Narrative Nursing Logs (Points, x ± s)

Dimension	**Before Use**	**After Use**	***T*-Values**	***p*-Values**
Total score	117.77±3.37	127.02±4.04	−13.958	<0.001*
Positive professional perception	20.65±1.48	22.93±0.80	−10.625	<0.001*
Nurse-patient relationship	22.98±1.46	25.26±1.45	−12.647	<0.001*
Family and friends' recognition	29.51±2.46	31.35±1.34	−4.602	<0.001*
Team belonging	20.93±1.62	22.30±1.46	−8.786	<0.001*
Personal growth	23.70±1.08	25.19±2.62	−3.565	0.001*

Note: * p <0.05.

The final version of the structured narrative nursing log is comprehensive, user-friendly, and well-aligned with the clinical narrative process. It offers clearly defined guidance and precautions for each stage of implementation. These attributes support the scientific rigor and clinical applicability of the log as a tool for structured, humanistic care delivery in ICU settings.

Use of the Structured Narrative Nursing Log Reduces Anxiety and Enhances the Sense of Care Among Conscious Patients in the ICU

The perceived sense of care is a critical aspect of the hospitalization experience for conscious patients in the ICU. Owing to factors such as the severity of illness, intensive treatment regimens, the restrictive hospital environment, and limited communication with healthcare staff, these patients are particularly vulnerable to psychological distress, including anxiety and fear. Such emotional responses may diminish their sense of being cared for. Implementation of targeted humanistic care interventions that address these psychological challenges has been shown to enhance patient coping mechanisms and increase confidence in managing illness, as supported by Li et al.[14]

In this study, anxiety levels in the intervention group were significantly lower than those in the control group ($p < 0.001$), indicating that the structured narrative nursing log effectively enhanced the impact of narrative nursing interventions and contributed to the alleviation of anxiety. Furthermore, patients in the intervention group reported a significantly higher sense of care compared to those in the control group. These individuals perceived stronger emotional connections with nursing staff and reported greater feelings of respect and support. The structured log, grounded in narrative nursing principles, not only safeguards patient safety and ensures the quality of care but also facilitates the delivery of precise and individualized humanistic nursing.

Previous studies have demonstrated that standardized and personalized narrative nursing interventions for critically ill patients improve their understanding of their condition, support psychological adjustment, and strengthen their confidence in health management.[14,15] In addition, the narrative nursing log serves as an effective communication tool, fostering emotional engagement between patients and nurses.[16,17] Through the use of this structured approach, nurses are able to simultaneously attend to patients' physiological needs and psychological well-being, thereby ensuring holistic care.

The structured narrative nursing log also provides nurses with a procedural framework that outlines key components of narrative care. This structure supports the systematic identification, management, and evaluation of patient concerns. In clinical practice, nurses who prioritize the emotional states and individual needs of patients can respond more effectively to complex and evolving care situations. These findings highlight the adaptability and practical value of the structured narrative nursing log in diverse ICU care contexts.

Use of the Structured Narrative Nursing Log Improves Nursing Efficiency and Enhances Professional Fulfillment

The results of this study indicate that nurses in the intervention group spent significantly less time on narrative nursing following the implementation of the structured narrative nursing log, while concurrently reporting higher professional fulfillment scores. The structured log contributed to enhanced positive professional perception, improved nurse–patient relationships, and promoted personal and professional growth. By facilitating the systematic identification of psychological factors influencing patients, the log streamlined the narrative nursing process, standardized the structure and quality of care, and enabled the efficient delivery of high-quality narrative nursing within time-limited clinical settings. This efficiency reduced the emotional burden on patients while enhancing the perceived value and satisfaction of nurses in their professional roles.[18]

Moreover, the structured narrative nursing log required nurses to perform comprehensive assessments and interventions at each stage of the process—before, during, and after implementation. This ensured that patient concerns were addressed thoroughly and systematically. The approach is consistent with a patient-centered, humanistic model of care. In addition, the log encouraged nurses to develop empathy, consider the emotional and psychological needs of patients, and apply principles of positive psychology during communication and problem-solving. These aspects reinforced the role of narrative nursing as a meaningful and impactful clinical practice.[19]

In summary, the preliminary clinical application of the structured narrative nursing log was associated with improved nursing efficiency and enhanced professional fulfillment among nurses, underscoring its practical value and potential for broader implementation in ICU settings.

Conclusion

Guided by narrative nursing theory and developed through a combination of literature review, brainstorming sessions, and Delphi expert consultation, a structured narrative nursing log was designed for use with conscious patients in the ICU. The log demonstrated scientific rigor, expert consensus, and clinical practicality.

Preliminary clinical application indicated that the log was effective in reducing patient anxiety, enhancing the perceived sense of care during hospitalization, improving the efficiency of narrative nursing, and significantly increasing nurses' sense of professional fulfillment.

However, this study had several limitations. It was conducted in a single-center setting with a relatively small sample size. The evaluation measures were not exhaustive, and patients with delirium were excluded, which may limit the generalizability of the findings. Future studies should aim to further classify patients by disease type and consider the inclusion of individuals with varying levels of consciousness. Additionally, the feasibility of adapting the structured narrative nursing log into an electronic documentation system warrants further investigation. Large-scale, multicenter studies are recommended to comprehensively assess the clinical effectiveness and broader applicability of this structured intervention.

Data Sharing Statement

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

Ethics Approval and Consent to Participate

This study was conducted with approval from the Ethics Committee of Nantong First People's Hospital (No.2022KT132). This study was conducted in accordance with the declaration of Helsinki. Written informed consent was obtained from all participants.

Author Contributions

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

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Disclosure

The authors declare that they have no conflicts of interest regarding this work.

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