Research Square

Preprints are preliminary reports that have not undergone peer review.
They should not be considered conclusive, used to inform clinical practice,
or referenced by the media as validated information.

Disenfranchised Grief: Emergency Department Nurses' Experiences of Suicide Deaths Among Children and Adolescents : A Qualitative Study

Danni Yu
Hangzhou Hospital of Traditional Chinese Medicine
Lina Zhang
Hangzhou Hospital of Traditional Chinese Medicine
Mingna Fan
Hangzhou Hospital of Traditional Chinese Medicine
Xueyan Huang
Hangzhou Hospital of Traditional Chinese Medicine
Lumeng Lu
Hangzhou Hospital of Traditional Chinese Medicine
li Zhu
Hangzhou Hospital of Traditional Chinese Medicine
Liyang Chang
Hangzhou Hospital of Traditional Chinese Medicine
Haifang Zhou
13376832727@163.com

Hangzhou Hospital of Traditional Chinese Medicine

Research Article

Keywords: Emergency department nurses, child and adolescent suicide deaths, qualitative descriptive study, occupational grief, bereavement care, occupational mental health

Posted Date: November 23rd, 2026

DOI: https://doi.org/10.21203/rs.3.rs-11293488/v1

License: This work is licensed under a Creative Commons Attribution 4.0 International License.
Read Full License

Additional Declarations: No competing interests reported.

Disenfranchised Grief: Emergency Department Nurses' Experiences of Suicide Deaths Among Children and Adolescents : A Qualitative Study

Danni Yu[a], Lina Zhang[a], Mingna Fan[a], Xueyan Huang[a], Lumeng Lu[a], Li Zhu[a], Liyang Chang[a*], Haifang Zhou[a*]

[a] Hangzhou Hospital of Traditional Chinese Medicine,Hangzhou, Zhejiang,China

Corresponding author :

Haifang Zhou E-mail:13376832727@163.com(Primary corresponding author)

Liyang Chang E-mail:changliyang@163.com(Co-corresponding author)

Background: Suicide among children and adolescents has emerged as a major global public health concern. As frontline professionals involved in resuscitation, death management, and family support, emergency department nurses may experience substantial occupational emotional burden following these events. However, nurses' experiences following suicide deaths among children and adolescents remain insufficiently understood, particularly within cultural contexts where suicide-related loss may be difficult to openly acknowledge.

Methods: A qualitative descriptive study design was adopted. Semi-structured interviews were conducted with 16 emergency department nurses from three tertiary hospitals in Zhejiang Province, China. Participants were recruited using purposive sampling combined with snowball sampling. Data were analyzed using thematic analysis.

Results: Three overarching themes were identified: (1) emotional impact—nurses experienced profound initial emotional and sensory responses, followed by grief, helplessness, guilt, persistent recollection, and emotional distress; participants who were parents described particularly strong emotional involvement; (2) cognitive reconstruction—through reflection on these events, nurses developed greater empathy toward bereaved families, gained more nuanced understandings of suicidal behavior, reconsidered their own family and parenting beliefs, and expanded their professional roles; and (3) practical dilemmas—nurses encountered challenges related to their

competence in pediatric emergency care, communication with bereaved families, and ethical decision-making during resuscitation. These challenges reflected the need for enhanced professional training and organizational support within emergency care settings.

Conclusion: Suicide deaths among children and adolescents represent highly challenging clinical events that may evoke significant emotional distress, trauma-related responses, and changes in emergency department nurses' professional perspectives. These findings highlight the need for structured occupational psychological support, targeted competency-based education, and humanistic care strategies to support nurses involved in suicide-related emergency care and improve care for bereaved families.

Patient or Public Contribution

Patients and members of the public were not involved in the design, conduct, a nalysis, or reporting of this study.

Keywords: Emergency department nurses; child and adolescent suicide deaths; qualitative descriptive study; occupational grief; bereavement care; occupational mental health

Introduction

Suicide among children and adolescents constitutes a grave global public health crisis. The United Nations Children's Fund's The State of the World's Children 2021 reported[1] that suicide is the fifth leading cause of death among individuals aged 10–19 years worldwide. In China, suicide is the third leading cause of death in this age group[2]. Falls from height, pesticide poisoning, and medication overdose are among the most common lethal methods of suicide[3]. In recent years, escalating academic competition and psychological pressure accompanying rapid social development have also contributed to a gradual increase in suicide mortality among younger children[4][5]. Suicide deaths among children and adolescents represent a profound disruption of

expected developmental trajectories and may impose substantial emotional burdens on families and healthcare professionals.[6].The suicide of a child may engender profound and enduring grief in parents and markedly increase their risk of posttraumatic stress responses and suicidal behavior[7]. For professionals, such events may constitute a form of "second-victim trauma." Research has demonstrated that ambulance personnel[8], mental health professionals[9], and other occupational groups experience substantial psychological distress following work-related exposure to suicide, with the severity of trauma comparable to that experienced by individuals bereaved by suicide[10].

The emergency department is typically the first point of hospital contact following a suicide event occurring outside the hospital. In China, individuals with suspected suicide attempts are generally transported to hospital emergency departments when death has not been confirmed or when resuscitation remains possible. Therefore, emergency department nurses are often directly involved in resuscitation efforts and the initial support of bereaved families following suicide deaths. The American Academy of Pediatrics has emphasized that the death of a child in the emergency department presents challenges across emotional, cultural, procedural, and legal domains[11].Nurses are likely to experience repeated occupational exposure to suicide throughout their careers and must simultaneously undertake trauma resuscitation[12], end-of-life care, and emotional support for family members.Consequently, nurses may experience emotional distress, grief responses, and occupational challenges, highlighting the need to better understand their experiences and support needs following suicide deaths among children and adolescents[13][14], placing them at considerable risk of occupational mental health problems. At the same time, as direct witnesses to resuscitation and death, nurses' clinical observations and subjective experiences offer an irreplaceable perspective from which to understand the emergency management of suicide among children and adolescents.

Existing research on death in emergency settings has predominantly focused on terminal illness, accidental injury, and pediatric palliative care[15][16][17], with limited in-depth examination of suicide deaths among children and adolescents. Studies of

suicide exposure have similarly concentrated largely on bereaved families, and there remains limited qualitative evidence regarding how emergency department nurses experience, respond to, and cope with suicide deaths among children and adolescents, particularly within the Chinese cultural and healthcare context.[18][19].Moreover, research on suicide among adolescents has primarily emphasized intervention and prevention following suicide attempts[20], whereas the impact of suicide death has not received comparable scholarly scrutiny.Against this background, the present study adopted a qualitative descriptive design to explore emergency department nurses' experiences, challenges, and support needs following suicide deaths among children and adolescents.This study sought to answer the following questions: How do emergency department nurses experience and understand the suicide deaths of children and adolescents? How do these experiences influence nurses' emotional responses, perceptions of families, professional roles, and clinical practice?The findings aim to inform the development of occupational mental health support systems for emergency department nurses and the optimization of emergency care pathways for children and adolescents affected by suicide.

Aim, objectives, and research question

Aim

This study aims to explore the experiences, challenges, and support needs of emergency department nurses in China following suicide deaths among children and adolescents.

Objectives

1.To explore the emotional responses and occupational grief experiences of emergency department nurses following suicide deaths among children and adolescents.
2.To explore changes in emergency department nurses' perceptions of suicidal behavior, bereaved families, and their professional roles following these events.
3.To identify the clinical challenges and professional difficulties encountered by emergency department nurses when caring for children and adolescents who died by

suicide.

4.To explore how suicide deaths among children and adolescents influence nurses' emotional responses, clinical practice, and professional development.

Research question

What are the experiences, challenges, and support needs of emergency department nurses in China following suicide deaths among children and adolescents?

In summary, by exploring the experiences, challenges, and support needs of emergency department nurses following suicide deaths among children and adolescents, this study expands current understanding of the occupational and clinical difficulties faced by frontline nurses involved in these critical events. Through an examination of nurses' emotional responses, changing perceptions, and clinical challenges, this study provides evidence to inform nursing education, clinical management, and occupational mental health support policies. Ultimately, the findings aim to inform the development of support strategies that strengthen clinical responses to suicide deaths among children and adolescents while promoting compassionate care and protecting emergency department nurses' psychological well-being.

Methods

Design

A qualitative descriptive design was adopted to explore the experiences, challenges, and support needs of emergency department nurses following suicide deaths among children and adolescents. A qualitative descriptive approach was selected because it is appropriate for exploring clinical experiences and perspectives while maintaining close connections with participants' descriptions of real-world practice. This approach is particularly suitable for examining complex healthcare experiences where understanding nurses' perceptions, challenges, and support needs is essential for informing clinical practice.

Emergency department nurses are involved throughout the entire process of suicide-related emergency care, including resuscitation, communication with bereaved

families, and post-event management. Therefore, they have direct experiences of these critical events and can provide valuable insights into the emotional and clinical challenges associated with caring for children and adolescents who die by suicide. Their experiences provide clinically grounded perspectives for understanding the challenges faced by nurses following suicide deaths among children and adolescents and for informing the development of appropriate psychological and professional support systems.

This approach also enables exploration of nurses' professional experiences and emotional responses, providing a comprehensive understanding of how suicide deaths among children and adolescents are encountered within emergency nursing practice.

Study setting and participants

Participants were recruited between March 2025 and March 2026 from three tertiary Grade A hospitals in Zhejiang Province, China, using purposive sampling combined with snowball sampling. Participants were selected to ensure diversity in clinical experience and exposure characteristics related to suicide deaths among children and adolescents.

The inclusion criteria were as follows: (1) currently employed as a clinical nurse; (2) at least 6 months of work experience in an emergency department; and (3) direct involvement in the emergency care of at least one child or adolescent who died by suicide within the six months preceding the participant's interview, including patients who were dead on arrival or died despite resuscitation efforts. Nurses undergoing standardized training, visiting nurses receiving advanced clinical training, and nurses temporarily assigned to the emergency department were excluded. Suicide-related circumstances were identified from information provided by family members or police at the time of emergency presentation, as reported by the participating nurses.

For recruitment, head nurses and nursing administrators were contacted to identify potentially eligible participants. Subsequently, participating nurses were invited to recommend colleagues who met the inclusion criteria and were willing to participate, facilitating additional recruitment through snowball sampling.

Data Collection

Data were collected through semi-structured interviews. Interviews were conducted between March 2025 and March 2026 during nurses' rest periods in a private demonstration room within the emergency department with individual interview sessions lasting 41–62 minutes. Prior coordination with the department ensured that the room was exclusively available during scheduled interview sessions. Only the researcher and participant were present during each interview to minimize external interruptions and maintain privacy and psychological safety.

Before each interview, participants were informed about the study objectives, interview procedures, and the intended use of audio recordings. Written informed consent was obtained before audio recording commenced. All interviews were audio-recorded and transcribed verbatim, and the researcher reviewed each transcript against the corresponding recording to ensure accuracy.

Data collection and analysis were conducted iteratively. Following each interview, the research team reviewed the transcripts, performed preliminary coding, and discussed emerging categories and patterns. Recruitment continued until subsequent interviews no longer generated substantial new information relevant to the research objectives. Ultimately, 16 emergency department nurses were included in the study.No eligible nurses who were invited to participate declined, and no participants withdrew from the study.

Although an interview guide was developed in advance, the semi-structured format allowed flexibility throughout the interview process. The interviewer adjusted the sequence and wording of questions according to participants' narratives and used probing questions to clarify or further explore issues raised by participants. These follow-up questions focused on emotional responses, clinical challenges, professional perceptions, and support needs while ensuring that all core topics outlined in the interview guide were addressed.Although eligibility required a relevant experience within the preceding six months, participants could also discuss earlier related experiences to provide context for their accounts.

One participant had experienced a suicide death involving a child or adolescent within

the preceding 10 days. During the interview, the participant became tearful and showed signs of emotional distress on several occasions. To prioritize the participant's emotional well-being, the interview was temporarily discontinued. The researcher subsequently contacted the participant, and the decision to resume the interview one week later was made collaboratively based on the participant's willingness and emotional readiness to continue. The follow-up interview was conducted only after the participant confirmed that they felt comfortable proceeding.

All interviews were conducted independently by the same female researcher. The interviewer held a master's degree, had received systematic training in qualitative research methods during her postgraduate studies, and had experience conducting qualitative interviews. At the time of the study, the interviewer worked in nursing administration and had three years of clinical nursing experience in the emergency department and three years of nursing administrative experience.The interview guide was developed based on a review of relevant literature and multiple rounds of discussion within the research team, which included two master's supervisors, one emergency department head nurse, and one associate chief nurse.

The final interview guide included the following questions:

1. Please describe an experience of caring for a child or adolescent who died by suicide in the emergency department. What happened during the event, and how did you respond emotionally and professionally?
2. How has caring for children and adolescents who died by suicide influenced your understanding of suicidal behavior and your interactions with their families?
3. What challenges did you encounter when managing these events, including clinical care, communication, and decision-making? How did you respond?
4. How did this experience influence your emotions, professional perspectives, and clinical practice?
5. What types of support do you need when caring for children and adolescents who die by suicide? What improvements are needed in current support systems?

Data Analysis

All audio recordings were transcribed verbatim within 24 hours after each interview. Meaningful pauses, crying, emotional expressions, and repeated statements were retained during transcription to preserve participants' emotional responses and contextual information. The researcher reviewed each transcript against the corresponding audio recording to ensure accuracy. When presenting quotations in the manuscript, semantically irrelevant fillers and repetitions were removed appropriately without altering participants' intended meanings.

Data were analyzed using thematic analysis within a qualitative descriptive approach, with attention to participants' accounts of their experiences, perceptions, and clinical challenges. Data collection and analysis proceeded iteratively. Following each interview, the researchers reviewed the transcript and undertook preliminary coding. Newly collected data were compared with previously analyzed accounts to refine codes and developing themes.

Two researchers were primarily responsible for the analysis: the interviewer, who had clinical experience in emergency nursing and postgraduate training in qualitative research, and a nursing educator with experience in qualitative research. Both had received formal training in qualitative methods. They independently read the transcripts and assigned initial codes to meaningful segments relevant to the research question. They then compared their coding and discussed differences in interpretation with reference to the original transcripts, agreeing on how the coded material should be organized.

Related codes were grouped into broader categories, from which preliminary themes were developed. The researchers repeatedly reviewed these themes against the original transcripts and refined them through discussion within the research team. The final thematic structure was agreed upon by the team, and supporting quotations were selected to illustrate the findings. Coding and data organization were performed manually.

Rigor

Multiple strategies were employed to enhance the credibility, dependability, and

confirmability of the study. Detailed records were maintained throughout the research process, including participant recruitment, data collection, coding, and theme development, to ensure methodological transparency and facilitate auditability.

The interviewer was a nurse researcher with clinical experience in emergency nursing and was familiar with the emergency care context. Although the interviewer had not personally encountered cases involving child or adolescent suicide deaths, her clinical background could potentially influence expectations regarding nurses' emotional responses and professional challenges. To enhance reflexivity, the interviewer documented personal assumptions before data collection and maintained reflexive notes throughout the interview and analytical processes. These notes were used to critically reflect on how the researcher's professional background and perspectives might influence data collection and interpretation.

To strengthen the credibility of the analysis, two researchers independently reviewed the transcripts and conducted initial coding. Regular discussions were conducted throughout the analytic process to examine differences in interpretation, refine themes, and maintain consistency between the emerging themes and the original data. A researcher without an emergency nursing background also participated in reviewing the developing themes to provide an additional perspective and enhance analytic balance.

Following the development of the preliminary themes, Two original interview participants—an emergency department head nurse and a clinical nurse educator—reviewed the preliminary themes and supporting interview excerpts and provided feedback on whether the interpretations reflected their experiences and perspectives. Their feedback was considered when refining the findings. Subsequently, their respective full interview transcripts were also returned to them for review and correction.

Ethical Considerations

All study procedures, including participant recruitment, informed consent, data collection, and data management, were conducted in accordance with the principles of

the Declaration of Helsinki. The study protocol was approved by the Ethics Committee of Hangzhou Hospital of Traditional Chinese Medicine (approval No. 2025KLL189). Before each interview, participants were informed of the study objectives, procedures, potential emotional discomfort associated with discussing suicide-related experiences, and their right to withdraw from the study at any time without consequences. Written informed consent was obtained from all participants before data collection.

Given the sensitive nature of suicide-related experiences, particular attention was paid to participants' emotional well-being during the interviews. Interviews were paused or discontinued when participants showed signs of emotional distress, and participants were provided with the opportunity to decide whether and when to continue.

All data were encrypted and stored on a password-protected computer accessible only to authorized members of the research team. To protect participants' privacy and confidentiality, all personally identifiable information was removed during data processing, and numerical pseudonyms were assigned during data analysis and reporting.

Results

Participant Characteristics

A total of 16 emergency department nurses participated in this study. The mean age of participants was 34 years (range: 26–44 years). Fourteen participants were female and two were male. The mean duration of total nursing experience was 11.25 years (range: 3–19 years), and the mean duration of emergency department experience was 10.13 years (range: 3–19 years). One participant was an emergency department head nurse, two were clinical nurse preceptors in the emergency department, and two had experience in nursing education. Detailed demographic characteristics are presented in Table 1.

Table 1. Demographic characteristics of the participants (N = 16).

Characteristic	n (%)
Age (years), mean (range)	34 (26–44)
Sex	

Characteristic	n (%)
Female	14 (87.50)
Male	2 (12.50)
Highest educational qualification	
Master's degree	2 (12.50)
Bachelor's degree	14 (87.50)
Professional title	
Associate chief nurse	3 (18.75)
Nurse-in-charge	6 (37.50)
Senior nurse	7 (43.75)
Years of emergency department experience	
0–5 years	2（12.50）
6–10 years	7（43.75）
11–15 years	4（25.00）
16-20 years	3（18.75）
Marital status	
Married	11(68.75)
Unmarried	5(31.25)
Childbearing status	
With children	9（56.25）
Without children	7（43.75）

Findings

Three interrelated themes emerged—emotional impact (Theme 1), cognitive reconstruction (Theme 2), and practical dilemmas (Theme 3)—with empathy permeating these dimensions. Together, these themes reflect an overarching experience: a complex professional experience at the intersection of grief and professional responsibility, in which psychological distress and professional growth may coexist. Figure 1 illustrates this conceptual framework.

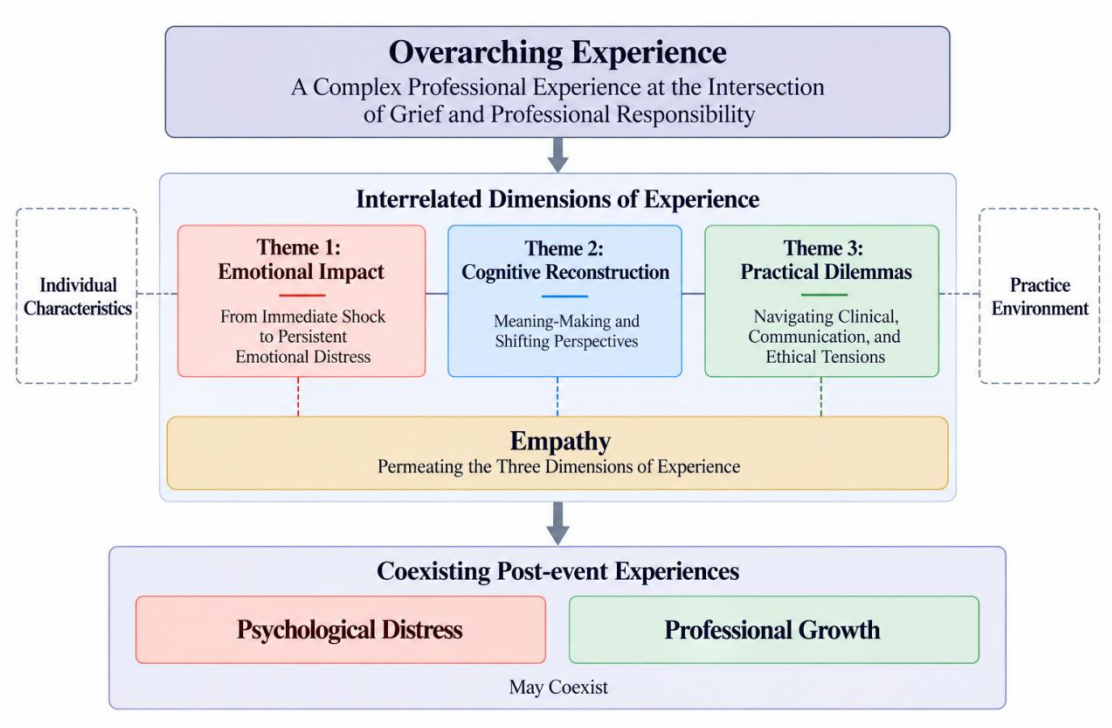


Fig. 1. Conceptual framework of emergency department nurses' experiences following child and adolescent suicide deaths. Solid boxes represent the three interrelated themes, while dashed boxes indicate contextual influences.

Theme 1: Emotional Impact: Multidimensional Emotional Impact of an Ext raordinary Event

Participants described a dynamic emotional process following suicide deaths among children and adolescents. Their experiences involved immediate shock and distress, followed by grief, helplessness, guilt, and persistent emotional responses as they attempted to process these events within their professional roles.

Sub-theme 1a: Profound Initial Emotional and Sensory Responses

Critical moments in participants' encounters with children and adolescents who died by suicide, including prehospital notification and initial contact with the patient, triggered intense emotional and sensory responses.

Several participants described the impact of these events through vivid cognitive and bodily sensations, such as "my mind went completely blank," "it felt like an electric shock," and "I got goosebumps." N6 recalled the striking visual impact of seeing a

child with severe facial cyanosis: “The child’s face was dark blue. The visual impact when I first saw him was overwhelming.” N14 described a marked emotional response upon receiving the prehospital emergency notification: “My mind went completely blank, and my heart immediately started racing.” The particular vulnerability of children and adolescents further intensified participants’ emotional responses. N10 stated: “I got goosebumps right away. It felt entirely different from seeing an adult.”

Sub-theme 1b：Complex Emotional Experiences

(1) Sorrow and grief

Participants used terms such as “a pity,” “heartbreaking,” “pitiful,” “distressing,”and “sorrowful” to describe their emotional responses, generally perceiving suicide among children and adolescents as a tragedy that should never have occurred. N11 stated: “What I felt most profoundly was a sense of loss. It was such a tragedy, especially because many of these children were academically outstanding.” Participants clearly distinguished their emotional responses to the deaths of children and adolescents from those elicited by other deaths. N10 explained:“Resuscitating a child feels entirely different from resuscitating anyone else. There is an indescribable sense of loss.” Some participants described suicide deaths among children and adolescents as a disruption of what they perceived as the expected trajectory of childhood and development. N14 stated: “He had no underlying illness; he was a physically healthy child. He should never have been lying here.”

(2) Helplessness and guilt

Participants felt a heightened sense of responsibility and a stronger desire to save children and adolescents; consequently, they experienced a more profound sense of helplessness when resuscitation was deemed futile or ultimately unsuccessful. N8 stated: “Compared with adults, I felt a stronger desire to save her.” Some participants described feelings of personal responsibility or regret. N10 explained: “I felt utterly helpless. We had managed to save so many people, yet we could not save this child. I felt that I should have been able to bring him back, but I failed.”Some participants had

previously been involved in treating the same patient following an episode of self-harm or a suicide attempt. When subsequently confronted with the patient's death by suicide, they experienced an even deeper sense of futility. N9 recalled: "This girl had come in for gastric lavage only the day before… Then she attempted suicide again the following day, and we could not save her. I have never forgotten her."

One participant described a patient whom she had personally helped resuscitate and who, over a two-year period beginning at the age of 14, had repeatedly engaged in self-harm and suicide attempts, including medication overdose, jumping from a building, and wrist cutting, before ultimately dying after jumping from a building. N11 stated: "I had continued to follow his situation, and I repeatedly asked myself: Why, in the end, was he still unable to escape such an outcome?"

Sub-theme 1c: Persistent Recollection and Emotional Distress

Participants frequently recalled details of these events after returning to their daily lives, particularly the patients' young ages and the circumstances surrounding their deaths. The interviews revealed that participants retained vivid memories of the patients' young ages—"he was only 9 years old," "a 10-year-old child," "a 13-year-old girl," and "only 18 years old." The repeated emphasis on patients' young ages highlighted the distinctive emotional meaning attached to these events and illustrated how the deaths of children and adolescents could remain psychologically salient for some nurses. Some participants reported that recalling these events precipitated feelings of sadness. N10 stated: "After work, when I was sitting at home, I would think back on what had happened and find myself overcome by an inexplicable sadness." Repeatedly revisiting details of the resuscitation process also disrupted sleep. N14 recalled: "After I returned home,I could not fall asleep. I kept thinking about the event and only managed to doze off briefly when it was almost dawn." Participants who were parents described stronger emotional connections with the deceased children.N5 stated: "For the next day or two, the incident would keep coming back to me from time to time. It was deeply distressing, especially because I have a child of my own."

Theme 2: Cognitive Reconstruction in the Aftermath of Tragedy

Participants' perceptions of suicidal behavior, bereaved families, and their own professional roles changed through reflection on these events. These cognitive changes influenced how nurses understood patients, families, and their responsibilities as healthcare professionals.

Sub-theme 2a: Bereaved Families: Scrutiny and Empathy

Participants initially tended to attribute suicide deaths to perceived shortcomings in family support, parental supervision, or caregiving.They scrutinized the emotions and behaviors of bereaved family members, expressing frustration toward what they perceived as insufficient parental support or protection. N12 stated: "Deep down, I still felt resentment toward them. Where were you before this happened? Why did you only start crying now?" N1 remarked: "How could they place an entire bottle of medication in the hands of a 13- or 14-year-old child with a history of suicide attempts?"

Some participants interpreted parents' denial of suicide as an expression of their difficulty accepting the loss. Participants interpreted this response as a form of maternal self-protection. N6 explained: "She repeatedly asked the police to clarify that her child had fallen accidentally rather than jumped from the building. Otherwise, she would feel that she had driven her child to this, and she would never be able to live with herself."

Beyond such scrutiny, participants also developed empathy upon recognizing the caregiving challenges faced by bereaved families, encompassing both emotional and cognitive empathy. Emotional empathy was manifested in the way family members' distress elicited corresponding emotional responses from participants. N6 stated: "When I saw the parents kneeling beside the child, crying and expressing their remorse… I could not help but cry with them." N11 recalled: "The boy who died by hanging was only in junior high school, about the same age as our head nurse's son. She cried while performing resuscitation."Cognitive empathy was reflected in

participants' recognition and understanding of family members' emotions, as well as in the dynamic evolution of their perceptions of the families. N12 explained: "Many of the parents had come from other provinces for work and had little formal education. They were struggling to make a living, so it was difficult to blame them." N13 stated: "His mother had resigned from her job and stayed with him throughout, yet this still happened."

Sub-theme 2b: Reconstructing Understandings of Suicidal Behavior

Following their experiences of suicide deaths among children and adolescents, participants underwent an ongoing cognitive reconstruction of suicidal behavior Participants described a shift from initially simple explanations of suicidal behavior toward more complex understandings. N11 stated: "Previously, I thought that when a child cut their wrists,they were simply trying to attract attention. Looking back now, I realize that they were actually sending a warning signal to those around them." Some participants proactively expanded their knowledge of mental health in an effort to better understand suicidal behavior. N7 explained: "Because incidents like these occur so frequently, I consulted psychiatrists to learn more about suicide."

Recognition of the potential influence of schools on adolescent mental health broadened participants' understanding of sources of stress beyond the family context. N6 stated: "The parents told us that the child had excellent academic performance, but the school had placed tremendous pressure on them." Participants held divergent views regarding suicide deaths among younger children. N12 believed that young children were not yet capable of fully comprehending the meaning of death: "Children aged 8 or 9 probably do not understand what death means. I think their actions are primarily impulsive." By contrast, N6 believed that young children could possess explicit suicidal intent and sufficient the ability to understand and make decisions regarding suicidal actions: "Children as young as 9 nowadays understand everything. He must genuinely have intended to jump from the building."

Although participants generally sought to understand the motivations underlying patients' suicidal behavior, the functional boundaries of emergency care and

discontinuities within the healthcare service pathway left them with few opportunities to obtain comprehensive information about the circumstances surrounding each event. N8 stated: “Apart from returning to complete the death certification procedures, the families do not come back, and we have no further contact with them.” Some participants also noted that emergency departments could preserve life only temporarily and were unable to address the underlying causes of suicidal behavior. N14 stated: “What difference does it make if you save her? She will still return to the same environment, the same family, and the same problems.”

Sub-theme 2c: Reconsidering Personal Family Relationships and Parenting Beliefs

Several participants reported that, after encountering suicide deaths among children and adolescents, they began to re-examine their own family relationships and parenting philosophies, gradually modifying their parenting beliefs and practices.

N2 (married, without children): “If I have a child in the future, I will certainly do everything possible to prevent them from reaching such a point.”

N4 (married, with children): “This had a profound impact on me. I also have a child, and when educating him, I take these cases as cautionary examples. I reflect on the problems I observed in those families and consider whether I might have similar issues.”

N9 (unmarried, without children): “If I have a child, I would certainly avoid placing excessive pressure on them. Their health and happiness should come first, and it is equally important that my future partner shares the same parenting philosophy.”

N10 (male, unmarried, without children): “I do not think parents should have excessively high expectations; it is enough for the child to be healthy… The family atmosphere influences the child, and I believe that the principal conflicts often originate within the family.”

Sub-theme 2d: Expansion of Professional Roles in Suicide Prevention and F amily Support

Following exposure to suicide deaths among children and adolescents, participants became more sensitive to signs of psychological crisis in this population. In their nursing practice, they placed greater emphasis on the screening and prevention of psychological crises and provided mental health education to family members. N13 stated: “Whenever I am on duty, I talk with the children and provide guidance to their parents.” N14 stated: “I often tell family members that medications must be kept and administered by the parents at scheduled times, just as they are in the hospital. Under no circumstances should the child be allowed to keep the medication themselves.”

Beyond frontline clinical care, several participants expanded their professional boundaries through educational, managerial, and public health communication roles. However, such activities required substantial professional experience and comprehensive competencies and were therefore more commonly undertaken by senior nurses or those who concurrently held teaching or departmental management positions.

N7 (lead clinical preceptor): “When I teach nursing students at universities, I often share cases of suicide among children and adolescents that I have encountered, hoping that this will encourage them to recognize the importance of mental health.”

N6 (head nurse): “I sometimes speak at my daughter’s parent–teacher meetings, where I share relevant cases with other parents in the hope that they will pay greater attention to their children’s mental health.”

N12 (nurse educator): “We now frequently participate in public health education activities. Whenever the opportunity arises, we advocate that families should take the mental health of children and adolescents seriously.”

Theme 3: Practical Dilemmas in Managing Suicide Deaths Among Children and Adolescents

Despite changes in perceptions and professional reflection, nurses continued to encounter practical dilemmas in managing suicide deaths among children and adolescents. These dilemmas involved professional competence, communication with bereaved families, and ethical decision-making.

Sub-theme 3a: Challenges in Professional Competence

Participants described that the suicide deaths they encountered often involved severe injuries, such as those resulting from falls from height or fatal medication overdoses, which increased the complexity of emergency care and placed greater demands on their clinical competence. Both junior and senior nurses reported experiencing considerable pressure when managing these cases.

N9 (3 years of emergency department experience): "I had encountered most types of adult resuscitation to some extent, but pediatric cases were relatively uncommon. After finishing my shift that day, I kept reflecting on what I should do at every step if I encountered a similar case again."

N8 (6 years of emergency department experience): "We performed the CT scan while continuing chest compressions. The results showed spinal cord transection and bilateral pneumothorax; the patient's condition was extremely complex."

N13 (10 years of emergency department experience): "Compared with adults, we encounter pediatric trauma resuscitation far less frequently. Medication administration, intravenous infusion, and the equipment required for resuscitation are all different. These cases are more difficult and place greater demands on both individual competence and team coordination."

In addition, extraordinary public health events involving the life and safety of children and adolescents require reporting to multiple departments, further increasing participants' workload. N11 stated: "Such special incidents must be reported, and a large amount of information has to be entered into the system. If the report is not submitted promptly, we may be criticized by our supervisors."

Sub-theme 3b: Challenges in Communication and Family Support

In addition to providing physical resuscitation, emergency department nurses were required to undertake extensive communication with and emotional support for family members. The interviews revealed that participants encountered multiple communication challenges during this process.

Most participants reported difficulties arising from objective constraints related to time and the clinical environment. N10 stated: “During resuscitation, we have no capacity to attend to the family members’ emotions. It is only after death has been pronounced and before the child is transferred to the mortuary that we have time to communicate with them.” Moreover, emergency departments generally lacked private and quiet spaces for communication, which limited opportunities for providing privacy and dignified communication. N8 recalled: “While we were performing resuscitation, another 16-year-old girl who was undergoing gastric lavage shouted, ‘If you keep pressuring me, I’ll jump from a building.’ At that very moment, the father of the child who had jumped was signing the documents. When he heard this, he became even more devastated.”

Second, the diverse and complex acute grief reactions of bereaved family members were also difficult for participants to manage. N13 stated: “His mother had cried to the point of hyperventilating and losing consciousness, and we had to intervene immediately.” N6 recalled: “I asked where the other family members were, and she replied, ‘Everyone in our family is dead.’”

Communicating with family members when presenting the deceased child’s body was another particularly difficult task and was generally undertaken by experienced nurses. N16 described: “Beforehand, we would prepare the child’s body and clean it carefully. Then we would say to the family, ‘Please come and see your child one last time.’ I would support the mother as she approached. Because our resuscitation bed is relatively low, family members often kneel on the floor and say things to the child such as, ‘How could you be so cruel?’ I simply could not bear it, and tears began to run down my face.” Participants demonstrated intense emotional resonance during this process.

Communication challenges were also rooted in broader cultural and environmental constraints. In the Chinese cultural context, participants perceived the loss of a child before their parents as an especially painful form of bereavement, which made communication with bereaved families more challenging. N10 stated: “Death itself is relatively common in the emergency department, but when parents lose a child,

particularly to suicide, I worry that saying the wrong thing may further distress the family." Tensions within the clinician–patient relationship also made participants more cautious. N4 explained: "The current healthcare environment is not always supportive, so I tend to be conservative and avoid saying too much."

Participants also described limited confidence in providing psychological support as a challenge in communication. N7 stated: "I am unable to provide highly specialized psychological counseling and can only respond on the basis of my personal experience." Participants were often uncertain about how to support helpless family members. The fact that they were complete strangers at the outset made it difficult to identify an appropriate way to initiate communication. N15 stated: "The first time we meet is also the moment when I have to ask you to accept the unnatural death of your child. I do not even know how to begin."

Sub-theme 3c:Tension Between Clinical Decisions and Family Expectations

When participants perceived that further resuscitation was unlikely to change the outcome, nurses remained constrained by family members' wishes, concerns regarding medical disputes, and other practical considerations. They had neither the authority to discontinue treatment solely on the basis of clinical judgment nor the ability to disregard the physical damage that invasive procedures could inflict on the integrity of the deceased patient's body.This predicament contributed to the feelings of conflict and frustration regarding their professional role. N15 stated: "The moment I saw the child, I knew that the child was already gone. Yet blood sampling, intravenous infusion, chest compressions—the entire resuscitation protocol still had to be performed. I felt that I was doing something I knew to be meaningless."

Some participants perceived continued resuscitation as serving primarily to console family members and reduce the risk of medical disputes when they believed that survival was unlikely. N8 stated: "The child's pupils were already dilated upon arrival, but we still continued resuscitation for nearly two hours because the family refused to give up."This divergence substantially prolonged resuscitation efforts. However, participants perceived that prolonged invasive procedures, such as chest compressions,

could cause further bodily injury and increase families' distress when witnessed, leaving nurses caught between continuing resuscitation and concerns about its consequences. N13 explained that prolonged chest compressions could result in rib fractures and other bodily injuries, while some children with severe trauma could also exhibit bleeding from body cavities: "Such a condition is itself a form of harm to the deceased, and it becomes even more difficult for the family to accept when they see it."These psychological conflicts placed considerable pressure on participants as they carried out medical orders. N6 stated: "There was a degree of conflict when we had to choose between emotional considerations and objective clinical reality."

Discussion

This study explored the experiences of emergency department nurses following suicide deaths among children and adolescents. The findings delineated an experiential trajectory encompassing three interrelated dimensions: emotional impact, cognitive reconstruction, and practical dilemmas. Empathy permeated each dimension, not only driving nurses' emotional responses but also shaping subsequent shifts in cognition and behavior. On the one hand, intense emotional impact and sustained empathic involvement may increase vulnerability to secondary traumatic stress and compromise nurses' occupational mental health[21]. On the other hand, although posttraumatic cognitive reconstruction may motivate nurses to proactively expand their professional boundaries, the absence of institutionalized psychological support and systematic organizational safeguards prevents such individual growth from being translated into sustained improvements in clinical care. Accordingly, systematic and forward-looking intervention strategies are required to transform individual traumatic experiences into organizational wisdom for responding to such events. These strategies should simultaneously safeguard the occupational health of emergency department nurses and enhance both the clinical response to suicide among children and adolescents and the quality of humanistic care.

The Trajectory of Emotional Distress Following Suicide Deaths Among Children and Adolescents

The death of a child or adolescent can cause profound emotional depletion[22], and death by suicide constitutes a particularly important precipitant of posttraumatic stress among emergency healthcare professionals[23]. The findings of this study indicate that suicide deaths among children and adolescents elicited complex emotional responses among emergency department nurses, including immediate shock, grief, helplessness, guilt, and persistent emotional distress. These emotional responses were shaped by the sudden and distressing nature of the events, nurses' perceptions of children's vulnerability, their empathic engagement with bereaved families, and their professional responsibilities during resuscitation and postmortem care. Rather than representing a single emotional reaction, these experiences evolved over time, with different forms of emotional distress emerging and interacting throughout the process. During the initial phase of the event, highly lethal and violent methods of suicide produced an intense visual impact[24], while the realization that a child or adolescent had ended their life in such an extreme manner generated profound cognitive shock. Together, these factors triggered nurses' immediate emotional responses and left vivid and enduring impressions of the death scene. Previous research has indicated that repeated exposure to critical incidents may lead to desensitization to stressful events[25]. Unlike routine emergency events that nurses encounter more frequently, suicide deaths among children and adolescents represent relatively uncommon but highly emotionally salient clinical events. The suddenness and severity of these events may limit nurses' opportunities to gradually develop adaptive coping strategies. This finding underscores the need to establish effective coping mechanisms.

As the initial shock gradually subsided, nurses experienced empathic emotions such as regret, heartache, sadness, and grief. These responses were comparable to those reported among nurses in neonatal and pediatric intensive care settings when confronted with the death of a child[26][27]. In such settings, prolonged and continuous care enables nurses to establish emotional bonds with patients and their families, thereby intensifying the emotional distress associated with a child's death. Emergency

department nurses, by contrast, are often confronted with suicide deaths among children and adolescents without any psychological preparation. Nevertheless, their grief responses are similarly intense. Moreover, because they lack an emotional buffering period and anticipatory psychological preparation, and because of their limited understanding of suicide and pronounced sense of helplessness, the potential psychological harm may be even greater. Notably, because the individuals who died by suicide were children or adolescents, nurses were more inclined to attribute these tragedies to external factors such as inadequate parental supervision and excessive educational pressure. The young age of the deceased appeared to intensify nurses' emotional responses. Participants who were parents described particularly strong identification with the parental role and heightened emotional involvement.

As feelings of sadness gradually subsided, nurses' emotional experiences evolved into guilt and helplessness, accompanied by recurrent self-questioning: "Child, why did you do this?" "Why were we unable to save them?" and "Why could they not escape such an outcome?" Unlike the indirect responsibility-related anxiety and helplessness experienced by mental health professionals[28] following suicide deaths among children and adolescents, the guilt and helplessness reported by emergency department nurses arose primarily from the perceived futility of resuscitation, deficiencies in emergency-based intervention for suicidal crises,and the persistent family- and society-level circumstances underlying suicidal behavior[29]. As frontline professionals who directly participated in resuscitation efforts and witnessed fatal outcomes, emergency department nurses experienced these emotions in a direct and immediate manner.

At the same time, nurses recognized that they were unable to provide meaningful help to either the patients or the bereaved families. In the context of suicide-related loss, participants also described difficulties in openly expressing their emotions and communicating with bereaved families, which contributed to experiences resembling disenfranchised grief[22]. This finding is consistent with previous research showing that nurses' grief following a patient's suicide is often overlooked and constitutes a form of socially unrecognized and concealed mourning[30]. When emotional distress lacks an

appropriate avenue for expression, it may readily develop into secondary traumatic stress. In the present study[31], nurses' persistent recollection of these events, intrusive rumination, sleep disturbance, and ongoing emotional distress were consistent with cognitive and emotional features associated with secondary traumatic stress following exposure to traumatic events. The absence of timely and effective psychological support further underscores the necessity of providing mental health support for emergency department nurses. Existing evidence suggests that psychological resilience may mitigate the adverse effects of stress and excessive empathic involvement by strengthening emotional regulation, cognitive reconstruction, and problem-solving capacities, thereby reducing the internalization of trauma[32]. Accordingly, nurses' psychological resilience should be reinforced through system psychological support and emotional management training to enhance their capacity for emotional regulation and trauma recovery. A flexible post-event respite system could also be established, including a brief recovery period after exposure to traumatic events, to promptly alleviate associated psychological depletion and to support the development of a multilevel system of psychological assistance and trauma-response safeguards.

Changes Consistent with Vicarious Posttraumatic Growth and Their Influen cing Factors

The theory of vicarious posttraumatic growth (VPTG) [33]suggests that individuals may experience positive psychological changes through reflection on traumatic experiences and cognitive restructuring. Such changes may involve a deeper appreciation of life and relationships, enhanced personal strength, recognition of new possibilities, and positive psychological development.

From the perspective of VPTG, some nurses demonstrated changes in their understanding of family relationships, life, and professional responsibility through reflections on these events. Nurses' reflections on family functioning, perceived motivations for suicidal behavior, and broader social stressors appeared to contribute to these changes.These changes were reflected in several areas. In the domain of

interpersonal relationships, nurses demonstrated greater empathic understanding of bereaved families and children and adolescents who had engaged in suicidal behavior. Notably, regardless of their marital or parental status, participants commonly translated occupational trauma into reflection on their own family lives, reflecting changes in their perceptions of life and intimate relationships following these experiences. Enhanced personal strength was reflected in nurses' proactive efforts to broaden their knowledge of mental health and to transform traumatic experiences into an increased sense of self-efficacy. Nurses also converted personal reflection into public action by actively extending their professional roles, corresponding to the VPTG dimension of recognizing "new possibilities."

These findings indicate that the psychological effects of traumatic events on nurses are not exclusively negative. Emergency department nurses may experience positive psychological changes following exposure to such events, consistent with previous research. Nevertheless, Previous studies have reported that VPTG among emergency department nurses is often limited[34]. The present study further elucidated the underlying barriers to and sources of this limited growth. On the one hand, such growth depended heavily on nurses' spontaneous individual reflection and lacked systematic training and institutional support, making it difficult to translate into standardized improvements in clinical care. On the other hand, opportunities for growth were structurally unequal. Senior nurses and those concurrently occupying managerial or teaching roles possessed greater professional resources and broader professional platforms, enabling them to convert personal experiences into public action more readily and to achieve growth across a wider range of dimensions. By contrast, junior nurses faced greater constraints and were less likely to derive positive experiences from trauma, a finding consistent with previous research[35]. These findings highlight the need to develop tailored support programs for nurses with differing professional characteristics to facilitate the development and application of positive changes following traumatic experiences. Particular attention should be given to junior nurses, who should be encouraged to participate in public health initiatives such as mental health education. By reinforcing professional identity through the

public expression of nursing expertise and values, individual psychological growth may be transformed into a sustained source of professional development.

Occupational Stress Amid Practical Dilemmas

Emergency departments worldwide are subject to systemic pressures arising from chronic workforce shortages and excessive workloads[36][37]， and these challenges are particularly pronounced in China[38][39]. Suicide deaths among children and adolescents represent a clinically complex and culturally sensitive context that may further intensify the psychological burden experienced by emergency department nurses[40][41][42].With respect to professional competence, nurses in the present study commonly experienced diminished confidence in managing pediatric trauma.. The pathophysiological characteristics of pediatric trauma differ fundamentally from those of adult trauma, placing greater demands on adherence to resuscitation protocols and multidisciplinary collaboration. The technical complexity and decision-making burden inherent in such cases therefore constitute substantial professional challenges[43]. Furthermore, systematic training programs for suicide response and bereavement care remain insufficiently developed within emergency care in China[44][45]. Most nurses have not received systematic specialist training in psychological crisis intervention, bereavement care, or communication. In the present study, even senior nurses largely relied on personal experience and lacked an evidence-based framework to guide practice. At the same time, the extreme urgency of emergency care markedly constrains the time available to establish emotional connections with bereaved families, thereby making the delivery of bereavement care and psychological support considerably more difficult and further exacerbating communication challenges in clinical practice.

The gap between clinical needs and available service capacity may contribute to the limited integration of psychosocial care and bereavement support into routine emergency practice.[38]. This not only undermines the quality of humanistic care but also deprives nurses of institutional channels through which occupational trauma might be acknowledged and alleviated.

At the same time, decisions regarding the termination of pediatric resuscitation pose distinctive ethical challenges for healthcare professionals, as cardiopulmonary resuscitation in children is often prolonged for a variety of reasons[46].The clinical experiences of emergency healthcare professionals in the present study likewise reflected this characteristic. In the context of suicide among children and adolescents, nurses were required to undertake the dual responsibilities of performing clinical interventions and providing emotional support to family members, while navigating the difficult balance between professional judgment and family preferences. The resulting ethical tension was substantially greater than that encountered in routine emergency care.

Participants' distress appeared to arise less from death itself than from the helplessness and perceived inadequacy experienced during the management of these events[35]. This finding is consistent with previous research on pediatric end-of-life care. Although participants consistently called for enhanced specialist training, the origins of these challenges extended far beyond deficits in individual competence and were also embedded in structural contradictions within the emergency care system. Accordingly, while strengthening specialist competencies in areas such as suicide risk identification and bereavement care, system-level reforms are also essential to alleviate occupational mental health burden. On the one hand, hospitals should establish occupational mental health protection mechanisms tailored to high-risk clinical settings. On the other hand, the functional boundaries of emergency departments within the continuum of care for suicide among children and adolescents should be clearly defined, and a coordinated referral network involving emergency departments, communities, and schools should be developed, thereby enabling nurses to refocus on their core clinical responsibilities. Such measures may contribute to improvements in both nurses' occupational health and the quality of clinical care.

This study has several limitations. First, the participants were recruited from only three tertiary hospitals in Zhejiang Province, China, and the sample size was relatively small.

Although this approach allowed an in-depth exploration of nurses' experiences within a specific clinical and cultural context, it may limit the transferability of the findings to other geographical regions and healthcare settings. In addition, purposive sampling combined with snowball sampling was used to identify nurses with direct experience of child and adolescent suicide deaths. While snowball sampling facilitated the recruitment of participants with relevant experiences, it may also have increased the possibility that participants shared similar professional networks or perspectives, potentially reducing the diversity of experiences represented in the study. Furthermore, this study did not collect detailed information regarding the cumulative number of suicide-related cases encountered by each participant. Although all participants had direct experience caring for children and adolescents who died by suicide, differences in prior exposure may have influenced their emotional responses and interpretations of these events.

Second, this study focused exclusively on the perspectives of emergency department nurses and did not include other stakeholders involved in suicide-related care, such as bereaved family members, emergency physicians, or mental health professionals. Furthermore, the study focused on suicide deaths and did not explore experiences related to nonfatal suicide attempts. Future research incorporating multiple stakeholder perspectives and different types of suicide-related events may provide a more comprehensive understanding of care needs and support strategies.

Finally, as the data were collected through retrospective interviews, participants' accounts may have been influenced by recall bias or social desirability bias. To minimize these potential influences, the interviewer used open-ended questions, encouraged participants to describe their experiences in detail, maintained reflexive records throughout the research process, and conducted member checking to ensure that the interpretations accurately reflected participants' perspectives. Nevertheless, participants' retrospective accounts may still have been shaped by individual memory and personal interpretations. Future studies could incorporate longitudinal approaches or multiple data sources to further explore changes in nurses' experiences over time.

Conclusion

This study explored the experiences of emergency department nurses following suicide deaths among children and adolescents. These experiences encompassed three interrelated aspects—emotional impact, changes in perceptions, and practical dilemmas—and reflected both psychological distress associated with secondary traumatic stress and positive changes consistent with vicarious posttraumatic growth within the occupational context. Within the distinctive cultural and healthcare context of China, the study provides insight into how emergency department nurses respond to occupational exposure to suicide deaths among children and adolescents. The findings extend understanding of nurses' occupational mental health following suicide deaths among children and adolescents and provide further insight into the relevance of vicarious posttraumatic growth in emergency nursing.

The findings provide a basis for developing tiered psychological support systems tailored to emergency care settings and optimizing comprehensive humanistic care during the management of suicide deaths among children and adolescents. Future occupational health interventions should address both psychological distress reduction and the development of positive adaptive changes following these experiences. Institutional changes addressing structural barriers may support improvements in nurses' occupational health and the quality of clinical care.

Relevance to Clinical Practice

The findings suggest that suicide deaths among children and adolescents are not only complex emergency care events but may also represent highly distressing occupational experiences for emergency department nurses, with potential long-term psychological impacts. Clinical practice should therefore not rely solely on individual nurses' ability to regulate emotions and cope based on personal experience. Instead, support should be provided at individual and team, organizational, and service-system levels to safeguard nurses' occupational mental health while facilitating the integration of these experiences into professional growth and enhanced caregiving capacity.

At the individual and team levels, nursing managers should establish a tiered psychological support mechanism triggered by high-risk clinical events, with particular attention to nurses directly involved in resuscitation and postmortem care, junior nurses, and those repeatedly exposed to similar events. Measures such as flexible post-event respite, peer support, psychological assessment, and structured post-event reflection and support sessions may provide nurses with a psychologically safe space in which to express occupational grief and ethical distress. Such support may help nurses process and integrate these experiences, strengthen their professional identity, and create conditions conducive to positive professional growth.

At the organizational level, targeted competency development should be strengthened for emergency care involving suicide deaths among children and adolescents. Training should encompass pediatric resuscitation, identification of suicide-related crises, support for acute grief, communication about death, ethical decision-making, and psychological self-protection. Simulation-based training, role-play, and case discussions may be used to enhance nurses' comprehensive response capabilities. Healthcare institutions should also consider existing staffing and service resources when defining the responsibilities and collaborative processes of emergency care teams in death communication, family support, and postmortem care, thereby providing nurses with practical guidance. For complex psychological or grief-related needs beyond the professional scope of emergency department nurses, accessible pathways for in-hospital consultation or specialist support should be established. Humanistic care processes should also be refined to safeguard privacy, demonstrate cultural sensitivity, respect families' coping capacities, and preserve the dignity of the deceased.

At the service-system level, the functional boundaries of emergency departments within the continuum of care for suicide among children and adolescents should be further clarified according to local healthcare contexts. Information sharing and referral coordination between emergency departments, communities, schools, and other relevant support services should be progressively strengthened to reduce discontinuities between emergency treatment and subsequent psychosocial support.

Declarations

Ethics approval and consent to participate

The study protocol was approved by the Ethics Committee of Hangzhou Hospital of Traditional Chinese Medicine (approval No. 2025KLL189). Written informed consent was obtained from all participants before data collection.All procedures were conducted in accordance with the Declaration of Helsinki.

Consent for publication

Not applicable.

Availability of data and materials

The datasets generated and/or analysed during the current study are not publicly available due to the sensitive and confidential nature of the qualitative interview data, but may be available from the corresponding author on reasonable request, subject to ethical and confidentiality considerations.

Competing interests

The authors declare that they have no competing interests.

Funding

This study was supported by the Zhejiang Medical and Health Program(2025HY0742) and Construction Fund of Key Medical Disciplines of Hangzhou (2025HZPY06).

Authors' contributions

Danni Yu: Conceptualization, Methodology, Investigation, Formal analysis, Writing – Original Draft.

Lina Zhang: Investigation, Data Curation, Formal analysis

Mingna Fan: Investigation, Data Curation, Formal analysis

Xueyan Huang: Formal analysis, Writing – Original Draft.

Lumeng Lu: Translation, Writing – Review and Editing.

Li Zhu: Data Curation, Writing – Review and Editing.

Liyang Chang:Conceptualization, Supervision, Writing – Review and Editing.

Haifang Zhou: Conceptualization, Supervision, Funding Acquisition, Writing – Review and Editing.

All authors approved the final version of the manuscript.

The Acknowledgements

The authors sincerely thank all the emergency department nurses who generously shared their experiences and perspectives, particularly given the emotional difficulty of revisiting these events. We also thank the staff at the participating hospitals for their assistance with participant recruitment and study coordination. Finally, we are grateful to all members of the research team for their support and collaboration throughout the study.

Declaration of generative AI and AI-assisted technologies in the writing process

During the drafting and revision of this manuscript, the authors used generative artificial intelligence solely for language editing, including improvements to English grammar, sentence clarity, readability, and academic expression. All AI-assisted modifications were reviewed and verified by the authors.

References

[1] United Nations Children's Fund .The State of the World's Children 2021: On My Mind—Promoting, Protecting and Caring for Children's Mental Health. (2021). Available online at: https://www.unicef.org/lac/en/reports/state-of-the-worlds-children-2021-on-my-mind (accessed October, 2021).

[2]Zhu J, Li Y, Zhang C, He J, Niu L. Trends in mortality and causes of death among Chinese adolescents aged 10-19 years from 1990 to 2019. Front Public Health. 2023 Feb 7;11:1075858. doi: 10.3389/fpubh.2023.1075858. PMID: 36825144; PMCID: PMC9941149.

[3]Cheng Q, Zhang X, Lui C, Yip PSF. Suicide Research in Mainland China, Hong Kong, and Macau Over Three Decades. Crisis. 2021 Nov;42(6):455-464. doi: 10.1027/0227-5910/a000743. Epub 2020 Dec 4.

[4]Wei X, Du W, Wang R, et al. Epidemiological characteristics and trends of injury-related mortality among children and adolescents in Jiangsu Province from2012

to 2021. Chinese Journal of Epidemiology. 2024;45(4):536–541. doi:10.3760/cma.j.cn112338-20230912-00150.

[5]Zhang Q, Zhang T, Miao D, et al. Epidemiological characteristics and temporal trends of injury-related mortality among children aged 0–14 years in Huai'an from 2016 to 2023. Journal of Medical Pest Control. 2026;42(3):240–244.（in Chinese）.

[6]Tal Young I, Iglewicz A, Glorioso D, Lanouette N, Seay K, Ilapakurti M, Zisook S. Suicide bereavement and complicated grief. Dialogues Clin Neurosci. 2012 Jun;14(2):177-86. doi: 10.31887/DCNS.2012.14.2/iyoung. PMID: 22754290; PMCID: PMC3384446.

[7]Hussin NAM, Talvitie T, Laitinen E, Aho AL. Finnish parents' perceptions of death following the traumatic death of a child. BMC Psychol. 2025 Jan 14;13(1):39. doi: 10.1186/s40359-024-02220-8.

[8]Witczak-Błoszyk K, Krysińska K, Andriessen K, Stańdo J, Czabański A. Work-Related Suicide Exposure, Occupational Burnout, and Coping in Emergency Medical Services Personnel in Poland. Int J Environ Res Public Health. 2022 Jan 20;19(3):1156. doi: 10.3390/ijerph19031156.

[9]Sanford RL, Hawker K, Wayland S, Maple M. Workplace exposure to suicide among Australian mental health workers: A mixed-methods study. Int J Ment Health Nurs. 2021 Feb;30(1):286-299. doi: 10.1111/inm.12783. Epub 2020 Sep 4.

[10]Roshini C, Baruah M, Manohar H, Thomas B, Sudhir P. The impact of suicidal deaths of children and adolescents among parents and mental health professionals: A systematic review and meta-synthesis. Psychol Psychother. 2026 Mar15. doi: 10.1111/papt.70045.

[11]McKenna L, Shimoinaba K, Copnell B. Family-centered care and pediatric death in the emergency department: A qualitative study using framework analysis. J Pediatr Nurs. 2022 May-Jun;64:18-23. doi: 10.1016/j.pedn.2022.01.013. Epub 2022 Feb 4.

[12]Aldrich RS, Cerel J. Occupational Suicide Exposure and Impact on Mental Health: Examining Differences Across Helping Professions. Omega (Westport). 2022 May;85(1):23-37. doi: 10.1177/0030222820933019.

[13]Shimoinaba K, McKenna L, Copnell B. Nurses' experiences, coping and support in the death of a child in the emergency department: A qualitative descriptive study. Int Emerg Nurs. 2021 Nov;59:101102. doi: 10.1016/j.ienj.2021.101102

[14]Clua-García R, Casanova-Garrigós G, Moreno-Poyato AR. Suicide care fromthe nursing perspective: A meta-synthesis of qualitative studies. J Adv Nurs. 2021 Jul;77(7):2995-3007. doi: 10.1111/jan.14789.

[15]Sausman J, Arif A, Young A, MacArtney J, Bailey C, Rajani J, Burt R. Healthcare professionals' perspectives of the management of people with palliative care needs in the emergency department of a UK hospital. BMC Palliat Care. 2023 Sep 6;22(1):129. doi: 10.1186/s12904-023-01248-8.

[16]McCallum KJ, Jackson D, Walthall H, Aveyard H. Exploring the quality ofthe dying and death experience in the Emergency Department: An integrative literature review. Int J Nurs Stud. 2018 Sep;85:106-117. doi: 10.1016/j.ijnurstu.2018.05.011.

[17]Kotler H, Hinds PS, Wolfe AHJ. "Death Is Not a Dirty Word:" A Qualitative Study of Emergency Clinician End-of-Life Communication. Pediatrics. 2024 Nov 1;154(5):e2024067876. doi: 10.1542/peds.2024-067876.

[18]Zhou Z, Wu C, Yun Y, et al. Suicide exposure and its negative effects and interventions. Advances in Psychological Science. 2025;33(12):2196–2216.（in Chinese）

[19]Lyra RL, McKenzie SK, Every-Palmer S, Jenkin G. Occupational exposure to suicide: A review of research on the experiences of mental health professionals and first responders. PLoS One. 2021 Apr 30;16(4):e0251038. doi: 10.1371/journal.pone.0251038.

[20]Hua LL, Lee J, Rahmandar MH, Sigel EJ; COMMITTEE ON ADOLESCENCE; COUNCIL ON INJURY, VIOLENCE, AND POISON PREVENTION. Suicide and Suicide Risk in Adolescents. Pediatrics. 2024 Jan 1;153(1):e2023064800. doi: 10.1542/peds.2023-064800.

[21]Jiang J, Liu S, Chi C, Liu Y, Xu J, Zeng L, Peng H. Experiences of compassion fatigue among Generation Z nurses in the emergency department: a qualitative study

in Shanghai, China. BMC Nurs. 2024 Aug 13;23(1):556. doi: 10.1186/s12912-024-02193-4.

[22]Liang Y, Jiang X, Peng Y, Sun L, Liu H, Chen J, Zhou Y, Luo Y, Shi X, Yin C. Factors Influencing Occupational Grief Among Pediatric Emergency andIntensive Care Unit Nurses in South China: A Cross-Sectional Study. J Nurs Manag. 2026;2026(1):e5685892. doi: 10.1155/jonm/5685892.

[23]Qian YF, Liu Y, Wang L, Li Q, Sun RQ. Current status of posttraumatic stress disorder among emergency nurses and the influencing factors. Front Psychiatry. 2023 Sep 4;14:1203782. doi: 10.3389/fpsyt.2023.1203782.

[24]Lockwood-Smith J., Hettiaratchy S., Davenport R., Weaver A., Newton N., Tunnicliff M., Raitt J., Hudson A., Brohi K., Cole E. Self-directed violence and unclear intent presentation within a major trauma system. A multisite analysis. Injury. 2025;56:112156. doi: 10.1016/j.injury.2025.112156.

[25] Abu-Alhaija DM, Gillespie GL. Critical Clinical Events and Resilience Among Emergency Nurses in 3 Trauma Hospital-Based Emergency Departments: A Cross-Sectional Study. J Emerg Nurs. 2022 Sep;48(5):525-537. doi: 10.1016/j.jen.2022.05.001.

[26]Wong JQH, Charles JS, Mok HT, Tan TSZ, Amin Z, Ng YPM. Experiences of healthcare personnel with death in the neonatal intensive care unit: a systematic review of qualitative studies. Arch Dis Child Fetal Neonatal Ed. 2023 Nov;108(6):617-622. doi: 10.1136/archdischild-2023-325566.

[27] Bloomer MJ, Butler AE, Brooks LA, Coventry A, McKeever S, Ranse K, Rowe J, Thomas S, Thornton R. Parents' and nurses' experiences of end-of-life care in intensive care for children: A systematic review. Aust Crit Care. 2025 Nov;38(6):101455. doi: 10.1016/j.aucc.2025.101455.

[28] Kaijadoe SPT, Nijhof KS, Klip H, de Weerd A, Popma A, Scholte RHJ. The impact of adolescent suicide on professionals in secure residential youth care. Resid Treat Child Youth. 2023 Sep 7;42(1):23-50. doi: 10.1080/0886571X.2023.2253724.

[29]Cafferty R, Grupp-Phelan J, Anthony B. Children and Adolescents With Suicidal

Ideation and the Emergency Department. JAMA. 2024;331(3):193-194. doi:10.1001/jama.2023.26291

[30] Morrissey J, Higgins A. "When my worse fear happened": Mental health nurses' responses to the death of a client through suicide. J Psychiatr Ment Health Nurs. 2021 Oct;28(5):804-814. doi: 10.1111/jpm.12765.

[31]Figley, C. R. (1995). Compassion fatigue as secondary traumatic stress disorder: An overview. In Compassion Fatigue: Coping with Secondary Traumatic Stress Disorder in Those Who Treat the Traumatized; Brunner/Mazel Psychological Stress Series, No. 23; Brunner/Mazel, pp. 1–20.

[32] Dong A, Pan Y, He F. A model for predicting secondary traumatic stress in emergency nurses: the roles of occupational stress, empathy, and psychological resilience. Front Med (Lausanne). 2025 Dec 18;12:1712821. doi: 10.3389/fmed.2025.1712821.

[33]Tedeschi RG, Calhoun LG. The Posttraumatic Growth Inventory: measuring the positive legacy of trauma. J Trauma Stress. 1996 Jul;9(3):455-71. doi: 10.1007/BF02103658. PMID: 8827649.

[34]Yaakubov L, Hoffman Y, Rosenbloom T. Secondary traumatic stress, vicarious posttraumatic growth and their association in emergency room physicians and nurses. Eur J Psychotraumatol. 2020 Dec 3;11(1):1830462. doi: 10.1080/20008198.2020.1830462.

[35] Shorey S, Chua C. Nurses and nursing students' experiences on pediatric end-of-life care and death: A qualitative systematic review. Nurse Educ Today. 2022 May;112:105332. doi: 10.1016/j.nedt.2022.105332.

[36]Drennan J, Murphy A, McCarthy VJC, Ball J, Duffield C, Crouch R, Kelly G, Loughnane C, Murphy A, Hegarty J, Brady N, Scott A, Griffiths P. The association between nurse staffing and quality of care in emergency departments: A systematic review. Int J Nurs Stud. 2024 May;153:104706. doi: 10.1016/j.ijnurstu.2024.104706.

[37]Poon YR, Lin YP, Griffiths P, Yong KK, Seah B, Liaw SY. A global overview of healthcare workers' turnover intention amid COVID-19 pandemic: a systematic review

with future directions. Hum Resour Health. 2022 Sep 24;20(1):70. doi: 10.1186/s12960-022-00764-7.

[38]Jiang J, Liu S, Chi C, Liu Y, Han P, Sun L, Zhuang Y. Exploring promotion factors of resilience among emergency nurses: a qualitative study in Shanghai, China. BMJ Open. 2024 Mar 12;14(3):e082231. doi: 10.1136/bmjopen-2023-082231.

[39] Tian M, Yang H, Yin X, Wu Y, Zhang G, Lv C, Mu K, Gong Y. Evaluating effort-reward imbalance among nurses in emergency departments: a cross-sectional study in China. BMC Psychiatry. 2021 Jul 14;21(1):353. doi: 10.1186/s12888-021-03344-6.

[40]Cafferty R, Klott A, Dafoe A, Glaros C, Dorsey B, Haasz M, Anthony BJ, O'Leary ST. A Qualitative Study Exploring Adolescent and Caregiver Perspectives of Emergency Department Response After a Positive Suicide Screen. Ann Emerg Med. 2025 Oct;86(4):391-401. doi: 10.1016/j.annemergmed.2025.03.019.

[41]Veresova M, Michail M, Richards H, Witt K, Lamblin M, Bleeker C, Robinson J. Emergency department staff experiences of working with people who self-harm: A qualitative examination of barriers to optimal care. Int J Ment Health Nurs. 2024 Oct;33(5):1482-1492. doi: 10.1111/inm.13353.

[42]Rheinberger D, Wang J, McGillivray L, et al. Understanding Emergency Department Healthcare Professionals' Perspectives of Caring for Individuals in Suicidal Crisis: A Qualitative Study. Front Psychiatry. 2022;13:918135. Published 2022 Jun 13. doi:10.3389/fpsyt.2022.918135.

[43]Scholz SS, Borgstedt R, Menzel LC, Rehberg S, Jansen G. Evolution and current state of global research on paediatric resuscitation: a systematic scientometric analysis. Scand J Trauma Resusc Emerg Med. 2020 Sep 10;28(1):90. doi: 10.1186/s13049-020-00780-3.

[44]Du C, Shen D, Yuan J, Zhang R, Fu C, Yin X. Suicide risk assessment and management needs of pre-examination and triage nurses in emergency departments: A qualitative study. Pak J Med Sci. 2025 Apr;41(4):1003-1007. doi: 10.12669/pjms.41.4.10501.

[45]Peng Y, Wu H, Tao J, Wang Y, Zhang M, Huang P. The Current Status of Bereavement Care in Chinese Emergency Departments: A Multicenter Cross-Sectional Study. Omega (Westport). 2026 Mar;92(4):2204-2217. doi: 10.1177/00302228231224550.

[46]Elmer J, Atkins DL, Daya MR, Del Rios M, Fry JT, Henderson CM, Lewis-Newby M, Madrigal VN, Marco CA, Ornato JP, Paquette ET, Parnia S, Rodriguez AJ, Shapiro JP, Schexnayder SM, Weiss EM, Zientek DM, Idris AH. Part 3: Ethics: 2025 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care. Circulation. 2025 Oct 21;152(16_suppl_2):S323-S352. doi: 10.1161/CIR.0000000000001371.