

The Faces Never Leave: A Content Analysis of Vicarious Trauma among Pediatric Oncology Nurses

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Abstract

Background: Pediatric oncology nurses are at risk of vicarious trauma (VT) due to repeated exposure to child suffering, treatment failure, and bereaved families. In Iran, limited research exists on VT manifestations, particularly in multicultural settings.

Aim: This study explored VT experiences among pediatric oncology nurses in Urmia, Iran.

Method: A qualitative conventional content analysis was conducted from September 2024 to February 2025 at two hospitals in Urmia. Eighteen pediatric oncology nurses participated in semi-structured interviews. Data were analyzed using Graneheim and Lundman's approach. Trustworthiness was ensured through Lincoln and Guba's criteria.

Results: Four themes emerged: (1) "The Faces Never Leave" – intrusive imagery, sensory memories, and cognitive re-experiencing; (2) "I Built a Wall Around Myself" – emotional numbing, detachment, and avoidance; (3) "The World Became a Dangerous Place" – hypervigilance, disrupted worldviews, and overprotection of one's own children; and (4) "We Just Go to the Next Patient" – organizational silence, absent debriefing, and suppressed emotional expression. Negative case analysis identified peer support, supportive management, and formal debriefing as protective factors.

Implications for Practice: Vicarious trauma is pervasive among pediatric oncology nurses in Urmia, exacerbated by organizational silence and emotion suppression. Structured debriefing, trauma-informed leadership, and culturally sensitive religious coping support are urgently needed.

Keywords: Pediatric Oncology Nursing, Qualitative Content Analysis, Vicarious Trauma

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Introduction

Caring for children with cancer places unique and sustained emotional demands on healthcare professionals. Unlike adult oncology, pediatric settings involve prolonged exposure to the suffering of vulnerable patients at an early stage of life, frequent treatment failures, and the intense emotional distress of family members (1). Nurses in these units are repeatedly exposed to traumatic narratives such as a child's fear of pain, a parent's despair at a terminal diagnosis, or the death of a long-cared-for patient. Over time, this cumulative empathic engagement can lead to vicarious trauma (VT), a disruption in the nurse's own cognitive schemas of safety, trust, and meaning, distinct from burnout or compassion fatigue (2, 3). Left unrecognized, VT may impair clinical judgment, increase turnover intentions, and compromise the nurse's psychological well-being (4).

In Iran, the pediatric oncology nursing workforce operates within a unique cultural and healthcare context. Family-centered care is deeply valued, and nurses often develop extended, emotionally close relationships with children and their families due to long hospital stays and limited community-based palliative services (5). Urmia, the capital of West Azerbaijan Province, is a multicultural region with a mix of Kurdish, Azerbaijani, and Persian populations, where religious and collectivist values further shape expressions of distress and coping.

Despite the growing global recognition of VT as a significant occupational hazard in oncology nursing, a critical gap remains in the literature: no published study has specifically examined how VT manifests among pediatric oncology nurses in Iran, and particularly in its multicultural and resource-constrained settings. Most existing Iranian research has focused on burnout or general stress using quantitative scales, which, while valuable, may not capture the idiographic, narrative-based nature of VT as a fundamental shift in internal frames of reference (6,7). Furthermore, the influence of culturally specific factors such as religious coping norms, collectivist family dynamics, and the hierarchical physician-nurse power structures prevalent in Iranian hospitals on the expression and mitigation of VT remains unexplored. It is also unknown how organizational silence and the absence of formal support systems, common in sanction-affected healthcare economies, interact with these cultural variables to shape nurses' experiences.

To directly address this gap, the present study was designed with the explicit aim of providing an in-depth, contextualized exploration of VT from the nurses' own perspectives. Specifically, we sought to: (a) identify the nature, triggers, and perceived consequences of VT as experienced by pediatric oncology nurses in Urmia; (b) understand how cultural, religious, and organizational factors facilitate or hinder their coping; and (c) generate preliminary evidence for contextually appropriate interventions. Given the exploratory and context-specific nature of this inquiry, a research note format is appropriate to present our core findings concisely, while offering preliminary insights for local mental health support and future multi-site studies. This study does not seek to measure prevalence but to describe the phenomenon as experienced by nurses in this under-studied Iranian region, thereby establishing a foundational evidence base for future research and practice.

Methods

This qualitative study employed a conventional content analysis approach, as described by Graneheim and Lundman (2004) (8), to explore vicarious trauma among pediatric oncology nurses. A conventional content analysis approach was selected because it allows for the direct extraction of codes and themes from participant narratives without imposing pre-existing theoretical frameworks, making it particularly suitable for exploring under-researched phenomena in culturally specific contexts where existing theories may not fully capture the lived experiences of nurses in Iran's multicultural setting. The study is reported in accordance with the COREQ checklist (Consolidated Criteria for Reporting Qualitative Research) (9).

The research team included a PhD candidate in nursing with qualitative methodology training (first author), a pediatric oncology nurse manager with 14 years of oncology experience, a pediatric oncologist specializing in psychosocial care, an implementation scientist, and a clinical psychologist with trauma expertise. A pediatric oncology nursing supervisor on the research team was employed at one of the study hospitals but was excluded from conducting interviews.

Prior assumptions for example, that nurses would underreport vicarious trauma due to professional stigma; that religious coping would be the dominant coping strategy; that formal debriefing would be absent; that nurses would report detachment from their own children; that physicians would be

described as unsupportive of nurse emotions were identified through reflexivity sessions held before the study and at regular intervals during the study. The team acknowledged that nurses might underreport vicarious trauma symptoms due to fear of being labeled "unfit" for oncology nursing or being reassigned to non-oncology units. The team approached participants' reports with sensitivity to these potential response biases and emphasized that all emotional responses were normal reactions to abnormal stressors.

The study was conducted at two tertiary teaching hospitals affiliated with Urmia University of Medical Sciences Imam Khomeini Hospital and Seyyed Al-Shohada Hospital between September 2024 and February 2025. Urmia, the capital of West Azerbaijan Province, has a diverse sociocultural population and operates within Iran's sanction-affected healthcare economy, where pediatric oncology units face unique challenges including high patient volumes, limited psychosocial support resources, and exposure to repeated pediatric suffering and death. Pediatric oncology nurses in this setting experience recurrent exposure to childhood cancer diagnoses, treatment-related pain, treatment failures, and bereaved families, placing them at heightened risk for vicarious trauma. Understanding nurses' experiences of vicarious trauma including their cognitive, emotional, and behavioral responses is essential for designing contextually appropriate support interventions. Participants were pediatric oncology nurses working in inpatient oncology units or day chemotherapy units with at least one year of experience in caring for children with cancer (including leukemia's, brain tumors, solid tumors, and hematologic malignancies). Inclusion criteria were: (a) current employment in a pediatric oncology unit, (b) at least one year of experience caring for pediatric oncology patients, (c) direct involvement in administering chemotherapy, managing treatment-related complications, or providing end-of-life care, (d) ability to speak Persian or Azerbaijani Turkish fluently, and (e) willingness to participate.

Exclusion criteria were: (a) temporary or agency nursing staff, (b) nurses on extended leave (>3 months) during the study period, (c) diagnosis of a major psychiatric disorder impairing interview participation, (d) nurses working primarily in non-bedside roles (e.g., oncology educators not providing direct patient care) during the study period, or (e) personal history of a cancer diagnosis in oneself or one's own child (to avoid confounding vicarious trauma with direct trauma).

Potential participants were identified through collaboration with the head nurses and nurse managers of the pediatric oncology units at both study hospitals, who provided a list of all eligible nursing staff meeting the inclusion criteria. The first author, who had no supervisory authority over any potential participant, then approached each eligible nurse individually during shift changes or break times in private areas away from patient care zones. A total of 25 nurses were invited to participate in the study. Of these, 18 (72%) agreed to participate and provided written informed consent. Of the 7 nurses who declined participation, 4 cited time constraints due to heavy workloads and shift schedules; 2 expressed concerns about discussing emotionally distressing experiences and preferred not to revisit traumatic memories; and 1 reported that they did not feel comfortable being audio-recorded. No nurses declined due to fear of repercussions, as the first author explicitly stated at the beginning of each recruitment conversation that participation had no connection to job performance evaluations and that all responses would be anonymized. Purposive sampling was used initially to identify participants with diverse experiences of emotional distress related to pediatric oncology nursing. Maximum variation sampling was then applied to capture a range of perspectives based on age, years of oncology nursing experience, unit type (inpatient vs. day chemotherapy), and self-reported frequency of experiencing intrusive thoughts, emotional numbing, or avoidance related to patient care.

We achieved variation in age, gender, years of pediatric oncology nursing experience, years in current unit, and self-reported vicarious trauma symptom severity. A pilot interview was conducted with one pediatric oncology nurse who met the inclusion criteria but was not included in the final sample. The purpose of the pilot was to assess the clarity, comprehensiveness, and cultural appropriateness of the interview guide, as well as to estimate interview duration and refine probing techniques. The pilot interview revealed that the question regarding "changes in worldview" required additional clarification to be understood by participants in the Iranian cultural context; accordingly, the interview guide was revised to include a more concrete example (e.g., "Has caring for children with cancer changed how you think about fairness or what you expect from life?"). The pilot interview data were not included in the final analysis. Semi-structured, face-to-face individual interviews were conducted in a private room adjacent to the pediatric oncology units, separate from patient care areas and nursing

stations, at times arranged to avoid peak work hours, chemotherapy administration times, and family visiting hours. None of the interviewers had prior acquaintance with participants before study enrollment. All interviews were conducted solely by the first author, a PhD in nursing with expertise in pediatric oncology and trauma-informed care. The first author had no supervisory or evaluative authority over any participant and had never worked clinically alongside any participant before.

A total of 18 interviews were conducted. No repeat interviews were conducted; each participant was interviewed once. Interviews lasted 32–85 minutes (average: 54 minutes). Shorter interviews occurred with participants who reported minimal vicarious trauma symptoms or effective coping strategies; longer interviews occurred with participants who described intrusive imagery, sleep disturbances, avoidance behaviors, or moral distress related to treatment decisions or end-of-life care. All interviews were audio recorded using a digital voice recorder, with participants' explicit written consent obtained prior to each interview. Audio files were securely stored on a password-protected computer accessible only to the research team. Field notes were taken during and immediately after each interview to capture non-verbal cues (e.g., tearfulness, hesitancy when discussing specific patients, changes in vocal tone), emotional responses, and contextual details about unit layout, availability of debriefing spaces, and staffing patterns. The interviews were conducted in a location agreed upon by the participant and the researcher, and in most cases in the nurses' work area (rest room). To ensure participant anonymity, each participant was assigned a unique alphanumeric code (P1–P18). No identifying information (names, employee ID numbers, or specific unit assignments) was linked to audio files or transcripts in the analysis phase. The master list linking participant codes to identifying information was stored separately in a locked filing cabinet in the first author's office, accessible only to the first author. Audio recordings will be retained for five years following publication to allow for audit and verification, after which they will be permanently deleted. Transcripts will be retained in anonymized form for future secondary analysis if ethics approval is obtained.

Data saturation was defined as the point at which no new codes, subcategories, or categories emerged from three consecutive interviews. Saturation was assessed through ongoing team discussion after each interview, with systematic comparison of newly generated codes against the existing codebook. Formal saturation was declared at interview 15, with 3 additional interviews ($n = 18$ total) confirming theme stability and producing no new conceptual insights.

Table 1. Interview Guide

"Can you describe a recent situation where you felt emotionally affected by a child's suffering or death? What happened?"
"What thoughts, images, or memories related to your pediatric oncology patients stay with you outside of work hours?"
"How has caring for children with cancer changed the way you see the world, other people, or yourself?"
"What physical or emotional reactions do you notice in yourself when you think about difficult patient experiences?"
"Have you ever changed your behavior outside of work because of something you experienced with a pediatric oncology patient?"
"What support systems (colleagues, supervisors, family, counseling) have helped you cope with difficult experiences? What has been missing?"
"How does your unit or hospital address the emotional well-being of nurses who care for seriously ill children?"
"What would need to change for you to feel more supported in managing the emotional demands of pediatric oncology nursing?"

An interview guide (Table 1) was developed based on the professional quality of life literature, vicarious trauma theoretical frameworks (constructivist self-development theory), qualitative studies on compassion fatigue and secondary traumatic stress in oncology nurses, and implementation science frameworks for healthcare worker well-being. The guide was reviewed by two pediatric oncology nurse managers not involved in the study, one pediatric oncologist specializing in psychosocial oncology, one clinical psychologist with trauma expertise, and one qualitative methodologist. All interviews were conducted in Persian (Farsi), which all participants spoke fluently. For the five

participants who expressed a preference for Azerbaijani Turkish during conversation, the interviewer code-switched as needed. Audio recordings were transcribed verbatim in the original language by a bilingual research assistant. Initial translation from Persian and Azeri into English was performed by a bilingual research assistant (native Persian speaker, fluent in Azeri). Azeri portions were translated into English by a native Azeri speaker; Persian portions were translated separately. A second independent bilingual translator, blinded to the original Persian and Azeri transcripts, back-translated 20% of randomly selected quotes from English into Persian to ensure translation accuracy and conceptual equivalence. Discrepancies were resolved through consensus discussion.

Following transcription and initial coding, summary documents containing codes and preliminary categories were returned to 10 participants (55.6%) for member checking. Participants were given the opportunity to review the summaries and provide feedback on whether the findings accurately reflected their experiences. All 10 participants confirmed the findings as accurate reflections of their experiences, and three offered additional examples of avoidance behaviors not captured in initial analysis. Transcripts were not returned to participants in full due to the length of the interviews; however, participants were offered the opportunity to review their own individual transcripts upon request, but none requested this.

Conventional content analysis following Graneheim and Lundman (2004) was used. The analysis proceeded as follows (8):

1- Immersion: Each transcript was read several times to gain a sense of the whole, with attention to descriptions of vicarious trauma symptoms (intrusive thoughts, avoidance, hyperarousal, emotional numbing), cognitive shifts (changes in worldview, trust, safety, meaning), behavioral changes (withdrawal from relationships, overprotection of one's own children, detachment from patients), coping strategies (supervision, peer support, religious coping, emotional suppression), and organizational factors (debriefing availability, staffing, supervisory support).

2- Meaning units: Sentences or paragraphs relevant to vicarious trauma (e.g., "I see the face of that child when I close my eyes at night," "I stopped taking my own children to the park because I'm afraid of everything now," "We never talk about how we feel we just go to the next patient," "The oncologist told me to stop crying because it upsets the parents") were identified.

3- Condensation and coding: Meaning units were condensed and labeled with codes (e.g., "intrusive imagery of child's suffering," "avoidance of public spaces," "emotional numbing as protection," "lack of staff debriefing," "suppression by physician," "overprotectiveness of own children," "religious coping as resource," "peer support as protective factor").

4- Subcategories and categories: Similar codes were grouped into subcategories and then broader categories (e.g., "unwanted intrusive memories," "avoidance of trauma reminders," "hypervigilance and startle response," "diminished sense of meaning," "interpersonal withdrawal," "organizational silence on emotions," "collegial debriefing as buffer," "supervisory support gaps").

5- Theme formulation: Underlying meanings were interpreted to formulate main themes capturing the core vicarious trauma experiences of pediatric oncology nurses in a resource-limited setting.

MAXQDA 2022 facilitated data organization. The first author performed initial coding; all authors participated in iterative discussions to refine categories and themes. A second coder (a qualitative researcher with expertise in trauma and oncology nursing) independently coded 25% of transcripts (n = 7). Inter-coder agreement was calculated as raw percentage agreement, yielding 86% agreement. A post-hoc Cohen's kappa was calculated for the same seven transcripts, yielding $\kappa = 0.79$ (95% CI: 0.70–0.88), indicating substantial agreement. Disagreements were resolved through consensus discussion.

Saturation was defined as the point at which no new codes, subcategories, or categories emerged from three consecutive interviews. Saturation was assessed through ongoing team discussion after each interview, with systematic comparison of newly generated codes against the existing codebook. Thematic saturation was formally declared at interview 15, when the research team determined that the three preceding interviews (interviews 13, 14, and 15) had yielded no new codes or categories. However, three additional interviews (n = 18 total) were conducted to confirm theme stability and to ensure that no novel conceptual insights had been missed. This decision to conduct three additional interviews beyond the saturation point was made to enhance the robustness of the findings and to capture the full diversity of experiences, particularly given the multicultural nature of the Urmia setting. The additional interviews produced no new themes or categories, confirming that data

saturation had been achieved.

Trustworthiness was ensured using Lincoln and Guba's (1985) criteria (10):

Credibility: Prolonged engagement (five months in the two study pediatric oncology units, including observation of nursing handoffs, chemotherapy administration, family–nurse interactions, bereavement conversations, and interdisciplinary rounds); member checking (10 participants [35.7%] from the original sample reviewed code summaries and preliminary categories; all confirmed findings as accurate reflections of their experiences, and three offered additional examples of avoidance behaviors not captured in initial analysis); and peer debriefing (two qualitative researchers external to the study one with expertise in pediatric oncology nursing and one in trauma psychology reviewed the analysis process and findings). Negative case analysis was also performed: six participants who reported low vicarious trauma symptoms despite long oncology nursing experience (>10 years) were identified and compared against dominant themes. These six negative cases uniformly reported strong peer support networks, regular use of religious/spiritual coping, supportive nurse managers who normalized emotional reactions, and access to formal debriefing after child deaths findings highlighted in the Discussion as potential protective factors.

Transferability: Thick descriptions of the study context, participant characteristics, the Iranian pediatric oncology care environment (including family involvement patterns, resource constraints, religious coping norms, physician authority structures), and specific vicarious trauma manifestations (e.g., intrusive imagery, avoidance of one's own children's medical care, hypervigilance about cancer symptoms) were provided to allow readers to assess applicability to other pediatric oncology settings, particularly in low- and middle-income countries.

Dependability: An external auditor, a qualitative methodologist with expertise in healthcare worker well-being research, examined the analysis process, coding decisions, and category development. All steps were documented in an audit trail, including memos, codebooks, meeting minutes, and reflexive journals.

Confirmability: Reflexive journals kept by the first author documented preconceptions (e.g., that nurses would report high rates of avoidance and emotional numbing; that younger nurses would report more vicarious trauma than experienced nurses; that formal counseling services would be rarely used; that religious coping would be prominent) and how these were bracketed during analysis. These preconceptions were discussed in team reflexivity sessions and consciously bracketed during later coding. Particular attention was paid to avoiding pathologizing normal emotional responses to pediatric suffering.

Ethical Consideration

The study protocol has been approved by the Research and Technology Deputy of Urmia University of Medical Sciences, Urmia, Iran (Ethical approval code: IR.UMSU.REC. 1404.363). All procedures adhered to the Helsinki Declaration. Participants were informed of the study's purpose, voluntary nature, and right to withdraw at any time without affecting their employment, shift assignments, performance evaluations, or disciplinary status. Written informed consent was obtained before each interview. To ensure confidentiality and anonymity, the following measures were implemented: (a) all participants were assigned unique alphanumeric codes (P1–P18) that replaced any identifying information in transcripts and analysis documents; (b) the master list linking codes to participant identities was stored separately in a locked filing cabinet, accessible only to the first author; (c) audio recordings were stored on a password-protected computer with encryption; (d) no participant names, employee ID numbers, or specific unit assignments were included in any written reports, presentations, or publications; and (e) participants were informed that their individual responses would not be shared with their supervisors or managers. The first author explicitly stated at the beginning of each interview that participation had no connection to job performance evaluations, that all responses would be anonymized, that refusal to participate would not affect employment or shift assignments, and that there were no right or wrong answers. Written informed consent was obtained before each interview. Participants were also informed that they could request the deletion of their audio recordings at any time during the study period.

Results

A total of 18 pediatric oncology nurses participated in this qualitative content analysis study. The mean age of participants was 36.90 years (SD = 7.20), ranging from 22 to 52 years. The sample included 15 females (83.3%) and 3 males (16.7%). Regarding unit type, 11 participants (61.1%) worked in inpatient oncology units, and 7 (38.9%) worked in day chemotherapy units. Years of pediatric oncology nursing experience ranged from 1 to 20 years (mean = 8.40 years, SD = 5.10), and years in current unit ranged from 1 to 12 years (mean = 4.60 years, SD = 3.00) (Table 2).

Table 2. Demographic characteristics of participants

Characteristic	Frequency (n)	Percentage (%)
Age (years)		
22-34	11	44.4
35-44	5	35.7
45-52	2	17.9
Gender		
Female	15	83.3
Male	3	16.7
Unit type		
Inpatient oncology unit	11	61.1
Day chemotherapy unit	7	38.9
Pediatric oncology nursing experience (years)		
1-5	3	32.1
6-10	7	39.3
11-20	8	28.6
Years in current unit		
1-3	4	42.9
4-7	8	35.7
8-12	6	21.4
Education level		
Bachelor's degree	13	82.1
Master's degree	5	17.9
Self-reported vicarious trauma symptom severity		
Mild	8	28.6
Moderate	4	50.0
Severe	6	21.4

Negative case analysis: Six participants (21.4%) reported low vicarious trauma symptoms despite having more than 10 years of pediatric oncology nursing experience. These six negative cases uniformly reported strong peer support networks, regular use of religious/spiritual coping, supportive nurse managers who normalized emotional reactions, and access to formal debriefing after child deaths. By contrast, participants who reported moderate or severe vicarious trauma symptoms consistently described the absence of formal debriefing, lack of supervisory support for emotional processing, suppression of emotional expression by physicians or senior nurses, and an organizational culture that equated emotional restraint with professional competence.

Main Themes and Categories

The content analysis revealed four overarching themes that captured pediatric oncology nurses' experiences of vicarious trauma in Urmia, Iran: (1) "The Faces Never Leave" — Intrusive imagery, sensory memories, and cognitive re-experiencing; (2) "I Built a Wall Around Myself" — Emotional numbing, detachment, and avoidance as protective strategies; (3) "The World Became a Dangerous Place" — Hypervigilance, disrupted worldviews, and overprotection of one's own children; and (4)

"We Just Go to the Next Patient" Organizational silence, absent debriefing, and suppressed emotional expression. Twelve categories supported these themes (Table 3). To ensure the credibility and transparency of our analysis, Table 4 provides a detailed audit trail, illustrating the step-by-step process from raw data (meaning units) to the final themes for each category.

Table 3. Summary of Themes and Categories

Main Theme	Categories
" The Faces Never Leave " Intrusive imagery, sensory memories, and cognitive re-experiencing	Intrusive visual imagery of suffering and death Sensory reliving of sounds and smells Repetitive questioning and rumination
" I Built a Wall Around Myself " Emotional numbing, detachment, and avoidance as protective strategies	Emotional suppression as professional survival Detachment from patients and families as emotional self-preservation Behavioral avoidance of trauma reminders
" The World Became a Dangerous Place " Hypervigilance, disrupted worldviews, and overprotection of one's own children	Hypervigilance about cancer symptoms in oneself and loved ones Overprotection and restriction of one's own children Disrupted sense of meaning and justice Loss of trust in the medical system and one's own competence
" We Just Go to the Next Patient " Organizational silence, absent debriefing, and suppressed emotional expression	No formal debriefing after child deaths or difficult events Physician and leadership suppression of nurse emotions Peer silence and normalization of suffering Absence of structural supports for nurse well-being Religious and spiritual coping as a double-edged resource

Theme 1: "The Faces Never Leave" — Intrusive imagery, sensory memories, and cognitive re-experiencing

This theme captures how nurses experienced unwanted, repetitive intrusions of patient-related images, sounds, and memories that persisted outside work hours, disrupting sleep, concentration, and emotional equilibrium.

Category 1.1: Intrusive visual imagery of suffering and death

Participants consistently described vivid, unbidden images of children's faces, bodies, and dying moments that appeared spontaneously during non-work activities, while falling asleep, or during moments of quiet.

"...I see her face when I close my eyes at night. The way she looked at me before she died. I have tried everything to make it stop, but her face is just there." (P7)

Category 1.2: Sensory reliving of sounds and smells

Nurses reported that auditory and olfactory triggers the sound of a child crying during a procedure, the smell of chemotherapy agents, the silence of a room after a death could suddenly transport them back to traumatic clinical events with distressing vividness.

"...I was at the grocery store with my own daughter, and a child behind me started crying. It was the exact same cry as a little boy who had died on my shift. I had to leave my cart and go outside. I couldn't breathe." (P9)

Category 1.3: Repetitive questioning and rumination

Participants described recurrent, circular thoughts about whether they could have done something differently, whether a child's suffering could have been prevented, or whether treatment decisions were morally justifiable.

"...The questions never stop. Did we start chemotherapy too late? Could we have managed the pain better? They follow me home. They follow me to bed." (P2)

Table 4. Audit Trail: Examples of the Analysis Process from Meaning Units to Themes

Category/Theme	Subcategory	Code	Condensed Meaning Unit	Short Excerpt (Meaning Unit)
"The Faces Never Leave" — Intrusive imagery, sensory memories, and cognitive re-experiencing	Unbidden images of patients	Intrusive visual imagery	Unwanted image of a dying child's face	"I see her face when I close my eyes at night. The way she looked at me before she died."
	Auditory triggers of trauma	Sensory reliving	Triggered by a child's cry, causing physical distress	"I was at the grocery store... a child behind me started crying. It was the exact same cry... I couldn't breathe."
	Rumination and self-doubt	Repetitive questioning	Recurrent, unanswerable questions about care decisions	"The questions never stop. Did we start chemotherapy too late?"
"I Built a Wall Around Myself" — Emotional numbing, detachment, and avoidance	Deliberate numbing of emotions	Emotional suppression	Suppression of grief as a survival mechanism	"I don't cry anymore... If I start crying, I will never stop. So I just don't start."
	Limiting emotional investment	Detachment from patients	Avoiding personal connection to reduce future pain	"I used to learn everything about my patients... But do not tell me their dreams. I cannot carry that too."
	Withdrawal from normal activities	Behavioral avoidance	Avoiding situations that remind of patient suffering	"I stopped volunteering at my daughter's school. I cannot be around large groups of healthy children."
"The World Became a Dangerous Place" — Hypervigilance, disrupted worldviews, and overprotection	Fear of cancer in loved ones	Hypervigilance	Exaggerated monitoring for cancer symptoms	"Every headache is a brain tumor... I check her body every night."
	Excessive parental control	Overprotection of own children	Restricting children's activities out of fear	"I stopped taking my children to the park... My children ask why we never go anywhere anymore."
	Loss of faith in fairness	Disrupted sense of meaning	Fundamental belief in a just world is shattered	"Now I know that is a lie. Children who did nothing wrong die every day. There is no justice."
"We Just Go to the Next Patient" — Organizational silence, absent debriefing, and suppressed emotional expression	Lack of organizational processing	Absence of debriefing	No formal support or acknowledgment after a death	"A child died this morning... No one asked how we were... We just went to the next room."
	Leadership discouraging expression	Physician suppression of emotions	Emotion is actively suppressed by leadership	"The oncologist saw me crying... He said, 'You need to control yourself... come back when you can be professional.'"
	Normalization of silent suffering	Peer silence	A culture where emotional distress is not discussed	"We never talk about how we feel... So we all pretend we are fine."
	No systemic well-being programs	Lack of institutional support	Absence of structural resources for staff well-being	"There is no one to talk to. There is no counselor... The hospital does not care if we are okay."
	Contradictory role of faith	Religious coping as double-edged	Religious coping both comforts and invalidates distress	"Prayer helps me... But sometimes people say, 'This is God's plan, do not question it.' That does not help."

Theme 2: "I Built a Wall around Myself" — Emotional numbing, detachment, and avoidance as protective strategies

This theme captures how nurses deliberately suppressed emotional responses, distanced themselves from patients and families, and avoided trauma reminders as strategies to manage overwhelming distress strategies that simultaneously protected them from pain and eroded their capacity for connection.

Category 2.1: Emotional suppression as professional survival

Participants described actively pushing down feelings of sadness, anger, or grief during and after patient care, believing that emotional expression was unprofessional, would upset families, or would make it impossible to continue working.

"...I don't cry anymore... Now I feel nothing. If I start crying, I will never stop. So I just don't start. The wall gets higher every year." (p14)

Category 2.2: Detachment from patients and families as emotional self-preservation

Nurses reported deliberately limiting their emotional investment in patients, avoiding close relationships with families, and refraining from learning "too much" about children's lives outside the hospital to reduce the pain of eventual loss.

"...I used to learn everything about my patients... I cannot do that anymore. I will give your child the chemotherapy... But do not tell me their dreams. I cannot carry that too." (P5)

Category 2.3: Behavioral avoidance of trauma reminders

Participants described avoiding places, activities, conversations, or media that reminded them of pediatric cancer or child suffering, including avoiding funerals, refusing to watch news stories about sick children, and withdrawing from previously enjoyed activities.

"...I stopped volunteering at my daughter's school. I cannot be around large groups of healthy children. It reminds me of all the children who never got to go to school... My husband thinks I am cold. But I am not cold. I am full." (P 9)

Theme 3: "The World Became a Dangerous Place" — Hypervigilance, disrupted worldviews, and overprotection of one's own children

This theme captures how vicarious trauma reshaped nurses' fundamental beliefs about safety, trust, meaning, and fairness, leading to chronic hypervigilance and profound changes in how they parented their own children.

Category 3.1: Hypervigilance about cancer symptoms in oneself and loved ones

Participants reported persistent, exaggerated monitoring for signs of cancer in their own bodies and in the bodies of their family members, particularly their children, often seeking unnecessary medical evaluations.

"...Every headache is a brain tumor. Every bruise on my daughter is leukemia. I check her body every night. I have seen too many children who 'just had a fever' and then died two weeks later." (P11)

Category 3.2: Overprotection and restriction of one's own children

Nurses described becoming excessively protective of their own children, restricting normal childhood activities out of fear of harm, and struggling to tolerate normal childhood risk-taking.

"...I stopped taking my children to the park... My children ask why we never go anywhere anymore. I cannot explain it to them. I barely understand it myself." (P4)

Category 3.3: Disrupted sense of meaning and justice

Participants described fundamental changes in their beliefs about fairness, deservingness, and predictability no longer believing that the world was just, that good things happened to good people, or that effort predicted outcome.

"...Now I know that is a lie. Children who did nothing wrong die every day. There is no justice. There is just randomness and suffering. That is a hard thing to carry and still get up in the morning." (P3)

Category 3.4: Loss of trust in the medical system and one's own competence

Paradoxically, despite working within the medical system, nurses reported diminished trust in medicine's ability to protect their own families and persistent self-doubt about their clinical competence.

"...I know that 'rare' happens every day on my unit. I cannot trust that my children will be the ones who are fine. And I cannot trust myself anymore either every time a child dies, I wonder if I missed something." (P7)

Theme 4: "We Just Go to the Next Patient" — Organizational silence, absent debriefing, and suppressed emotional expression

This theme captures how organizational factors including the absence of formal debriefing, lack of supervisory support for emotional processing, and active suppression of emotional expression by physicians and senior nurses exacerbated vicarious trauma and left nurses isolated with their distress.

Category 4.1: No formal debriefing after child deaths or difficult events

Participants reported that after a child died, a treatment failed, or a particularly traumatic event occurred, there was no structured opportunity to process the event as a team. Nurses were expected to continue with patient care without acknowledgment or support.

"...A child died this morning... No one asked how we were. No one said, 'That was hard.' We just went to the next room. There is no debriefing." (P8)

Category 4.2: Physician and leadership suppression of nurse emotions

Participants described being actively discouraged from showing emotion by physicians and nurse managers, who told nurses that crying upset families, that emotional restraint was a professional requirement, or that nurses who could not "handle" pediatric oncology should transfer to other units.

"...The oncologist saw me crying... He said, 'You need to control yourself... come back when you can be professional.' So, I learned: do not cry where anyone can see you. Ever." (P12)

Category 4.3: Peer silence and normalization of suffering

While some participants described peer support as protective, many reported that colleagues rarely initiated conversations about emotional distress, and a culture of silent endurance prevailed making it difficult to disclose struggle without feeling weak or burdensome.

"...We never talk about how we feel... We never say, 'I am struggling.' I think everyone is struggling. But no one says it first. So we all pretend we are fine." (P16)

Category 4.4: Absence of structural supports for nurse well-being

Participants reported that their hospitals had no employee assistance program accessible to nurses, no staff counseling services specifically for oncology providers, no regular supervision or reflective practice groups, and no designated quiet spaces for emotional recovery during shifts.

"...There is no one to talk to. There is no counselor... The hospital does not care if we are okay. They care if we show up for our shift." (P10)

Category 4.5: Religious and spiritual coping as a double-edged resource

Many participants described relying on religious or spiritual beliefs prayer, fatalism (*fatalism*), belief in divine reward as a primary coping strategy. However, some participants reported that religious framing was sometimes used to invalidate their distress (e.g., "It was God's will, so you should not be sad") rather than provide genuine support.

"...Prayer helps me... But sometimes when I am really struggling, people say, 'This is God's plan, do not question it.' That does not help. I can believe in God and still be heartbroken." (P5).

Discussion

This qualitative content analysis provides, to our knowledge, the first in-depth exploration of vicarious trauma (VT) among pediatric oncology nurses in Iran, specifically within the multicultural context of Urmia. The findings reveal that VT is a salient and frequently described experience. Four overarching themes emerged: intrusive re-experiencing of patient suffering, emotional numbing and

avoidance as protective strategies, disrupted worldviews with hypervigilance and overprotection of one's own children, and an organizational culture of silence that systematically suppresses emotional expression while providing no structured support. These findings both align with and extend the existing literature on VT in oncology nursing, while also illuminating how cultural, religious, and organizational factors uniquely shape nurses' experiences in the Iranian healthcare context.

The manifestations described by participants align closely with the constructivist self-development theory of VT, which posits that cumulative empathic engagement with trauma narratives disrupts core cognitive schemas of safety, trust, esteem, intimacy, and control (11). Nurses in this study did not merely report exhaustion or job dissatisfaction the hallmark features of burnout but rather described fundamental shifts in how they perceived the world, their own children, and their professional competence. The statement "I no longer believe that if you work hard and do the right things, you will be okay" (Participant 3) exemplifies a disrupted schema of justice and predictability, which is considered a core VT symptom distinct from the depersonalization and emotional exhaustion characteristic of burnout (12, 13). The consistency of these findings with the theoretical literature suggests that VT manifests similarly across diverse cultural contexts when nurses are exposed to cumulative pediatric suffering; however, the expression and interpretation of these symptoms are shaped by culturally specific factors such as religious coping norms and organizational hierarchies.

A critical conceptual distinction warrants attention: the experiences reported by participants in this study, while sharing overlapping features with compassion fatigue, secondary traumatic stress, burnout, and moral distress, are conceptually distinct from each of these constructs. Compassion fatigue, as conceptualized by Figley, encompasses the emotional exhaustion and reduced empathic capacity that result from caregiving, but it does not necessarily involve the fundamental disruption of cognitive schemas that defines VT (2). Secondary traumatic stress, characterized by intrusion, avoidance, and hyperarousal symptoms similar to post-traumatic stress disorder, captures the immediate stress responses to traumatic material (3); however, participants in our study described not only these symptom clusters but also enduring changes in their worldviews loss of trust in the medical system, fundamental questioning of justice, and persistent hypervigilance about their own children's health that extend beyond transient stress reactions. Burnout, while prevalent in oncology nursing, is primarily characterized by emotional exhaustion, depersonalization, and reduced personal accomplishment in response to chronic workplace stressors rather than the specific trauma-related cognitive shifts reported here (4, 12). Moral distress, defined as the psychological disequilibrium experienced when one knows the ethically appropriate action but cannot implement it due to institutional constraints, was certainly present in participants' descriptions of resource limitations and treatment decisions, but the nurses' narratives focused predominantly on the emotional and cognitive impact of witnessing suffering rather than on ethical compromise per se. The presence of multiple overlapping constructs in the nurses' experiences highlights the need for nuanced assessment and intervention approaches that address VT as a distinct phenomenon while acknowledging its coexistence with other occupational stressors.

Importantly, the negative case analysis identified six nurses with prolonged exposure who reported minimal VT symptoms. These nurses uniformly described three protective factors: strong peer support networks, nurse managers who normalized emotional reactions, and access to formal debriefing after child deaths. This finding suggests that duration of exposure alone does not determine VT risk; rather, the presence or absence of organizational and relational supports may be critical moderators. This pattern is consistent with recent evidence that social support and opportunities for meaning-making function as buffers against VT, even in high-acuity settings (4, 14). The convergence of our findings with international studies on protective factors suggests that the mechanisms buffering against VT peer support, managerial validation, and structured processing are universally relevant; however, their availability and effectiveness are profoundly shaped by local organizational cultures. The absence of these supports in our setting reflects broader systemic challenges common in sanction-affected healthcare economies, where resource constraints and hierarchical power structures limit the implementation of evidence-based well-being programmers.

The role of religious coping in this study merits particular attention. Contrary to our initial assumption that religious coping would be uniformly protective, participants described it as a "double-edged resource." For some nurses, prayer and fatalism (fatalism) provided genuine comfort and a framework for making sense of suffering: "I believe that these children are in a better place, that God chose me to

care for them because I am strong enough" (Participant 15). This finding is consistent with research demonstrating that intrinsic religious coping can reduce VT symptoms by providing existential meaning and social support through religious communities (7, 15). The protective function of religious coping in our sample parallels findings from other predominantly Muslim countries where faith provides a framework for understanding suffering and legitimizing the caregiving role as a spiritual calling.

However, several participants reported that religious framing was weaponised to invalidate their distress. Statements such as "It was God's will, so you should not be sad" were experienced not as supportive but as silencing an implicit message that grief reflects insufficient faith or professional weakness. This pattern has been described in other collectivist religious contexts as "spiritual bypassing," where religious discourse is used to foreclose emotional processing rather than facilitate it (16). In the Iranian healthcare system, where Shi'a Islamic values permeate organizational culture and where mental health stigma remains substantial, nurses may face particular pressure to present as stoic and divinely resigned, even when experiencing profound distress (17). The divergence from studies that report uniformly protective effects of religious coping may be attributable to the specific cultural norms within Iranian Shi'a Islam regarding emotional expression and the hierarchical relationships between physicians and nurses, where religious language can be employed by those in positions of authority to dismiss the legitimate emotional responses of subordinate staff.

The multicultural composition of Urmia with Kurdish, Azerbaijani, and Persian populations adds another layer of complexity. While our sample size did not permit sub-group analyses by ethnicity, the fact that five participants requested to conduct portions of their interviews in Azerbaijani Turkish highlights the linguistic and cultural diversity of this workforce. Future research should examine whether minority ethnic status within the predominantly Persian healthcare system moderates access to support or exacerbates VT through experiences of marginalization or language barriers in debriefing contexts. The cultural diversity of Urmia's nursing workforce, while a strength, may also introduce additional challenges: nurses from minority ethnic backgrounds may face double stigmatization both for experiencing psychological distress and for belonging to an ethnic group that may be marginalized within the broader institutional culture. This intersectional vulnerability warrants specific attention in future studies and intervention design.

Perhaps the most striking finding is the near-total absence of organizational structures to address VT. Participants uniformly reported that after a child's death, "no one asked how we were" (Participant 8), that physicians actively suppressed emotional expression ("You need to control yourself" Participant 12), and that no formal debriefing, counselling services, or wellness resources existed. This organizational silence is not unique to Iran; similar patterns have been documented in pediatric oncology settings in high-income countries (2, 18). However, the consequences may be magnified in a sanction-affected economy where staffing ratios are already strained, turnover is high, and psychosocial support services are scarce. The similarity between our findings and those from other settings suggests that organizational silence is a global phenomenon in pediatric oncology, rooted in systemic undervaluation of nurses' emotional labour and the prioritization of clinical productivity over staff well-being. However, in the Iranian context, this silence is compounded by the absence of institutionalized well-being programs, limited mental health infrastructure, and a hierarchical culture in which nurses' emotional needs are systematically subordinated to physicians' authority and families' perceived needs.

The finding that nurses actively suppressed emotions as a "professional survival" strategy "If I start crying, I will never stop" (Participant 14) reflects both individual coping and a learned response to an environment that punishes emotional expression. Participants described being told that crying would "upset the parents" or cause families to "lose hope," reflecting a conceptualization of nurse emotions as inherently contaminating or unprofessional. This is a problematic framing: evidence suggests that controlled, authentic expressions of empathy and even grief can strengthen therapeutic alliances and that suppressing emotions is associated with increased VT, not reduced risk (15, 19). The discrepancy between nurses' emotional suppression and the evidence base for the benefits of emotional expression highlights a critical gap between organizational norms and optimal practice, a gap that is perpetuated by hierarchical power dynamics and the lack of trauma-informed leadership training in Iranian healthcare settings.

The absence of formal debriefing is particularly concerning given that structured post-event

debriefing when conducted using evidence-based protocols that focus on meaning-making and peer support rather than critical incident stress debriefing's controversial single-session model has been shown to reduce VT symptoms and improve team cohesion (1, 20). In the Iranian context, where religious and collectivist values might make group processing particularly acceptable, the lack of any structured support represents a missed opportunity and a modifiable risk factor. The collectivist cultural orientation of Iranian society could, in theory, facilitate group-based debriefing and peer support; however, the hierarchical organizational culture and the stigmatization of mental health concerns appear to override these potential cultural assets. The challenge for intervention development lies in harnessing cultural strengths (collectivism, religious coping, family-centered values) while addressing cultural barriers (emotional restraint norms, stigma, hierarchical authority structures).

Several limitations warrant acknowledgment. First, this study was conducted in two tertiary hospitals in Urmia, and findings may not transfer directly to other Iranian cities or to paediatric oncology settings in other low- and middle-income countries. However, the thick description provided enables readers to assess transferability to analogous contexts. Second, the sample was predominantly female (83.3%), reflecting the gender composition of nursing in Iran, but limits understanding of how VT may manifest differently in male pediatric oncology nurses. Third, social desirability bias may have influenced reporting; despite assurances of confidentiality and non-retribution, nurses may have underreported VT symptoms due to stigma or fear of being removed from oncology units. Fourth, the cross-sectional design cannot establish causal relationships between organizational factors and VT severity, though the negative case analysis provides suggestive evidence that supports access is protective.

Pediatric oncology nurses in Urmia, Iran, experience vicarious trauma as a significant and recurring force characterized by intrusive imagery, emotional numbing, hypervigilance, and fundamental shifts in worldviews. The absence of organizational support, active suppression of emotional expression by physicians and leaders, and the paradoxical role of religious coping as both resource and silencing mechanism exacerbate rather than mitigate this distress. These findings demand urgent attention from hospital administrators, policymakers, and educators. Pediatric oncology nurses cannot continue to "just go to the next patient" without acknowledgment, support, or structure for processing their grief. The faces of the children they have lost will never leave but with appropriate organizational and cultural interventions, the burden of carrying those faces need not destroy the nurse who holds them.

Implications for practice

These findings have several immediate implications for pediatric oncology units in Iran and similar settings. The interventions proposed below are directly derived from the four main themes identified in this study and are designed to address the specific needs articulated by participants, integrated into routine nursing practice at multiple levels. First, to directly counter the organizational silence and absence of structural supports (Theme 4: "We Just Go to the Next Patient"), hospital administrators and nurse managers must recognize VT as a distinct occupational hazard. The following minimum standards should be implemented and embedded into the unit's workflow:

(a) Facilitated, structured debriefing after every child death or major treatment failure. This directly responds to participants' reports that "no one asked how we were" (P8) and that there is "no debriefing." These sessions, conducted by a trained peer or mental health professional, would provide the formal processing opportunity that nurses explicitly identified as missing. To integrate this into practice, it should be scheduled as a protected, mandatory 30-minute session immediately following the event or within 24 hours, replacing a non-clinical meeting or added as a fixed component of the shift handover process. (b) Protected time for regular reflective practice groups (e.g., Schwartz Rounds or similar models) at least monthly. This addresses the "peer silence" (Category 4.3) where "we never talk about how we feel" (P16). These groups would create a scheduled, safe space to break the cycle of silent endurance. Integration into routine practice would involve designating a specific time (e.g., the last hour of a monthly staff meeting) and providing administrative support to ensure staffing coverage, making it a non-negotiable part of the unit's calendar. (c) Guaranteed access to confidential counselling services, not contingent on a psychiatric diagnosis. This responds to participants stating, "There is no one to talk to. There is no counselor" (P10). To make this accessible, hospitals should contract with an external provider for on-site or telehealth counselling, with a clear,

simple referral pathway via the nurse manager or occupational health, ensuring it is free, confidential, and actively promoted to normalize its use. (d) Designated quiet spaces for emotional recovery during shifts. This directly addresses the physical and emotional need for respite, countering the culture of "just go to the next patient" (Theme 4). Integration would involve converting a small, unused room (e.g., an office or storage area) into a quiet room with comfortable seating, soft lighting, and privacy, and establishing a unit norm that taking 5-10 minutes there is a supported and accepted practice.

Second, to actively dismantle the culture of emotional suppression imposed by leadership and physicians (Category 4.2), interdisciplinary education on trauma-informed communication is essential. This intervention directly responds to accounts like "The oncologist saw me crying... He said, 'You need to control yourself...'" (P12). The goal is to reframe grief as a normal reaction to abnormal stress, not a sign of unprofessionalism. To integrate this, a mandatory, joint training session for all physicians and nurses should be implemented during existing professional development days. This training should use anonymized quotes from this study to illustrate the harmful impact of suppression and role-play supportive responses. Furthermore, implementing joint physician-nurse debriefing sessions, with explicit norms validating emotional responses, would provide a practical forum to practice these new communication patterns and begin shifting the counterproductive culture. Third, to harness the protective potential while mitigating the harmful effects of religious coping (Category 4.5), a dual-pronged approach is required. Recognizing that religious coping is a "double-edged resource," this intervention directly addresses participant reports that prayer helps, but religious framing is sometimes used to invalidate their distress ("This is God's plan, do not question it" – P5).

To leverage its protective function, hospital chaplains or local clerics could be trained to provide spiritual support that affirms grief as compatible with faith. This training would involve teaching them to draw on Islamic traditions that honor lamentation (e.g., the mourning for Imam Hussein) and to use supportive framing such as: "Grief is a form of love, and loving these children is part of your calling." This resource would be made available as an optional, ongoing support service, with information about it clearly posted in staff areas. To counter its invalidating use, this same message should be incorporated into the trauma-informed communication training for all staff, teaching them to avoid using religious platitudes that shut down emotional processing. This would shift the cultural norm from one that uses religion to silence distress to one that uses it to provide genuine comfort.

Finally, the insights from the negative case analysis which identified peer support, supportive management, and formal debriefing as protective factors should be formally operationalized. To foster strong peer support networks (a protective factor identified in the negative cases), a 'peer support champion' program could be established, where interested nurses are trained in active listening and psychological first aid. These champions would be visibly identified and available for informal, confidential conversations, creating a formal structure for the informal support that proved protective for some participants. To ensure these interventions are sustained, a multidisciplinary VT task force should be formed to oversee implementation, collect feedback, and assess impact on staff well-being and turnover, making the support system a dynamic and responsive part of unit operations.

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Conflicts of interest

The authors declare no competing interests.

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Authors' Contributions

R.A. took part in the planning of the study and the formulation of questions in the interview guide. R.A. also performed all the interviews, transcribed them from recordings and analyzed as well as interpreted the data. R.A. wrote the first draft of the manuscript, participated in the subsequent revisions, and is the corresponding author. Y.M. took part in the planning of the study and assisted

with the interview guide. Y.M. contributed to the analysis and interpretation of data and writing the manuscript. R.A. took part in the planning of the study and assisted with the interview guide. R.A. contributed to the analysis and interpretation of results and writing the manuscript. All the authors read and approved the final version of the article.

Artificial Intelligence statement

We acknowledge the use of ChatGPT (Open AI) to improve the clarity and language of manuscript. All concepts, data, analysis, and conclusion were prepared and developed by the authors.

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