



Dimensions of anxiety in families of children hospitalized during the pandemic: a mixed methods study

Dimensiones de la ansiedad en familias de niños hospitalizados durante la pandemia: un estudio de métodos mixtos

Dimensões da ansiedade em famílias de crianças hospitalizadas durante a pandemia: um estudo de métodos mistos

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ABSTRACT

Introduction: Illness and hospitalization in children, in addition to their physical and emotional impact, are stressful events that expose families to feelings of vulnerability, which can trigger anxiety.

Objective: To analyze the anxiety of family members accompanying children during hospitalization.

Methods: This study adopted a mixed-methods, parallel, and convergent design. The sample was comprised of families of children admitted to the pediatric ward of a Brazilian hospital. **Results:**

Moderate levels of anxiety were observed among family members, particularly feelings of tension, helplessness, and exhaustion associated with the hospital environment and caregiving responsibilities.

Qualitative data revealed emotional distress but also highlighted healthcare team support, family support, and faith as protective factors. Data integration showed that despite suffering, support networks and spirituality help mitigate the effects of anxiety. **Conclusions:** The study revealed high levels of anxiety among caregivers during pediatric hospitalization in the pandemic, influenced by factors such as isolation and prolonged admissions. Family support and interaction reduced anxiety.



It is recommended to restructure nursing practices to ones that value family presence and support in hospital care.

Keywords: Anxiety; Family; Hospitalization; Nursing; Pediatrics.

RESUMEN

Introducción: La enfermedad y la hospitalización de los niños, además de un impacto físico y emocional, son eventos estresantes que exponen a la familia a sentimientos de vulnerabilidad que pueden desencadenar ansiedad. **Objetivos:** analizar la ansiedad de los familiares que acompañan a los niños durante la hospitalización. **Método:** diseño de métodos mixtos, paralelo y convergente, realizado con familiares de niños ingresados en una sala de pediatría de un hospital brasileño. **Resultados:** los resultados indican niveles moderados de ansiedad entre los familiares, con énfasis en sentimientos de tensión, impotencia y agotamiento asociados al ambiente hospitalario y a la responsabilidad por el cuidado del niño. Los datos cualitativos revelan angustia emocional, pero también identifican la acogida del equipo sanitario, el apoyo familiar y la fe como factores de protección. La integración de los datos muestra que, a pesar del sufrimiento, las redes de apoyo y la espiritualidad ayudan a mitigar los efectos de la ansiedad. **Conclusiones:** la investigación reveló altos niveles de ansiedad entre los cuidadores durante la hospitalización de los niños, influidos por factores como el aislamiento y las estancias hospitalarias prolongadas. El apoyo familiar y la socialización mitigaron la ansiedad. Se recomienda reestructurar las prácticas de enfermería para valorar la presencia y el apoyo de la familia en la atención hospitalaria.

Palabras Claves: Ansiedad; Familia; Hospitalización; Enfermería; Pediatría.

RESUMO

Introdução: A doença e a hospitalização das crianças, além do impacto físico e emocional, são eventos estressantes que expõem as famílias a sentimentos de vulnerabilidade que podem desencadear ansiedade. **Objetivos:** analisar a ansiedade dos familiares que acompanham a criança durante a hospitalização. **Métodos:** delineamento de métodos mistos, paralelo e convergente, realizado com famílias de crianças internadas em enfermaria pediátrica de um hospital brasileiro. **Resultados:** observou-se níveis moderados de ansiedade entre os familiares, com destaque para sentimentos de tensão, impotência e esgotamento associados ao ambiente hospitalar e à responsabilidade com o cuidado da criança. Os dados qualitativos revelam sofrimento emocional, porém também identificam o acolhimento da equipe de saúde, apoio familiar e fé como fatores protetores. A integração dos dados evidencia que, apesar do sofrimento, redes de apoio e espiritualidade ajudam a mitigar os efeitos da ansiedade. **Conclusões:** A pesquisa revelou níveis elevados de ansiedade entre cuidadores durante a hospitalização infantil na pandemia, influenciados por fatores como isolamento e internações prolongadas. Apoio familiar e convivência atenuaram a ansiedade. Recomenda-se reestruturar práticas de enfermagem que valorizem a presença e o suporte à família nos cuidados hospitalares.

Palavras-Chave: Ansiedade; Família; Hospitalização; Enfermagem; Pediatria.

INTRODUCTION

The child population requires new and specific models of care. Health problems in children are mainly caused by vulnerabilities related to the families' social and economic contexts, high household density, and caregivers' low educational levels, among other factors contributing to illness and hospitalization.^{1,2}

Beyond their impact on physical and emotional wellbeing, illness and hospitalization are stressful events that expose families to vulnerability. This manifests as disrupted expectations, disturbance of normalcy, and confrontation with the unknown, accompanied by fear.^{3,4} The effects are perceived by family members, affecting the organization and routine of all and leading to changes in their internal and external structure, which affect the actions and interactions of the family.^{4,5}

In the hospital context, family presence is fundamental, serving as a pillar for children by alleviating feelings of distress, fear, and insecurity.^{5,6} However, it is important to emphasize that the person caring for the child may also experience emotional distress during a hospital stay because of their responsibility as the primary caregiver. These situations can trigger feelings of anguish and anxiety, in addition to causing overload due to the accumulation of demands, as well as physical and mental exhaustion.⁷⁻⁹

Thus, the family member responsible for accompanying the child during hospitalization may become more anxious and experience feelings of guilt, since the family dynamic is completely altered, resulting in biopsychosocial changes. Furthermore, there is a constant need to obtain information about the child's health status.^{10,11} These factors and behaviors may negatively impact the treatment and hospital stay of pediatric patients, as family suffering reduces their ability to provide support, comfort, and meet the child's daily needs. Children are also able to perceive the suffering of their families, which can worsen illness and prolong treatment and hospitalization.^{12,13}

In this context, the following questions arise: What are the levels of anxiety among family members during hospitalization, and how do they affect the care and support provided to hospitalized children? What has the hospitalization experience been like for families? Accordingly, this study aims to analyze the level of anxiety of family members accompanying children during hospitalization.

METHODOLOGY

This study adopted a mixed-methods approach with a parallel-convergent design, which consisted of the simultaneous collection of quantitative and qualitative data to deepen the understanding of the research problems and objects of study.¹⁴ Several points of integration between these methods were considered. Initially, quantitative data were collected from 30 participants. Subsequently, the research team conducted interviews to address the qualitative questions until reaching data saturation. Finally, data analysis involved triangulation of the quantitative and qualitative results.

The participants were family members of children hospitalized in the pediatric ward of a public hospital in the state of Mato Grosso do Sul, Brazil, between September and October 2020. During this period, the hospital implemented visitation restrictions, allowing changes only every 24 hours due to the COVID-19 pandemic.

Inclusion criteria comprised caregivers who were present in the ward at the time of data collection, had a minimum stay of five days, and agreed to participate in the study. Visitors under the age of 18 were excluded.

The population size was determined based on the average hospital admissions during the three months preceding the study. A finite sample calculation approach was applied for sample selection, stratified by proportion. The minimum sample size was 27 participants, with a 95% confidence level, a 5% margin of error, and a 5% prevalence, to optimize the accuracy of the results. To prevent potential losses or refusals, an additional 10% was added, resulting in a final sample of 30 participants.

Two quantitative data collection instruments were employed in this study. The State-Trait Anxiety Inventory (STAI), adapted into Brazilian Portuguese (IDATE), was used to assess anxiety both as a general trait and as a temporary state in the adult population. This instrument comprises a Trait-Anxiety scale (20 statements) that assesses how often individuals feel anxious, ranging from "almost never" (1) to "almost always" (4), and a State-Anxiety scale (20 statements) that evaluates the level of anxiety "at this moment," with scores ranging from "not at all" (1) to "very much" (4). Scores on both scales range from 20 to 80 points.¹⁵

Additionally, a sociodemographic questionnaire was employed to characterize the study participants, encompassing information about both the family members and the children/adolescents involved in the research. This form also enabled correlating the collected variables with the outcomes of the STAI (IDATE).¹⁶

Qualitative data collection followed the saturation criterion, which was reached after 14 interviews, once the data began to recur and no new individual analytic insights emerged. The interviews were semi-structured, developed by the authors, and validated by an expert panel. They were conducted with the same participants who had completed the STAI. The guide addressed the impacts of hospitalization on the family context and the experiences of accompanying caregivers in relation to the children/adolescents, with prompts such as: "What has this period of hospitalization for [your child's name] been like for you?", "How would you describe your feelings at this moment?", and "Please comment on the positive and negative aspects of this hospitalization experience."

Interviews took place in a designated room with open windows to ensure adequate ventilation, maintaining a minimum distance of 1.5 meters between the researcher and each participant; mask use was strictly enforced.

Each participant contributed a single interview, which was audio-recorded and transcribed verbatim, with an average length of 42 minutes. To facilitate data processing, each interview received an identifier code ("F1," "F2," "F3," etc.).

For qualitative analysis, we employed Qualitative Content Analysis as proposed by Morse and Field.¹⁶ Initially, interviews were digitally recorded from participants' narratives, allowing insight into the family's daily life and interactions. The accounts were then transcribed and organized chronologically, followed by careful reading to understand the meanings of maternal anxiety in the context of hospitalization. Finally, the data was coded based on similarity and significance.

After the initial coding, the categories were analyzed regarding their internal consistency and interpretive relevance. Data triangulation was conducted using field notes and peer review among the researchers, which enabled the team to validate the categories and refine the emerging meanings. This step deepened the understanding of the phenomenon, ensuring methodological rigor and fidelity to the participants lived experiences.

The quantitative data were entered, tabulated, and organized in Excel, followed by statistical analysis by a statistician using the Statistical Package for the Social Sciences (SPSS, version 26).

For the inferential analysis of the quantitative variables and the State-Trait Anxiety scores, the Shapiro-Wilk test was applied to assess normality assumptions. The t-test was used for bivariate analysis, while multivariate analysis employed ANOVA. For significant variables in the multivariate analysis, post hoc comparisons were conducted using Tukey's test. Correlations between research variables were examined using Spearman's correlation coefficient. Statistical significance was set at $p < .05$.

As part of the mixed - methods approach, we integrated the qualitative and quantitative data. This integration involved analyzing the content of the interviews according to numerical findings, aiming for a deeper interpretation of results. The combined analysis of quantitative and qualitative data, as suggested by Lorenzini (2017), allowed for a more comprehensive understanding of participants' experiences of anxiety during pediatric hospitalization. The family narratives not only supported but also validated the results of the statistical analysis, underscoring the relevance of the mixed-methods approach for a more in-depth examination.

This research followed strict ethical guidelines. The study began after approval from the Research Ethics Committee of Universidade Federal de Mato Grosso do Sul, under CAAE 30714920.30000.0021 and ruling number 4.003.836, issued on May 3, 2020

RESULTS

The study included 30 family members of hospitalized children. Women accounted for 86.7% (n = 26) of the sample, most of whom were aged 31–45 years (56.6%, n = 17), in stable unions (63.3%, n = 19), and had complete or incomplete elementary education (33%, n = 10). The length of hospitalization ranged from 5 to 68 days (see Table N°1).

The main reasons for admission were musculoskeletal conditions (33.3%) and kidney disorders (23.3%).

Anxiety Assessment

According to the STAI (IDATE) results, 16 family members (53.3%) presented low state anxiety, while 13 (43.3%) showed moderate state anxiety. For trait anxiety, 13 participants (43.3%) scored low, while 16 (53.3%) presented moderate scores. These outcomes indicate that most relatives experienced low levels of anxiety during the child's hospitalization, whereas prior to hospitalization, most presented intermediate levels.

In the State-Anxiety scale (STAI-S/IDATE-E), most responses were "1 – Not at all" and "2 – A little," indicating that most family members had low anxiety at the time of hospitalization, as shown in Table N°2.

Most participants (60%) resided in the state capital, while 40% came from rural areas and depended on municipal transportation to reach the hospital.

Regarding the hospitalized children, 50% were female and 50% male. The median age was 7 years, with most enrolled in regular school (83.3%, n = 25) and requiring support during hospitalization.

In the Trait-Anxiety scale (STAI-T/IDATE-T), most responses were "1 – Almost never" and "2 – Sometimes," also indicating that most family members did not present high anxiety prior to hospitalization, as evidenced in Table N°3.

Correlation analysis (Table N°4) revealed that older family members exhibited lower levels of both trait and state anxiety, as did those living with other people and those with more children. Increased trait anxiety was associated with more frequent and prolonged hospitalizations, as well as with the child's older age.

Most family members presented with low anxiety during the child's hospitalization, while prior to hospitalization, most exhibited intermediate levels of anxiety.

Table N° 1: Sociodemographic characteristics of relatives of hospitalized children. Campo Grande-MS. 2020. N=30.

Characteristics	N(%)
Age of family members	
18 – 30 years old	9(30)
31 – 40 years old	17(56,6)
41 – 50 years old	3(10)
>50 years old	1(3,3)
Kinship	
Mother	21(70,0)
Father	3(10,0)
Stepmother	1(3,3)
Stepfather	1(3,3)
Brother/Sister	1(3,3)
Uncle/Aunt	2(6,7)
Grandmother/Grandfather	1(3,3)
Marital status	
Married/Stable Union	19(63,3)
Single/Widowed/Divorced	11(36,7)
Education	
Elementary School	10(33,3)
Middle School	10(33,3)
High School	8(26,7)
Complete Bachelor's degree	1(3,3)
Incomplete Bachelor's Degree	1(3,3)
Family Income	
<1 Minimum wage	8(26,7)
1-3 Minimum wage	17(56,7)
3-6 Minimum wage	4(13,3)
No rent	1(3,3)

Source: Created by authors.

The central theme, Interruption of Life, emerged from the qualitative data. This theme represents the various repercussions that hospital admission had on the family members' lives. This theme reflects the stagnation of daily and routine activities, as well as lifestyle changes due to hospitalization or circumstances beyond the family's control.

The interruption of family life emerged from factors related both to the hospitalization itself and to the COVID-19 pandemic. This process resulted in three thematic categories: Family members' feelings and demands during hospitalization; Impact of the COVID-19 pandemic in the context of child hospitalization and family routine; and Support networks for family members.

Table N°2: Characterization of the State-Trait Anxiety Inventory (STAI-E) answered by family members of children admitted to the Pediatric ward of the Maria Aparecida Pedrossian University Hospital. Campo Grande – MS (2020). N = 30.

	Not at all	A little	Somewhat	Very Much So
	N(%)	N(%)	N(%)	N(%)
E3 – I feel tense	9(30,0)	11(36,7)	5(16,7)	5(16,7)
E4 - I feel strained	23 (76,7)	2(6,7)	2(6,7)	3(10,0)
E6 - I feel upset	21 (70,0)	4(13,3)	3(10,0)	2(6,7)
E7 - I am presently worrying over possible misfortunes	15 (50,0)	4(13,3)	4(13,3)	7(23,3)
E9 - I feel frightened	14 (46,7)	5(16,7)	7(23,3)	4(13,3)
E12 - I feel nervous	13 (43,3)	7(23,3)	7(23,3)	3(10,0)
E13 - I feel jittery	21 (70,0)	7(23,3)	1(3,3)	1(3,3)
E14 - I feel indecisive	20 (66,7)	4(13,3)	4(13,3)	2(6,7)
E17 - I am worried	11 (36,7)	7(23,3)	3(10,0)	9(30,0)
E18 - I feel confused	16 (53,3)	6(20,0)	5(16,7)	3(10,0)

Source: Created by authors.

Caretakers reported that family life was disrupted by the demands of the child’s hospitalization and the need to remain as companions, a situation exacerbated by the pandemic. They described intensified physical and emotional exhaustion, as well as fear and uncertainty regarding the child’s health outcomes.

Table N°3: Characterization of the State-Trait Anxiety Inventory (Trait) answered by relatives of children admitted to the Pediatric Unit of the Maria Aparecida Pedrossian University Hospital. Campo Grande – MS (2020). N=30.

	Almost never	Sometimes	Often	Almost always
	N(%)	N(%)	N(%)	N(%)
T2 - I feel nervous/and impatient	5 (16,7)	16(53,3)	6(20,0)	3(10,0)
T4 - I wish I were as happy as other people seem to be	18 (60,0)	2(6,7)	7(23,3)	3(10,0)
T5 - I feel like a failure	17 (56,7)	5(16,7)	6(20,0)	2(6,7)
T8 - I feel that the difficulties are piling up in such a way that they are increasingly difficult for me to overcome	11 (36,7)	11 (36,7)	6(20,0)	2(6,7)
T9 - I worry too much about things that don't really matter	13 (43,3)	10 (33,3)	2(6,7)	5(16,7)
T11 - I have disturbing thoughts	12 (40,0)	9(30,0)	5(16,7)	4(13,3)
T12 – I have little self-confidence	10 (33,3)	7(23,3)	6(20,0)	7(23,3)
T15 – I feel incapable	16 (53,3)	9(30,0)	4(13,3)	1(3,3)
T17 - Some unimportant ideas cross my mind and bother me	12 (40,0)	9(30,0)	6(20,0)	3(10,0)
T18 - I live through disappointments so intensely that I can't forget them	13 (43,3)	5(16,7)	8(26,7)	4(13,3)
T20 – I feel tense and upset when I think about current problems	5 (16,7)	11 (36,7)	9(30,0)	5(16,7)

Source: Created by authors.

Family members' feelings and demands during hospitalization

The accounts show that life interruptions and unexpected changes led to emotional and social repercussions. Family members expressed that staying in the hospital with a hospitalized child meant losing part of their lives:

“When you step into a hospital to live with a small child, your daughter, in intensive treatment, you lose half of your life outside.” (F3)

In this context, family members faced both physical and emotional strain associated with the burden of remaining in the hospital while simultaneously caring for their child. This burden was intensified by the impossibility of rotating caregivers, particularly due to pandemic restrictions. Caregivers also described that the child's illness and the search for treatment resulted in both physical and mental exhaustion, often aggravated by discomfort and the inability to rest properly, as periods of rest were constantly interrupted by care demands:

“[...] it's just very exhausting, right, being in a place like this. For those who work [health professionals], they still get to leave, go home, and sleep in their own bed. Here you can't sleep peacefully, every hour someone comes to give medication [...] you don't rest like you do at home [...].” (F10)

Family members expressed feelings of fear, uncertainty, anguish, and worry due to being in an unfamiliar and stressful environment. They also reported powerlessness and sadness when witnessing painful procedures without being able to intervene. Additionally, concerns about other family members at home were evident. This context triggered anxiety and emotional strain in the caregiving family member, intensified by the child's condition.

The sense of powerlessness and guilt was associated with feelings of vulnerability resulting from perceived loss of autonomy. Loneliness and helplessness were evident, highlighting the absence of support during hospitalization. Feeling powerless and alone when making decisions generated significant emotional impacts and heightened anxiety:

“[...] I feel kind of powerless because I can't do anything for her, I'm just there, I have to wait, right, for the medication to take effect [...].” (F5)

Family members also observed that hospitalization made their children afraid, particularly due to potential separation from parents and the unfamiliarity of the hospital environment. This reality demanded their constant presence and prevented them from leaving the child's side:

“[...] if I tell her I'm going to step away, I have to explain, tell her what I'm doing, because she's terrified that I'll leave and abandon her.” (F3)

Hospitalization and hospital-based health care disrupted the child's normal life, especially when bed rest was required. Witnessing the child lose their previous vitality was described as particularly difficult:

“It's been hard because she's a very active girl, she likes to play, make TikToks. So, seeing her bedridden has been very hard for me, it's complicated [...] she's the joy of the house, running everywhere, she never stops. So, seeing her like this is hard, I suffer with it.” (F10)

Despite the physical and emotional impacts on family members—which contributed to heightened anxiety—they expressed relief when recognizing hospital admission as necessary for resolving the child's clinical condition. Although the hospital was a stressful environment and the situation was challenging for both the family member and the whole family, they also saw hospitalization a

Table N°4: Correlation analysis between sociodemographic variables and State-Trait Anxiety Inventory scores, answered by family members of children admitted to the Pediatric ward of the Maria Aparecida Pedrossian University Hospital. Campo Grande – MS (2020). N = 30.

		A	B	C	D	E	F	G	H	I
Idade (A)	CC	-	0,380	-0,114	-0,22	0,272	-0,085	-0,113	-0,05	-0,365
Nº de Filhos (B)	P-valor	-	0,039	0,548	0,243	0,147	0,654	0,552	0,791	0,047
	CC	-	1	0,533	0,223	-0,014	0,069	0,042	-0,04	-0,187
Nº de ocupantes (C)	P-valor	-	-	0,002	0,237	0,942	0,717	0,827	0,832	0,323
	CC	-	-	1	0,285	-0,207	-0,204	-0,072	-0,062	-0,131
Deslocamento até o hospital (min) (D)	P-valor	-	-	-	0,127	0,272	0,28	0,707	0,746	0,490
	CC	-	-	-	1	-0,223	0,213	0,113	-0,035	0,265
Idade (Criança) (E)	P-valor	-	-	-	0,235	0,258	0,55	0,853		0,157
	CC	-	-	-	-1	-	-0,105	-0,380	-0,014	0,058
Tempo de internação (Dias) (F)	P-valor	-	-	-	-	-	0,58	0,038	0,94	0,76
	CC	-	-	-	-	-	1	-0,022	-0,14	0,033
Nº de internação (G)	P-valor	-	-	-	-	-	-	0,906	0,459	0,861
	CC	-	-	-	-	-	-	1	-0,077	0,091
Escore (Estado) (H)	P-valor	-	-	-	-	-	-	-	0,686	0,632
	CC	-	-	-	-	-	-	-	1	0,211
Escore (Traço) (I)	P-valor	-	-	-	-	-	-	-	-	0,264
	CC	-	-	-	-	-	-	-	-	1

¹Correlation de Spearman. CC: Coeficiente de correlation.

Source: Created by authors.

'beneficial and necessary for the child's recovery. Witnessing the child's improvement offered confidence and relief:

"[...] I know that, well, it's the best for her too, right? Of course, if I could leave, if I could know her diagnosis and be discharged, because, well, I'm afraid, she's afraid too [...]." (F11)

Family members also reported feeling supported by health professionals, given the routine interaction with them. This contact fostered reassurance and reduced worry, perceiving nurses as an important source of support that helped alleviate anxiety:

"[...] so, you can really see that the nurses' care for her is very good, and that reassured me [...] my support now is them [the nurses], they are reassuring me, making me less worried." (F3)

Assertive communication from the nursing staff enabled family members to understand the child's illness and hospitalization better, while also facilitating information exchange.

Impact of the COVID-19 pandemic in the context of child hospitalization and family routine

The pandemic compounded the changes and disruptions to family routines caused by hospitalization. This situation triggered fear of infection, leading to social isolation, which intensified anxiety among all family members, especially the primary caregiver, who had to remain in a modified environment adapted to biosafety requirements.

Another relevant aspect was the closure of schools and adapting school activities to be managed from home. The closure of the hospital school was also challenging, as caregivers had to balance the child's health condition with providing academic support. Remote learning emerged as an alternative. However, this modality relied on technological resources to which many families lacked access. This scenario heightened and exacerbated caregivers' anxiety.

Furthermore, with children remaining at home full-time and school activities interrupted, caregivers associated this with an increased risk of domestic accidents, which further intensified concerns about hospitalizations and the safety of other children in the household:

"It was really the school that weighed heavily, because, you know, we have greater responsibility to stay home taking care of the kids full-time and also having to deal with schoolwork [...]." (F6)

Support networks for accompanying family members

Remaining in the environment of the hospital led families to rely on their support networks. Caregivers reported receiving support from their families, which allowed them to cope with the demands of caring for their child. Friends and faith were also mentioned as important sources of support that helped them endure hospitalization. Faith was perceived as a source of strength—an anchor to face hospitalization—while sustaining hope for a positive outcome. Belief and hope provided comfort and alleviated anxiety:

"I think it's us ourselves—me, my mother, and my father—and we keep strengthening one another [...]." (F7)

"My family supports me, especially during this difficult time [...]." (F5)

"Every day I ask God to heal my son [...]. I have faith and hope; this helps me and calms me." (F13)

The joint-display technique was used to integrate and understand the data. Table N°5 illustrates this information.

Table N°5: Joint display illustrating the integration of quantitative and qualitative data. Campo Grande, MS, Brazil, 2020.

Quantitative Result	Qualitative Result	Integration
<p>State-Trait Anxiety Inventory (STAI-T)</p> <p>Frequency and percentage for the response Sometimes to the statement:</p> <p>T2 – <i>I feel nervous/impatient</i> – 16 (53.3%).</p>	<p>Interviews</p> <p>The data reveal momentary anxiety due to the interruption of routine, which triggers emotional and social repercussions caused by an unexpected change.</p> <p><i>“You enter a hospital to live with a small child, your daughter, in intensive treatment, and you lose half of your life outside.”</i> (F3)</p> <p><i>“I feel a bit powerless because I can’t do anything for her, you know, I’m there, I have to wait, you know, for the medicine to take effect.”</i> (F5)</p>	<p>The anxiety presented by the caregivers, which was moderate for more than half of the participants, is directly related to the disruption of routine, the perception of losing one’s life outside the hospital, and the feeling of helplessness in the face of the child’s clinical condition. The nervousness and impatience identified in the quantitative instrument intensify while waiting for quick treatment responses and the emotional overload experienced in the hospital environment, revealing that anxiety is not limited to an individual trait but is amplified by contextual and emotional factors associated with hospitalization.</p>
<p>State-Trait Anxiety Inventory (STAI-T)</p> <p>Frequency and percentage for the response <i>sometimes</i> to the statements:</p> <p>T20 – <i>When I think about my current concerns and activities, I become tense or agitated</i> – 11 (36.7%).</p> <p>T8 – <i>I feel that difficulties are piling up so high that I cannot overcome them – Almost never: 11 (36.7%); Sometimes: 11 (36.7%).</i></p>	<p>Interviews</p> <p>The family member experiences physical and emotional exhaustion, primarily associated with the burden of continuous presence in the hospital environment and caring for their child. In addition, the caregiver reports that dealing with the child’s illness and seeking treatment has created both physical and mental fatigue.</p> <p><i>“[...] if I tell her that I’m going out, I have to explain to her, tell her what I’m going to do, because she gets terrified that I am leaving her behind.”</i> (F3)</p> <p><i>“[...] it’s very exhausting, you know, being in a place like this. For those who work [health professionals], they can still go home and sleep peacefully in their own bed. Here, you can’t sleep well; there’s always someone providing medications [...] you just don’t rest like you do at home [...]”</i> (F10)</p>	<p>The data indicate that the caregivers’ anxiety goes beyond a momentary reaction, constituting a persistent and multifactorial state. Prolonged hospital stays intensify this condition, the burden arising from the nearly exclusive responsibility of caring for their child, the lack of emotional and social support, as well as adverse environmental conditions that directly affect sleep quality at night. The roots of anxiety are both situational—related to the hospitalization process—and structural, linked to factors such as gender roles, the fragility of support networks, and the accumulated physical and psychological strain over the course of hospitalization.</p>

Continuation Table N°5.

<p>State Anxiety Inventory (STAI-S)</p> <p>Frequency and percentage marked for the response <i>not at all</i> to the statements:</p> <p>E4 – I feel under pressure - 23 (76.7%)</p> <p>E13 – I feel jittery - 21 (70.0%)</p> <p>E6 – I feel upset - 21 (70.0%)</p>	<p>Interviews</p> <p>The family member feels supported and assisted by the team caring for the child, which helps them feel calmer.</p> <p><i>“[...] So, you see, the nurses’ comfort is very good for her, and that reassures me even more [...]”</i></p> <p><i>“My support now comes from them [the nurses]; they are calming me, making me less worried.” (F3)</i></p>	<p>The data converge to indicate that the emotional support and care provided by the nursing team contributed significantly to the caregivers’ sense of safety and calm, reflected in the low anxiety scores reported. The team’s support was identified as a protective factor against emotional distress, confirming that family-centered care directly impacts the emotional state of caregivers.</p>
<p>State Anxiety Inventory (STAI-S)</p> <p>Frequency and percentage for the response <i>not at all</i> to the statement:</p> <p>E7 – I am presently worried about possible misfortunes – 15 (50.0%)</p> <p>Trait Anxiety Inventory (STAI-T)</p> <p>Frequency and percentage for the response <i>Almost Never</i> to the statements:</p> <p>T18 – I experience disappointments so intensely that I cannot forget them – 13 (43.3%)</p> <p>T11 – I have unsettling thoughts – 12 (40.0%)</p>	<p>Interviews</p> <p>The family’s permanence in the hospital environment leads them to seek support from their personal networks. The primary caregiver receives assistance from their family to continue managing the child’s care demands. Faith and hope provide comfort, relieve anxiety, and mitigate concerns about undesirable outcomes.</p> <p><i>“I think it’s just us, me, my mother, and my father, and we strengthen each other [...]” (F7)</i></p> <p><i>“My family supports me whenever I need it, especially during this difficult time [...]” (F5)</i></p> <p><i>“I pray to God every day to heal my son [...]. I have faith in God, and hope; that helps and calms me.” (F13)</i></p>	<p>Family support and spirituality play a central role as coping strategies for caregivers during the child’s hospitalization. Their reports highlight the importance of mutual support among family members and reliance on religious practices, particularly faith in God, as sources of hope and emotional comfort. These subjective dimensions are reflected in the quantitative STAI-S and STAI-T data, in which a large proportion of participants reported low frequency of unsettling thoughts, intense disappointments, or worries about adverse outcomes. This convergence of findings suggests that strengthening support networks and maintaining spiritual beliefs are protective factors against anxiety, contributing to the caregiver’s emotional balance during hospitalization.</p>

Source: Created by authors.

DISCUSSION

The anxiety family members of hospitalized children experience is influenced by multiple factors, including the severity of the child's clinical condition, the unpredictability of treatment, and the hospital environment itself.¹⁷⁻²⁰ During the COVID-19 pandemic, these factors were exacerbated by visitor restrictions, social isolation, fear of contagion, and uncertainties regarding treatment continuity, all of which intensified caregivers' emotional distress, particularly among mothers.^{21,22}

Studies conducted during this period highlighted the presence of anxiety symptoms in both children and their caregivers, underscoring the need for continuous emotional support and strategies to mitigate the adverse effects of hospitalization in contexts of public health crises.²³ Even after the pandemic subsided, the emotional impact has persisted. Post-pandemic findings reveal a high prevalence of stress (83.4%), anxiety (35%), and depression (38%) among mothers of hospitalized children, associated with factors such as insecurity about bed availability, concerns over treatment costs, and the health of other family members.^{24,25}

These data show that, although the emergent stage of the pandemic has passed, its emotional effects remain and, in some cases, have intensified. This situation requires prolonged engagement of healthcare teams in providing psychosocial support to family members. Children and adolescents were also affected, presenting significant post-traumatic stress symptoms related to the hospital environment and excessive exposure to electronic media during isolation. Nonetheless, many exhibited post-traumatic growth, signaling a potential for resilience that can be strengthened through appropriate interventions.^{26,27}

Furthermore, the implementation of contact, aerosol, and/or respiratory precautions for other diseases, as well as the intensive use of personal protective equipment (PPE) by healthcare staff, often evokes the pandemic for families, increasing their levels of anxiety. Heightened anxiety stems not only from fear of contagion but also from communication barriers and the sense of physical distancing—factors that are critical in exacerbating the emotional distress of family members during hospitalization.^{28,29}

A child- and family-centered approach, emphasizing support, effective communication, and the inclusion of family members in care activities, is essential for reducing anxiety levels both during and after hospitalization.^{30,31} During invasive procedures, such as venipuncture, family support serves as a protective factor, mitigating children's anxiety and strengthening the bond among healthcare team, child, and caregiver.^{32,33}

The convergence of these findings underscores the importance of integrated and continuous strategies that address both anxiety management and the reinforcement of family support networks. Active listening, the use of resources that involve play, discussion circles, and interprofessional collaboration should be incorporated into care practices to promote more humanized and emotionally sustainable care—particularly in a post-pandemic context, in which the effects of the health crisis continue to impact the experiences of caregivers and patients.^{34,35}

CONCLUSIONS

This study examined the anxiety experienced by family members and caregivers during the hospitalization of children amid the pandemic. Although most family members exhibited moderate levels of anxiety during hospitalization, higher levels were also observed, highlighting the influence of contextual factors on caregivers' emotional states. Caregiver age and family characteristics, such as cohabitation and multiple children, were associated with lower levels of trait and state anxiety. In contrast, frequent and prolonged hospitalizations were linked to higher trait anxiety. Physical distancing from others during hospitalization was a contributing factor, emphasizing the importance of family and support networks.

Although the World Health Organization has declared the end of the pandemic, our findings encourage reflection on the likelihood of similar situations arising in the future, which demands

reconsidering attitudes and implementing safe practices that ensure family presence in healthcare settings.

The mixed-methods design proved appropriate and contributed to a deeper understanding of the data. We recommend that nurses continue to provide family support in pediatric care settings to mitigate the anxiety experienced by companions during children's hospitalization. Effective nursing strategies and practices must be restructured to optimize family-centered care.

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REFERENCES

1. Teodoro GS, Carlúcio LR., Vador RMF. O enfermeiro e a socialização da criança hospitalizada: uso de ilustrações e histórias como mediadoras. *Develop.* 2021;7(6):61267-86. <https://doi.org/10.34117/bjdv7n6-481>
2. Kalogerogianni I, Zartaloudi A, Dousis E, Evangelou E, Dafogianni C, Vlachou E, et al. Parents' psychosocial needs during the child's hospitalization in pediatric intensive care units (PICU): a systematic review. *Eur Psychiatry.* 2024;67(S1):S674-4. <https://doi.org/10.1192/j.eurpsy.2024.1402>
3. Ministério da Saúde. Secretaria Executiva. Data SUS. Morbidade Hospitalar do SUS - por local de internação no Brasil. 2019. <http://tabnet.datasus.gov.br/cgi/tabgi.exe?sih/cnv/niuf.def>
4. Dryden-Palmer K, Shinewald A, O'Leary K. Supporting siblings during the critical illness hospitalization of a child: learning from experience. *Front Pediatr.* 2024;12:1337491. <https://doi.org/10.3389/fped.2024.1337491>
5. Bazzan JS, Milbrath VM, Gabatz RIB, Cordeiro FR, Freitag VL, Schwartz E. O processo de adaptação familiar à hospitalização infantil em Unidade de Terapia Intensiva. *Rev. Esc. Enferm USP.* 2020;54e03614. <https://doi.org/10.1590/S1980-220X2018056203614>
6. Silva AOC, Cunha TF, Bezerra IR, Sant'anna TS, Andrade LM, Silva RMCRA, et al. Impactos psicoemocionais na hospitalização pediátrica: percepções dos acompanhantes e a atuação da equipe de enfermagem. *RSD.* 2022;11(3):e20411326259. <http://dx.doi.org/10.33448/rsd-v11i3.26259>
7. Ferreira AN, Sales JKD, Coelho HP, Marçal FA, Melo CS, Sousa DR., et al. Hospitalização infantil: Impacto emocional indexado a figura dos pais. *Rev. Interfaces.* 2020;8(1):402-408.
8. Cardoso TP, Oliveira PR., Volpato RJ, Nascimento VF, Rocha EM, Lemes AG. Vivências e percepções de familiares sobre a hospitalização da criança em unidade pediátrica. *Rev. Enferm. UFSM - REUFSM Santa Maria, RS.* 2019;9(4) 41-14.
9. Mandetta M. Identificação da vulnerabilidade da família na prática clínica. *Rev. esc. enferm. USP.* 2006; 40(2). <https://doi.org/10.1590/S0080-62342006000200018>
10. Center for Disease Control and Prevention (CDC). Management of visitors to healthcare facilities in the context of COVID-19: Non-US healthcare settings. 2020.

11. Ioannou I, Giotsa A. Evaluation of anxiety levels and related factors in parents of preterm infants hospitalized in NICU. *J Pediatr Res Rev Rep.* 2024;6(3):1–13. [http://dx.doi.org/10.47363/JPRRR/2024\(6\)161](http://dx.doi.org/10.47363/JPRRR/2024(6)161)
12. Nurani I, Firdaus AD, Maulidia R. Relationship between nurse caring and parents anxiety level in children who has Hospitalized Based on approach Swanson Theory. *JKF.* 2022;4(2):163–71. <https://doi.org/10.35451/jkf.v4i2.972>
13. Blok AC, Valley TS, Weston LE, Miller J, Lipman K, Krein SL. Factors affecting psychological distress in family caregivers of critically ill patients: a qualitative study. *Am J Crit Care.* 2023;32(1):21–30. <http://dx.doi.org/10.4037/ajcc2023593>
14. Rana K, Chimoriya R. Um guia para uma abordagem de métodos mistos para pesquisa em saúde. *Enciclopédia.* 2025; 5(2):51. <https://doi.org/10.3390/encyclopedia5020051>
15. Biaggio AMB, Natalício L. Manual para o inventário de ansiedade Traço-Estado (IDATE). Rio de Janeiro: Centro Editor de Psicologia Aplicada – CEPA; 1979.
16. Kaipper MB. Avaliação do inventário de ansiedade traço-estado (IDATE) através da análise de Rasch [Tesis de Magister]. Mato Grosso do Sul, Brasil: Universidade Federal do Rio Grande do Sul; 2018.
17. Morse JM. Emerger de los datos: los procesos cognitivos del análisis en investigación cualitativa. In: Morse JM, editor. *Asuntos críticos en los métodos de investigación cualitativa.* Medellín: Universidad de Antioquia; 2003. p. 29.
18. Seo A, Kim SS. Effects of caregiver burden, anxiety, spirituality and family relationships on depression among caregivers of hospitalized children. *Journal of Korean Academy of Fundamentals of Nursing.* 2021;28(3):353–360. <https://doi.org/10.7739/jkafn.2021.28.3.353>
19. Bezerra AM, Marques FRB, Marcheti MA, Luizari MRF. Fatores desencadeadores e amenizadores da sobrecarga materna no Ambiente hospitalar durante internação infantil. *Cogitare Enferm.* 2021;26:e72634. <https://doi.org/10.5380/ce.v26i0.72634>
20. Mottaghi K, Hasanvand S, Goudarzi F, Heidarizadeh K, Ebrahimzadeh F. The role of the ICU liaison nurse services on anxiety in family caregivers of patients after ICU discharge during COVID-19 pandemic: a randomized controlled trial. *BMC Nursing.* 2022;21: 253. <https://doi.org/10.1186/s12912-022-01034-6>
21. Chang L. The influence of humanistic care on the mental health and behavior of family members of pediatric patients. *Advanced Journal of Nursing.* 2021;2(1). <https://doi.org/10.32629/ajn.v2i1.253>
22. Liu M, Xu Y, Li Y. Effects of family participatory nursing on clinical outcomes of premature infants in NICU and families' psychological status. *Contrast Media Mol Imaging.* 2022;2022:1–8. <https://doi.org/10.1155%2F2022%2F7420909>
23. Souza DM, Fernandes RF, Costa CTS, Borghi CA, Rossato LM. Da teoria à prática: a inclusão da família de crianças hospitalizadas nos procedimentos dolorosos. *Rev. esc. enferm. USP.* 2023;57:e20230152. <https://doi.org/10.1590/1980-220X-REEUSP-2023-0152pt>
24. Aparecida ALAS, Siqueira FC, Rodrigues JRC. Junior ACS. Avaliação da ansiedade e depressão em familiares de crianças em tratamento quimioterápico. *Revista Científica Multidisciplinar Núcleo do Conhecimento.* 2022;7(3): 220-241.
25. Castro LS, Silva LJ, Silva T., Queiroz GOM., Regina, Souza SR., Noronha RDB. A Família da criança com câncer em emergência oncológica pediátrica: revelando significados. *Texto contexto - enferm.* 2023; 32. <https://doi.org/10.1590/1980-265x-tce-2022-0323pt>
26. Dryden-Palmer K, Shinewald A, O'Leary K. Supporting siblings during the critical illness hospitalization of a child: learning from experience. *Front. Pediatr.* 2024;12. <https://doi.org/10.3389/fped.2024.1337491>
27. Kim S, Chang H, Kim T, Cha WC. Patient Anxiety and Communication Experience in the Emergency Department: A Mobile, Web-Based, Mixed-Methods Study on Patient Isolation During the COVID-19 Pandemic. *J Korean Med Sci.* 2023 Oct 9;38(39):e303. <https://doi.org/10.3346/jkms.2023.38.e303>

28. Farias BS, Silva IG, Pereira LN, Passos SG. A humanização do cuidado de enfermagem ao recém-nascido submetido à fototerapia: integração família-enfermeiro no processo assistencial. *Revista JRG.* 2024; 7(15): e151699. <https://doi.org/10.55892/jrg.v7i15.1699>
29. Nascimento MEB, Melo ABO, Laurindo ACA, Souza LAAB, Rêgo M. da S, Lima LEM, et al. O acolhimento da família em Unidade de Terapia Intensiva Neonatal e Pediátrica. *Braz. J. Implantol. Health Sci.* 2024;6(2):2356-2367. <https://doi.org/10.36557/2674-8169.2024v6n2p2356-2367>
30. Pardede J, Simangunsong M. Family support with the level of preschool children anxiety in the intravenous installation. *Jurnal Keperawatan JIWA.* 2020;3(8): 223-234.
31. Reami GS, Moraes THP. O lúdico como manejo da crise ansiogênica em crianças hospitalizadas. *REMS.* 2023;4(3):1–9. <https://doi.org/10.51161/integrar/remms/3814>
32. Brito T, Motta AL, Lima C, Lemos LL, Silva M, Borges MV, Pinheiro B. O acolhimento de enfermagem aos pais frente a hospitalização de neonatos em Unidade de Terapia Intensiva. *Revista Contemporânea.* 2024;4(9):e5680. <https://doi.org/10.56083/RCV4N9-051>
33. Oliveira TS, Santos JM, Lima UT. Rodas de conversa sobre estratégias para aliviar a ansiedade em crianças hospitalizadas: um relato de experiência. *Revista JRG.* 2024;7(14):e141123–3. <https://doi.org/10.55892/jrg.v7i14.1123>
34. Bhushan B, Basu S, Ganai UJ. Post-traumatic stress and growth among the children and adolescents in the aftermath of COVID-19. *Front. Psychol.* 2022;12:791263. <https://doi.org/10.3389/fpsyg.2021.791263>
35. Malik N, Dutta A, Roy Chowdhary S, Sarkar M, Das S, Datta K. A study to assess the risk factors contributing to psychological stress, anxiety and depression in mothers of Covid-19 positive hospitalized children in a Tertiary care hospital. *JPNS.* 2022;5(1):14.21. <https://doi.org/10.18231/j.ijpns.2022.004>