



## REVISIONES

### Nursing Interventions Promoting Child / Youth / Family Adaptation to Hospitalization: A Scoping Review

Intervenciones de Enfermería Promotoras de la Adaptación del Niño / Joven / Familia a la Hospitalización: una Scoping Review

Intervenções de Enfermagem Promotoras da Adaptação da Criança/Jovem/Família à Hospitalização: uma Scoping Review

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#### ABSTRACT:

**Objective:** Identify the adaptation process of the child and family to hospitalization and map the nursing interventions that promote the child/youth/family's adaptation to hospitalization.

**Method:** Elaboration of a Scoping Review based on the Joanna Briggs Institute (2014). Inclusion criteria - *Population:* Child, Young (0-18 years old); *Concept:* Interventions promoting adaptation and *Context:* Hospitalization. The studies considered were quantitative, qualitative and systematic reviews. Electronic databases used for article search - PUBMED, MEDLINE and CINAHL. Selection criteria: full text articles dated between 2012 and 2019. Languages of inclusion: Portuguese and English.

**Results:** A total of 14 articles were analyzed, including 2 systematic reviews of the literature, 7 qualitative studies and 5 quantitative studies. The results of the analysis were organized by themes: the child's adaptation to hospitalization, the parent's adaptation to hospitalization and strategies promoting adaptation to hospitalization. The interventions aimed at children are focused on strengthening coping mechanisms and on increasing the sense of security. These have been categorized into communication strategies; playful activities and relaxation activities; and promotion of hope and coping strategies.

**Conclusion:** The mapped Nursing interventions that promote adaptation to hospitalization intend to decrease the child / family's anxiety and stress, increasing the ability to receive information and to participate in care and decisions. Intervention such as therapeutic play, anticipatory information, relaxation techniques, distraction, humor, music therapy, adaptation kits, therapeutic groups and hope-promoting strategies are emphasized.

**Keywords:** Adaptation; Hospitalized Child; Family; Pediatric Nursing.

## RESUMO:

**Objetivo:** Identificar o processo de adaptação da criança e família à hospitalização e mapear as intervenções de enfermagem promotoras da adaptação à hospitalização da criança/jovem/família.

**Método:** Elaboração de uma *Scoping Review* com base no Joanna Briggs Institute (2014). Critérios de inclusão - *População:* Criança, Jovem (0-18 anos); *Conceito:* Intervenções promotoras da adaptação e *Contexto:* Hospitalização. Os estudos considerados foram estudos quantitativos, qualitativos e revisões sistemáticas. Pesquisa de artigos em três bases de dados eletrônicas – PUBMED, MEDLINE e CINAHL. Critério de seleção: datados entre 2012 e 2019 e em regime *full text*. Línguas de inclusão: Português e Inglês.

**Resultados:** Foram analisados 14 artigos, salientando-se que o desenho de estudo incluem 2 revisões sistemáticas da literatura, 7 estudos qualitativos e 5 quantitativos. Os resultados da análise foram organizados por temas: adaptação da criança à hospitalização, adaptação dos pais à hospitalização e estratégias promotoras de adaptação à hospitalização. As intervenções dirigidas à criança centram-se no fortalecimento dos mecanismos de enfrentamento e no aumento da segurança, tendo estas sido categorizadas em estratégias comunicacionais; atividades lúdicas/brincar e atividades de relaxamento; promoção da esperança e estratégias de *coping*.

**Conclusão:** As intervenções de Enfermagem promotoras da adaptação à hospitalização mapeadas visam diminuir a ansiedade e *stress* da criança/família, aumentando a capacidade para receber informação, participar nos cuidados e em decisões. Destacam-se a brincadeira terapêutica, informações antecipatórias, técnicas de relaxamento, distração, humor, musicoterapia, *kits* de adaptação, grupos terapêuticos e estratégias promotoras de esperança.

**Palavras-Chave:** Adaptação; Criança Hospitalizada; Família; Enfermagem Pediátrica.

## RESUMEN:

**Objetivo:** Identificar el proceso de adaptación del niño y la familia a la hospitalización y mapear las intervenciones de enfermería que promueven la adaptación a la hospitalización del niño/joven/familia.

**Método:** Elaboración de *Scoping Review* basado en Joanna Briggs Institute (2014). Criterios de inclusión para *Población:* Niño, Joven (0-18 años) y Familia; *Concepto:* Intervenciones promotoras hacia la adaptación y *Contexto:* Hospitalización. Los estudios considerados fueron estudios cuantitativos, cualitativos y revisiones sistemáticas. Búsqueda de artículos en tres bases de datos electrónicas - PUBMED, MEDLINE y CINAHL. Criterio de selección: datados entre 2012 y 2019 y en régimen *full text*. Idiomas: inglés y portugués.

**Resultados:** Se analizaron un total de 14 artículos, destacando que el diseño del estudio incluye 2 revisiones sistemáticas de la literatura, 7 estudios cualitativos y 5 cuantitativos. Los resultados del análisis se organizaron por temas: adaptación del niño a la hospitalización, adaptación de los padres y estrategias que promueven la adaptación a la hospitalización. Las intervenciones dirigidas a los niños se centran en el fortalecimiento de los mecanismos para hacer frente a los problemas y en el aumento de la seguridad, y se han clasificado en estrategias de comunicación; actividades recreativas y de relajación; promoción de la esperanza y estrategias de *coping*.

**Conclusión:** Las intervenciones de enfermería promotoras de la adaptación a la hospitalización mapeadas pretenden disminuir la ansiedad y el estrés del niño / familia, aumentando la capacidad para recibir información, participar en el cuidado y en las decisiones. Se destacan el juego terapéutico, informaciones anticipatorias, técnicas de relajación, distracción, humor, musicoterapia, *kits* de adaptación, grupos terapéuticos y estrategias promotoras de esperanza.

**Palabras clave:** Adaptación; Niño Hospitalizado; Familia; Enfermería Pediátrica.

## INTRODUCTION

The present time is seen as crucial to the science of nursing, taking in consideration the rapid development of society, health and general science, which directs nursing to different priorities. The current challenges are outlines in order to create a knowledge structure that provides a unifying approach and renews the place of theory in nursing science<sup>(1)</sup>.

The art of pediatric nursing focuses on family-centred care and atraumatic care, guided by evidence-based practice <sup>(2)</sup>. Despite the adjustment of the hospital environment to pediatric care, even short periods of hospitalization have adverse effects on children and their families, as they are separated from the rest of the family, removed from their routines, and have to live in a new and unfamiliar environment. Children may also have to undergo procedures that generate fear and pain <sup>(3-5)</sup>. Hospitalized children are particularly vulnerable due to their illness, their physical, intellectual and emotional stage of development, and also due to the little control they have over what is happening to them <sup>(6)</sup>.

The nursing team should seek to maintain an enlightening dialogue and transmit confidence to children and their families, providing humanized care, so that they are kept informed and guided in regards to treatment, procedures and doubts <sup>(7)</sup>. The relationship between the nurse and the family should be based on mutual respect and on open and honest communication <sup>(8)</sup>. Family-centred care is a central element in pediatric nursing care, keeping in mind that the child's best interest is to be cared for by his or her family. Thus, both children and their families should actively participate in the hospitalization process <sup>(4)</sup>.

As a system, the child and the family have the ability to adapt to the new situation, which is affected by numerous stimuli. The displayed behaviour depends on their coping mechanisms and they do not always achieve adaptation <sup>(3)</sup>. In the context of illness and hospitalization, the main experienced stimulus is the illness itself. There are, however, other stimuli, such as change of environment and routines and separation from other relatives. The knowledge one has of the illness, the support the child and family members receive will among others, accentuate or mitigate the effects of these stimuli. There are also stimuli not directly related to the current experience of the disease and hospitalization, but which have influence over it, such as previous experiences with hospitalization, disease within the family, among others <sup>(3)</sup>.

In Roy Adaptation Model (RAM) from 1976, Roy used the System Theory to define the System Person characterized by input (internal and external), and the response of the person, which is defined as output. The response is built through the input and the individual level of adaptation <sup>(9)</sup>. The adaptation means that the system has the capability to adjust itself to the environmental changes and, at the same time, to affect that environment. The goal of nursing is, thus, to promote that adaptation and to help deal with the adaptation problems that may occur. The nurse should act to control the stimuli, preparing the child and the family for the anticipated changes by strengthening their coping mechanisms <sup>(3)</sup>.

The benefits of using this adaptation model with families have been demonstrated in several clinical settings and have often been applied to in pediatric settings <sup>(10)</sup>. The RAM provides a practice-oriented nursing process in order to provide holistic care, and it can be a valuable tool in the practical orientation of the nursing process as it leads to the formulation of nursing diagnosis predictors of nursing interventions <sup>(2, 11)</sup>. Therefore, the nursing diagnosis of Ineffective Coping was formulated to guide this scoping review<sup>(12)</sup>, related to the outcome: adaptation of the child and family to hospitalization by mobilizing adaptive measures <sup>(13)</sup>.

Nursing interventions focus mainly on the physiological adaptive mode (reducing anxiety and fear) and the role function mode, specifically in promoting the parental role. For

Johnson *et al*<sup>(13)</sup> the main interventions related with this diagnosis are the improvement of coping and increased safety. As suggested interventions, the authors refer to early guidance (preparing for anticipated changes by strengthening coping mechanisms) and emotional support. Other interventions are also suggested such as active listening, not lying, giving preparatory information, spiritual support, providing care in admission; facilitating family presence, setting limits and promoting family support; techniques to reduce anxiety. Other interventions mentioned are distraction, humour, therapeutic play, art therapy, music therapy and animal therapy<sup>(13)</sup>.

Understanding the negative impact of disease and hospitalization and the use of strategies that make the hospital environment supportive of well-being are facilitators of adaptation for the children and their families. Consequently, they can turn this experience into an opportunity for learning and development<sup>(14)</sup>.

## METHODOLOGY

This literature review was conducted according to the Scoping Review method by Joanna Briggs Institute (JBI)<sup>(15)</sup>. These reviews are particularly useful for synthesizing research evidence and are often used to map existing literature<sup>(16)</sup>. A previous Scoping Review protocol was developed at an early stage. A scope analysis protocol is critical as it predefines the objectives and methods of the review<sup>(15)</sup>. At that point, it was defined as a scope review objective to identify the child and family process of adaptation to hospitalization and to map the nursing interventions that promote adaptation of the child and the family to hospitalization. The research question was formulated: "What nursing interventions promote the adaptation the child and the families to hospitalization?". Key words were also defined: Adaptation; Family; Hospitalized Child and Pediatric Nursing.

### Research Strategy

During the protocol phase, inclusion criteria were defined according to the Scoping PCC methodology - Population: Child/ Youth (0-18 years old) and family; Concept: Interventions promoting adaptation and Context: Hospitalization. The choice of these criteria aims to standardize research and provide a clear view on the inclusion or non-inclusion of individual sources.

The search was carried out at an early stage through searching grey literature (evidence not published in commercial publications), Google Scholar, and the EBSCO research databases, in order to have an overview of the knowledge produced on the subject, and to understand the index terms used to describe the subject under study, which helped to outline the research. According to JBI<sup>(15)</sup>, on research strategy, it is recommended to search a minimum of three large databases of bibliographical citations. Accordingly, a search was carried out in the following electronic databases PUBMED, MEDLINE and CINAHL on 21 January 2020, using the descriptors DeCS - Adaptation, Psychological; child, Hospitalized; Pediatric Nursing, and MeSH Adaptation, Psychological; child, Hospitalized; Nursing and using the Boolean operator AND.

It was established that qualitative and quantitative studies and systematic literature reviews would be included. Date of publication was also used as a selection criterion, having included articles found dated between 2012 and 2019. This timeline is considered to have the most recent scientific evidence, and, furthermore, is a way to

limit publications for content analysis. In addition, only full text publications were included. It was also considered as languages of inclusion the articles found in Portuguese and English. Subsequently, an analysis of the articles resulting from this research was carried out, using the words present in the titles, as well as the key words associated with them, the abstracts and finally their full reading, in order to find the target articles of this Scoping Review.

### **Data Extraction**

After the research, all articles obtained were identified and all those that were duplicated were removed. Titles and summaries were analysed against the inclusion criteria. Full text studies that did not meet the inclusion criteria were excluded. The data from the included articles were extracted using a mapping tool aligned with the objective and the research question <sup>(15)</sup> (Appendix I). The results are presented in a PRISMA Flow Diagram <sup>(16)</sup> (Appendix II). A table of excluded articles is also presented in the Appendix (Appendix III).

## **PRESENTATION AND DISCUSSION OF RESULTS**

The objectives established for this Scoping Review were to identify the process of adaptation of the child and family to hospitalization and to map the nursing interventions that promote to the child and family's adaptation to hospitalization. For this purpose, data was extracted from the 14 articles analysed, and the Objectives, Study Design, Study Population, Context, Concept and Results of each article are presented in the form of a chart (Appendix IV), that summarises the key ideas that answered the research question, contributing to the systematic interpretation of the articles.

The analysis of the articles was organized by themes and the discussion was structured by chapters. The discussions begin with the adaptation of the child to the context of hospitalization, followed by the parents adaptation, and finally by interventions that promote adaptation to hospitalization, distinguishing between those that are addressed to the child and those which focus on to the parents.

### **Child's adaptation to hospitalization**

When confronted with the hospital environment, as well as having to deal with the illness, the child is separated from the family environment, friends, school and personal objects. This environment requires the child to interact with unknown people such as nurses and doctors, to undergo interventions that can be painful or uncomfortable, and to experience noise and changes in daily routines. These can contribute to the child perceiving hospitalization as a traumatic or stressful experience <sup>(18)</sup>.

When it comes the family perceptions of the difficulties felt by their children during the adaptation to hospitalization, it should first be noted that the hospital setting changes their ability to adapt and increases their vulnerability <sup>(18)</sup>. In this setting, the child recognises the presence of the family as protection, becoming their point of reference, affection and source of security. Hospitalization can cause a number of different behaviours from an emotional point of view, and children may experience mood changes. The most common way a child manifests discomfort, fear and pain is through crying. They may also feel agitated, nervous and may find it difficult to sleep. Another



common reaction, noticed by families, is quietness, the child may become less talkative and, apparently, unreactive. This research highlights the need to humanize the hospital environment in pediatric settings, involving the family into care. How a child copes with hospitalization and illness depends on their adaptation process? Nursing care is essential for the child to be able to process feelings through emotional support, information supply, recreational activities and active listening. Supporting the caregiver is crucial to enable them to care for themselves and their child, interacting positively and building relationships that are beneficial to everyone <sup>(19)</sup>.

Specific articles related to the adaptation of children living with a chronic disease were analysed. In a study on the hospitalization of adolescents, its impact on their daily lives was reported. These point to dietary restrictions as a major interference with routine due to new dietary recommendations, which is one of the most difficult parts of the treatment. When adolescents consider the new situation as a problem to be solved and an opportunity to learn, they become less vulnerable. Therefore, it is essential that children/young people know their diagnosis and participate in the treatment in order to better deal with the disease <sup>(20)</sup>.

### **Adaptation of parents with hospitalized children**

Hospitalization is also a stressful time for the family, and nursing care should be planned around the needs of children and their families in order to minimize its negative effects<sup>(18)</sup>. The child's caregivers should be active care partners, since, they provide important information that supports care and should be valued by the nurses due to the potential to transform and enrich it. During their care, nurses should provide information, clarification and guidance on the child's health conditions so that the parents know what to expect and what is expected of them <sup>(18)</sup>.

In a context of intensive care, a child's hospitalization has a great impact on the family given that at that moment, when faced with the seriousness of the child's situation, all dreams and life projects turn into fear <sup>(21)</sup>. In this instance, the relationship between family members tends to change. In most cases, family members become closer to support those most in need of support, even though they may be physically distant. By strengthening these bonds, family members develop a behaviour based on their adaptation process, defined by internal and external actions and reactions in order to strengthen their support system. The support system is based on RAM's Interdependence Adaptive Mode. This interdependence is clear among family members who experience a process of hospitalization, being revealed through the emotional, spiritual and even financial support provided <sup>(21)</sup>.

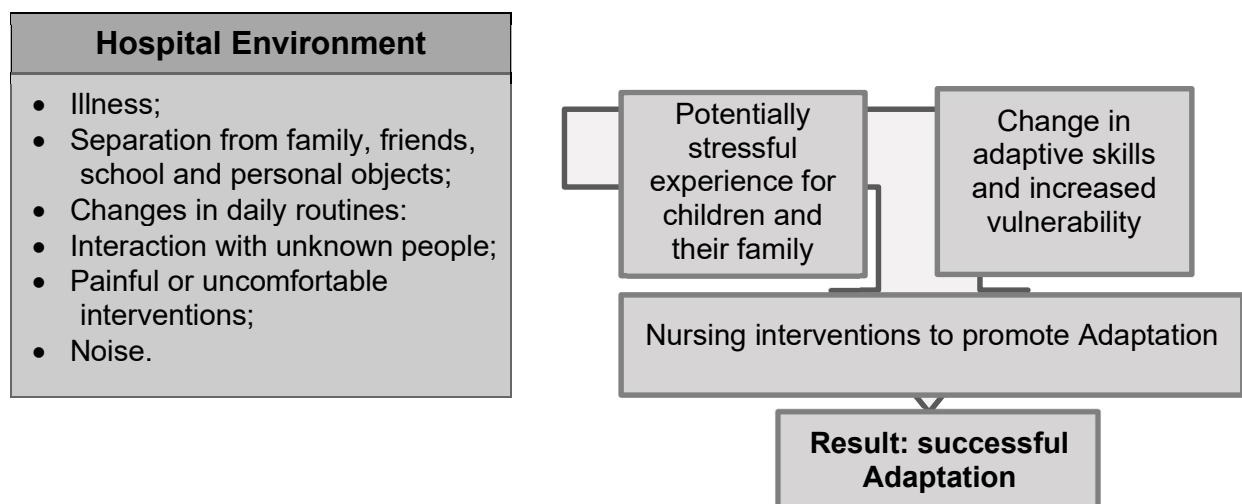
In this sense, Foster *et al.* <sup>(22)</sup> reflects on the experiences and needs of parents of seriously injured children. These authors identify three main themes: 1) dealing with childhood injury, 2) accepting the complexity of the injury and 3) finding ways to deal with family needs. Regarding the first topic, parents showcase a number of reactions including shock (with references to feelings of sadness, fear and grief, and, on others cases, to keep emotions under control by recognizing that they would probably feel those emotions later); a focus on managing their child's treatment (most parents consider their responsibility to understand the type of treatment their child receives and to ask staff questions about their progress) and a struggle to balance hospital and home environments (there is always tension between caring for the hospitalized child versus meeting the demands of life and family outside the hospital). The authors report that

parents come to progressively accept the injury during hospitalization by understanding the impact of the disease and how it will affect both the child and the family. Finally, a number of personal and external factors influence how parents seek support and accept help. Some parents may find difficult to accept support for their emotional needs, focusing exclusively on their child's needs. Others accept emotional support from health professionals, family and friends in the form of visits, phone calls, or through social networks, while others receive practical support from neighbours and friends <sup>(22)</sup>. Therefore, it is essential that the emotional needs of parents are recognized and addressed during the hospitalization of children, since the suppression of emotions can damage mental health and increase stress symptoms. The authors emphasize the need to address and demystify the feeling of guilt felt by the parents <sup>(22)</sup>.

Similarly, Hagstrom <sup>(23)</sup> emphasizes seven sources of stress for parents: separation, uncertainty, illness and suffering of the child, emotional stress, physical stress, financial stress and work stress, and previous experiences. Separation is mentioned as the primary source of stress for the families of inpatient children, with references to feelings of division between being at home or in the hospital and the alteration of parental roles (tasks and responsibilities). Parents also refer to their children's own illness and suffering as a source of stress. Uncertainty is referred to in different ways, from not knowing whether the child will be well, to how they will be after the discharge and what the future consequences of the disease may be. The sensation of a roller coaster is also frequently mentioned, alternating between periods of discouragement and excitement. These parents mention as stress relieving factors the welcoming environment (single room, family space in the child's room, place for siblings to be present for periods of time during hospitalization), preparation and explanation on the health status and the performed procedures, inclusion in the care plan, explaining how to interpret alarms and warning signs. Therefore, during nursing care is relevant to consider the potential sources of stress, planning the most opportune moments for parents' absence and providing when possible sibling visits. It is also important to support the psychological state of the family, often evaluating their feelings, taking into account their unstable condition during the hospital stay <sup>(23)</sup>.

To summarise, based on the articles analzsed, a schematic representation of the process of adaptation of the child and family to hospitalization is presented (Figure 1).

**Figure 1.** Adaptation Process of the Child and Family to Hospitalization



## Interventions to promote adaptation to hospitalization aimed at children

Nursing interventions that promote children's adaptation to hospitalization focus on strengthening coping mechanisms and increasing their sense of security. With this in mind, the interventions referred to in the analysed articles were grouped accordingly: (1) communication strategies; (2) playful activities/playing and relaxation; (3) promotion of hope, and (4) coping strategies <sup>(13)</sup>.

- 1) On the interaction between nurse and child, the main themes are the following: the characteristics that create a positive encounter - which depends on the professionalism, knowledge, nursing experience and parental role; the adaptation of the nurse to the needs of each child, adjusting the environment, for example, through games, for example, distracting the child by talking about things of interest to them, or using humour and stimulating the child's participation, so that the child feels important and not ignored <sup>(24)</sup>. The importance of communication is highlighted, as it is a right of the child to be informed about their condition. The family and nurses should adapt the information to their level of maturity, as it is through communication and play that they feel more in control of the situation. It is therefore necessary to increase ways of communicating with the child, through games, reading, demonstration and explanation of procedures <sup>(18)</sup>. It is also essential to promote the family relationship through the use of communication strategies, considering the importance of family support in the child's hospitalization process. For instance, children recognize that eating well is extremely important for treatment success, so when eating becomes difficult, families develop strategies to respond to this challenge, such as buying food or bringing their favourite food from home. Health education is an intervention which promotes the adaptation and the partnership between the child and the health professional, and this should be structured, since the children who understand how the treatment works in their disease process have greater capacity to face adversities and side effects. The interaction between nurse and child should be guided by trust, security, respect and dialogue <sup>(20)</sup>.
- 2) Regarding the coping mechanisms, the studied adolescents highlighted the importance of developing playful activities such as listening to music, talking to other adolescents and positive thinking <sup>(20)</sup>. In their study Sposito *et al.* <sup>(25)</sup> reported that, in addition to pharmacological strategies, children identified other strategies to help themselves, such as involvement in playful activities, massaging, and thinking about distracting subjects. Children can cope more easily with treatments after identifying and taking actions that help to relieve side effects and pain, making the treatment less threatening and causing less discomfort. Playful activities are seen as coping strategies, with emphasis on playing games (video games and computer games), reading, drawing and painting. Moreover, bringing their own games and toys made the hospital environment similar to home and the toys available helped to minimize the boredom. They also mentioned that internet access has improved contact with people and the "world" outside the hospital.



Likewise, techniques such as relaxation, distraction techniques, as well as acupuncture were also mentioned <sup>(25)</sup>.

- 3) As regards maintaining hope for healing and finding support in religion, the children said that it was worth going through the treatment process because of the hope that it could cure them. Keeping hope presents itself as an important strategy to face adversity. Despite this, a relapse or failure of treatment is seen as a threat. Children look for ways to strengthen their hope in order to minimize the fear of treatment failure. Thereby, religion becomes an important source of support, strengthening hope <sup>(25)</sup>.
- 4) Regarding the implementation of coping strategies, the use of adaptation kits is mentioned, since it has been concluded that they are effective in reducing children's anxiety, calming their behaviour and increasing their collaboration during procedures <sup>(26)</sup>. On the other hand, animal therapy can benefit hospitalized children and adolescents, facilitating adaptation to the hospital environment. This therapy can reduce pain and anxiety, increase socialization and quality of life. Dogs are among the most popular animals used by nurses. This therapy can also be used as a nursing intervention, to help the child adapt to stressful situations, increase mobility and muscle activity and promote the child's collaboration during procedures, considering that they tend to feel more relaxed and confident when they realize that the hospital environment also provides them with pleasure and fun <sup>(27)</sup>. The importance of strategies like therapeutic groups is also highlighted. These strategies can play an important role, not only in listening, but also in recognizing other young people facing similar situations <sup>(20)</sup>. The group can be an important stage for the development of adaptation strategies, and the nurse in his intervention should enable the child and his family to adopt coping strategies <sup>(28)</sup>.

To summarise, nurses should use effective non-pharmacological strategies to help children deal with fear through techniques such as relaxation and guided imagination; listening to music; activities with video games; watching television; activities with toys; and the use of comfort massages <sup>(25)</sup>.

### **Interventions to promote adaptation to hospitalization directed at the family**

Regarding nursing interventions to support the adaptation of the parents of hospitalized children, it is essential that the nurse acts to support the development of a support system, since this can help to minimize the negative effects of the hospitalization process. The family feels supported not only by their own family, friends, health professionals, and their spirituality, but also by the families of other hospitalized children. Families share the same space, the experiences and feelings related to the health-disease process of their children, and support each other so that they can recover together. Building the support system with health professionals is undeniably important for family members, as it helps them deal with and adapt to the child's illness, reducing stress symptoms and the feeling of fear. Effective communication between health professionals and the family can reduce the anxiety felt in the face of illness and hospitalization, so the nursing team aims to promote the adaptation of the family, contributing to their health and quality of life <sup>(21)</sup>.

For Doupnik *et al.* <sup>(29)</sup>, there are three essential categories of nursing interventions in this field. Beginning with education, the authors focus on the importance of teaching about parental skills and beneficial knowledge in caring for children. As far as emotional regulation is concerned, these point out that the focus is on emotional self-care, and include such interventions as activities to promote relaxation or distraction, teaching parents strategies for coping with anxiety and stress, and encouraging adaptive emotional expression. Finally, social and structural support focuses on identifying resources for social support and practical considerations related to hospitalization. This study shows that adaptation support interventions are effective in reducing parents' anxiety and stress and consequently in improving children's anxiety, as they increase parents' ability to participate in child care, to receive information and to participate in shared decision making <sup>(29)</sup>.

Reflecting on the effectiveness of an adaptation scale to hospitalization, based on the nursing evaluation of the effectiveness of coping mechanisms, it is concluded that this leads to the implementation of realistic support interventions. This scale facilitates the successful identification of families most at risk of ineffective adaptation during their child's hospitalization <sup>(30)</sup>.

A schematic representation of the analysed results, with the nursing interventions promoting adaptation to hospitalization addressed to the child and family highlighted by the articles analysed in Scoping Review is presented below (Figure 2).

**Figure 2 – Nursing interventions that promote adaptation to hospitalization for children and their families.**

Communication strategies	Play and relaxation activities	Promotion of hope	Coping strategies	Interventions addressed to the family
Effective Communication	Reading, drawing and painting	Religious/spiritual practices	Adaptation kits	Family Centered Care
Anticipatory Information	Distraction/ Humor	Hope Diaries	Animal Therapy	Effective Communication
Adapting the environment to the child	Music therapy/ Arterapia		Therapeutic Groups	Promote the Support System
Support emotional needs	Guided Imagination/ Meditation			Support Emotional Regulation
Active child participation in care	Internet access			Hospitalization Adaptation Scale

To point out the limitations of this study, it should be mention that only articles published in Portuguese and English were included and research was conducted in three databases. The same search criteria may be applied in the future to more databases and to articles in other languages, in order to increase the theoretical sample and test the results.

## CONCLUSION

Mapping of the results of the analysed articles allowed us to understand the process of the child and family's adaptation to hospitalization and also if the nursing interventions to promote adaptation to hospitalization of children and their families are in line with the interventions raised in relation to the expected outcome. Mapped Nursing interventions focused mainly on the physiological and the role function adaptive modes of the RAM.

Based on the principle of family-centred care, the nurse plans the care around the whole family, encouraging parental participation in care during hospitalization. Adaptation support interventions have an impact on reducing anxiety and stress in children and their parents, as they increase parents' ability to participate in care, to receive information, and to enable them to participate in shared decision-making.

It became clear that there was a need to increase ways of communicating with the child, for example through games, reading and demonstration and explanation of procedures. Other mentioned promotion strategies for effective adaptation were relaxation techniques, distraction, humour, therapeutic play, art therapy, music therapy, adaptation kits, animal therapy and therapeutic groups. The articles also demonstrated the relevance of implementing strategies that promote hope, since keeping hope presents itself as an important strategy to face adversity and minimize fear.

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## REFERENCES

1. Roy C. Key Issues in Nursing Theory. Developments, Challenges, and Future Directions. *Nursing Research*. 2018, 67 (2): 81–92.
2. Saini N, Veena S, Arora S, Khan F. Roy's Adaptation Model: Effect of Care on Pediatric Patients. *Int J Nurs Midwif Res*. 2017; 4 (1): 52-60.
3. Tremarin R, Gawleta F, Rocha D. A Teoria da Adaptação Sustentando o Cuidado de Enfermagem em Hospital Pediátrico: Um estudo de Caso. *Cogitare*. 2009; 14(3): 569-574.
4. Costa T, Morais A. A Hospitalização Infantil: Vivência de Crianças a partir de Representações Gráficas. *Rev enferm UFPE*. 2017, 11 (1): 358-67.
5. Santos P, Silva L, Depianti J, Cursino E, Ribeiro C. Os cuidados de Enfermagem na Percepção da Criança Hospitalizada. *Rev Bras Enferm*. 2016, 69(4): 603-9.
6. Livesley J, Long T. Children's Experiences as Hospital in-patients: Voice, Competence and Work. Messages for Nursing from a Critical Ethnographic Study. *International Journal of Nursing Studies*. 2012, 50: 1292-1303.
7. Gonçalves K, Figueiredo J, Oliveira S, Davim R, Camboim J, et al. Criança Hospitalizada e Equipe de Enfermagem: Opinião de Acompanhantes. *Rev enferm*. 2017, 11 (6): 2586-93.
8. Hutchfield K. Family-centred care: a concept analysis. *Journal of Advanced Nursing*. 1999, 29 (5), pp. 1178-1187.

9. Roy C, Andrews H. Teorias da Enfermagem. O Modelo de adaptação de Roy. Lisboa: Instituto Piaget, 2001.
10. Hanna D, Roy C. Roy Adaptation Model and Perspectives on the Family. *Nursing Science Quarterly*. 2001, 14(1).
11. Coelho S, Mendes I. Da Pesquisa à Prática de Enfermagem aplicando o Modelo de Adaptação de Roy. *Esc Anna Nery*. 2011, 15 (4): 845-850.
12. Herdman T, Kamitsuru S. Diagnósticos de enfermagem da NANDA-I: definições e classificação 2018-2020 (11ª ed.). Porto Alegre: Artmed; 2018.
13. Johnson M, Bulechek G, Butcher H, Dochterman J, Maas M. Ligações entre NANDA, NOC e NIC. Porto Alegre: Artmed; 2006.
14. Pereira AM, Nunes J, Teixeira S, Diogo P. Gestão do Estado Emocional da Criança (dos 6 aos 8 anos) através da Actividade de Brincar: Analisando o Cuidado de Enfermagem em Contexto de Internamento de Pediatria. *Pensar Enfermagem*. 2010, 14 (1).
15. Joana Briggs Intitute. Joanna Briggs Institute Reviewers' Manual. Australia: Joana Briggs Intitute; 2014.
16. Moher D, Liberati A, Tetzlaff, Altman, The PRISMA Group. Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *PLoS Medicine*. 2009, 6 (7).
17. Peters M, Godfrey C, Khalil H, Mclnerney P, Parker D, Soares C. Guidance for conducting systematic scoping reviews. *International Journal of Evidence-Based Healthcare*. 2015, 13:141–146.
18. Ribeiro JP, Gomes GC, Silva PA, Thofehrn MB, Oliveira AM, Tarouco AC. Reflecting on the Construction of Caring in Pediatrics. *J Nurs UFPE on line*. 2016, 10(12): 4672-9.
19. Gomes GC, Nicola GD, Souza NZ, Chagas MC, Farias DF, Xavier DD. Percepções da Família acerca das dificuldades de adaptação criança à Hospitalização: Subsídios para a Enfermagem. *Cogitare Enferm*. 2013, 18(4): 767-74.
20. Costa JS, Santos ML. Grupo de Adolescente Hospitalizados com Doença Crónica não transmissível como tecnologia de cuidado de enfermagem. *Rev enferm UFPE on line*. 2016, 10(2): 508-14.
21. Bazzan JS, Milbrath VM, Gabatz, RI, Soares M, Schwartz, Soares, D. Support Systems in the Pediatric Intensive Therapy Unit: Family Perspective. *Rev Bras Enferm*. 2019; 72(3): 243-50.
22. Foster K, Young A, Mitchell R, Van C, Curtis K. Experiences and needs of parents of critically injured children during the acute hospital phase: A qualitative investigation. *Injury, Int. J. Care Injured*. 2017, 48: 114–120.
23. Hagstrom S. Family Stress in Pediatric Critical Care. *Journal of Pediatric Nursing*. 2016.
24. Abuidhail J, Al-Motlaq M, Mrayan L, Salameh T. The Lived Experience of Jordanian Parents in a Neonatal Intensive Care Unit: A Phenomenological Study. *The Journal of Nursing Research*. 2016.
25. Sposito A, Silva-Rodrigues F, Sparapani V, Pfeifer L, Lima R, Nascimento L. Coping Strategies Used by Hospitalized Children With Cancer. *Journal of Nursing Scholarship*. 2015, 0: 1-9.
26. Drake J, Johnson N, Stoneck AV, Martinez DM, Massey M. Evaluation of a Coping Kit for Children With Challenging Behaviors In a Pediatric Hospital. *Pediatric Nursing*. (2012), 38 (4): 215-221.
27. Moreira RL, Gubert FA, Sabino LM, Benevides JL, Tomé MA, Martins MC, et al. Assisted therapy with dogs in pediatric oncology: relatives' and nurses' perceptions. *Rev Bras Enferm*. 2016, 69(6): 1122-8.

28. Ordem dos Enfermeiros. Regulamento das Competências Específicas do Enfermeiro Especialista em Enfermagem de Saúde da Criança e do Jovem. Lisboa: Ordem dos Enfermeiros; 2018.
29. Doupnik SK, Hill D, Palakshappa D, Worsley D, Bae H, Shaik A, et al. Parent Coping Support Interventions during Acute Pediatric Hospitalizations: A Meta-Analysis. *Pediatrics*. 2017, 140 (3).
30. Lyu Q, Kong SK, Wong FK, You L, Yan J, Zhou X, et al. Psychometric Validation of an Instrument to Measure Family Coping During a Child's Hospitalization for Cancer. *Cancer Nursing*. 2016.



## Appendices

### Appendix I - Joanna Briggs Institute Data Extraction Instrument (2014)

**Review Title:** Nursing Interventions Promoting Adaptation of: Intervenções de Enfermagem Child / Youth / Family to Hospitalization: a Scoping Review.

**Review Question:** Which nursing interventions promote adaptation hospitalization of the child and his family? Inclusion Criteria (PCC):

Population: Child, Youth (0-18 years) and Family (Parents, caregivers or representatives brothers and sisters).).

Concept: Interventions that promote adaptation.

Context: Hospitalization

**Study details and feature extraction:**

Author (s) \_\_\_\_\_

Year of publication \_\_\_\_\_

Goals \_\_\_\_\_

Study design \_\_\_\_\_

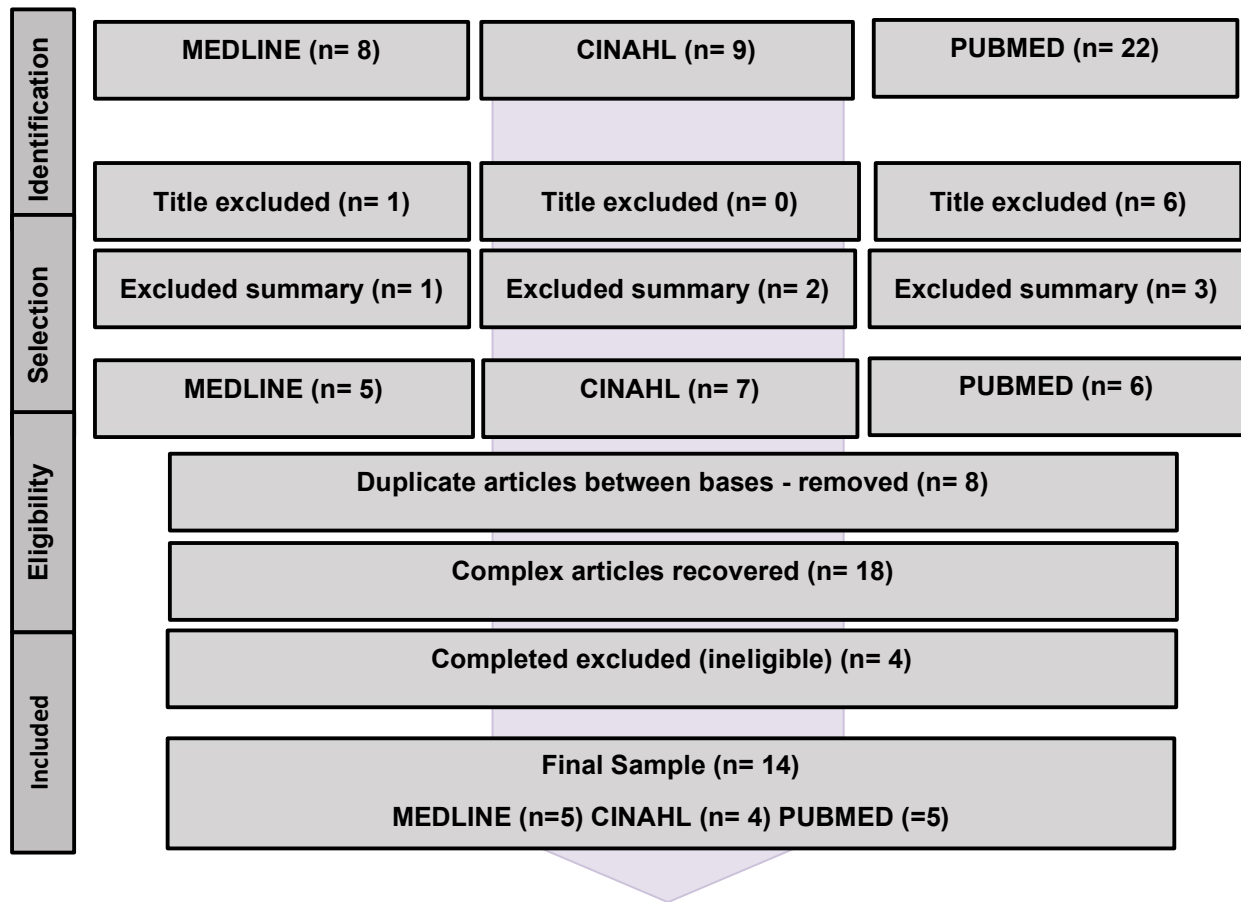
Study population \_\_\_\_\_

Context \_\_\_\_\_

Intervention \_\_\_\_\_

Mains results \_\_\_\_\_

## Appendix II- PRISMA flowchart (16)



### Appendix III - Table of Articles Excluded from the Scoping Review

Title	Authors	Year	Motive
Translation and adaptation of a pediatric early warning score	Miranda, J; Camargo, C; Sobrinhom C; et al.	2016	Title
Transitioning home: A four-stage reintegration hospital discharge program for adolescents hospitalized for eating disorders	Dror, S; Kohn, S; Avichezer M, Sapir, B; et al.	2015	Title
Trying to Live With Pumping: Expressing Milk for Preterm or Small for Gestational Age Infants	Ikonen, R; Paavilainen, E; Kaunonen, M.	2016	Title
A Stress Coping App for Hospitalized Pregnant Women at Risk for Preterm Birth	Jallo, N; Thacker, L; Menzies, V; et al.	2017	Title
Fatigue and health related quality of life in children and adolescents with cancer	Nunes, M; Jacob, E; Bomfim, E, et al.	2017	Title
Factors Predicting Parent Anxiety Around Infant and Toddler Postoperative and Pain.	Rosenberg, R; Clark, C; Chibbaro, P; et al.	2017	Title
The Role of Peer Support in the Development of Maternal Identity for "NICU Moms"	Rossman, B; Greene, M; Meier, P.	2015	Title
Altered stress system reactivity after pediatric injury: Relation with post-traumatic stress symptoms	Ewing-Cobbs, L; Prasad M; Cox, C; et al.	2017	Summary
Psychological Outcomes in Parents of Critically Ill Hospitalized Children	Stremmer, R; Haddad, S; Pullenayegum, E; Parshuram, C.	2017	Summary
"It broke our hearts" Understanding Parents' Lived Experiences of Their Child's Admission to an Acute Mental Health Care Facility	Ward, L; Gwinner, K.	2014	Summary
Discharge Teaching, Readiness for Discharge, and Post-discharge Outcomes in Parents of Hospitalized Children	Weiss, M; Sawin, K; Grafton, K; et al.	2017	Summary
Capacidade de resiliência em adolescentes: o olhar da enfermagem	Santos, R; Barreto, A.	2014	Summary
Support provided by nurses to parents of hospitalized children – cultural adaptation and validation of Nurse Parent Support Tool and initial research results	Aftyka, A; Rozalska-Walaszek, I; AWrobe, A, et al.	2016	Full reading
Factors influencing fatigue among mothers with hospitalized children: A structural equation model	Kim, S; Kim, H; Park, Y; et al.	2017	Full reading
Cross-cultural adaptation of an instrument to measure the family-centered care	Silva, T; Alves, L; Balieiro, M; et al.	2015	Full reading
Stress and coping of parents caring for a child with mitochondrial disease	Senger, B; Ward, L; arbosa-Leiker, C; Bindler, R.	2015	Full reading
Hospitalization As A Difficult Situation For Children In The Opinion Of Parents And Nursery Personnel	Witanowska, J; Warmuz-Wancisiewicz, A; Ullman, A	2019	Full reading

## Appendix IV- Table of articles included in the Scoping Review

Author and year of Publication	Objective	Study design	Study population	Context	Concept	Results
Ribeiro <i>et al.</i> (2016)	Reflection on care for hospitalized children. Creation of spaces that value the dignity of the hospitalized child and family.	Systematic Literature Review	Hospitalized child-family	Hospitalization	Pediatric Nursing Care	<ul style="list-style-type: none"> <li>• Child and family-centered care - parents as care partners.</li> <li>• Communication: reading, games, demonstration of procedures.</li> </ul>
Grahn, Olsson, Mansson, (2016)	Describe strategies used by nurses in interaction with children aged 3 to 6 years	Qualitative	Hospitalized child-family	Pediatric Emergency.	Pediatric Nursing Care	<ul style="list-style-type: none"> <li>• Importance of communication between the health team and child, so that they and their family feel safe during internment</li> <li>Importance of communication between the health team and the child, so that the child and his family feel safe during hospitalization.</li> <li>• Child and family involvement in care is essential to reduce fears and increase collaboration in them.</li> </ul>
Drake <i>et al.</i> (2012)	Evaluate the perception of the intervention's effectiveness through an Adaptation Kit.	Quantitative cross-sectional	Nursings	Hospitalization of Children with Developmental Disorders	Intervention with adaptation kit	<ul style="list-style-type: none"> <li>• Nurses perceive the kits as effective in reducing patients' anxiety, calming children's behavior and increasing collaboration during procedures.</li> </ul>
Doupnik <i>et al.</i> (2017)	Describe adaptation-promoting interventions for parents of hospitalized children.	Systematic Literature Review.	Parents of Hospitalized Children	Hospitalization	Nursing interventions to support adaptation	<ul style="list-style-type: none"> <li>• Adaptation support interventions can relieve parents' psychological stress during their child's hospitalization.</li> <li>• Three categories of interventions: education, emotional regulation and social and structural support.</li> </ul>

Foster <i>et al.</i> (2016)	Analyze parents' experiences with a seriously injured child.	Qualitative	Parents of Hospitalized Children	Acute hospital stay.	Nursing interventions to support adaptation	<ul style="list-style-type: none"> <li>• Adaptation support interventions can relieve parents' psychological stress.</li> <li>• Categories of interventions: education, emotional regulation and social and structural support.</li> </ul>
Hagstrom (2016)	Describe sources of stress for families of children hospitalized in intensive care.	Quantitative and Qualitative	Parents of Hospitalized Children	Hospitalization in an Intensive Care Unit	Nursing interventions to support adaptation	<ul style="list-style-type: none"> <li>• Sources of stress: separation, not knowing, the child's illness and suffering, care and affection, emotional stress, physical stress, financial and work stress, and past experiences.</li> </ul>
Gomes <i>et al.</i> (2013)	To know the family's perceptions about the child's adaptation difficulties during hospitalization	Qualitative exploratory-descriptive research	Families of children hospitalized	Hospitalization	Adaptation to hospitalization	<ul style="list-style-type: none"> <li>• Hospital environment as different, fear of hospitalization and changes in the child's behavior.</li> <li>• Need to support the family so that they can give the necessary support to the child and take care in a humanized way, so that hospitalization is less traumatic.</li> </ul>
Lyu <i>et al.</i> (2016)	Validation of Hospitalization Adaptation Scales.	Quantitative and Qualitative	Families of children hospitalized in oncology	Oncology Hospital Internment	Adaptation to hospitalization	<ul style="list-style-type: none"> <li>• Nursing assessment of the effectiveness of coping mechanisms during children's hospitalization.</li> <li>• Implementation of realistic interventions.</li> </ul>
Sposito <i>et al.</i> (2015)	Analyze adaptation strategies used by children with cancer to undergo chemotherapy.	Qualitative	Children with cancer disease under going chemotherapy.	Oncology Hospital Internment	Adaptation to hospitalization	<ul style="list-style-type: none"> <li>• The identified strategies: understand the need for chemotherapy; find relief from side effects and pain; understand the importance of food; participation in entertainment activities and having fun; keeping hope of healing and support in religion alive.</li> </ul>



Costa and Santos (2016)	Create a self-help group with adolescents hospitalized with chronic non-communicable disease.	Qualitative Descriptive and exploratory	Adolescents hospitalized with chronic non-communicable disease	Hospitalization	Adaptation to hospitalization	<ul style="list-style-type: none"> <li>Impact of internment in daily life, limitation in routine activities such as going to school, seeing family and friends and playing. Coping mechanisms: family support, development of recreational activities and regular use of medication.</li> </ul>
Moreira <i>et al.</i> (2016)	Perception of professionals of the nursing team and responsible for children and adolescents with cancer about Assisted Therapy with Dogs.	Qualitative	Nurses and guardians of children and adolescents with cancer disease	Hospitalization	Assisted Therapy with Dogs as Adaptation to Hospitalization	<ul style="list-style-type: none"> <li>The participants' perceptions reinforce recommendations that can be applied in the hospital context and evidence that therapy can become an effective intervention to promote the health of children and adolescents with cancer</li> </ul>
Cho <i>et al.</i> (2016)	Identify the effects of the kangaroo technique.	Quantitative quasi-experiment	Premature babies and mothers	Neonatology Units	Kangaroo technique.	<ul style="list-style-type: none"> <li>The Kangaroo Technique is one of the most effective nursing interventions in neonatal care in the care of preterm children and their mothers.</li> </ul>
Abuidhail, <i>et al</i> (2016)	Describe the experiences, needs in relation to care and the support systems of parents in Neonatology.	Qualitative	Parents of preterm children	Neonatology Units	Adaptation to hospitalization	<ul style="list-style-type: none"> <li>Main themes: shock, worry and anxiety experienced by parents; the influences of admission on family experiences; the necessary information and assistance received by parents from health professionals; and parents' emotions and satisfaction.</li> </ul>
Bazzan <i>et al</i> (2019)	Analyze the support systems used by family members in the process of adapting to the child's hospitalization in an intensive care unit.	Qualitative	Relatives of hospitalized children.	Intensive Care Unit.	Adaptation to hospitalization.	Support Systems: family and friends; relatives of other hospitalized children; spirituality and the health team.

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