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THEORETICAL VALIDITY OF THE NURSING ATTITUDE SCALE REGARDING THE RIGHTS OF CHILDREN UNDER INTENSIVE CARE[1]

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ABSTRACT

Objective: build and validate the theoretical content of a nursing attitude scale regarding child rights in pediatric intensive care units.

Method: methodological study describing the construction and theoretical validation of the scale through a bibliographical review, semantic analysis and content validation by experts/nurses, employing the content validity coefficient and the intraclass correlation coefficient.

Results: the Nursing Attitude Scale regarding Rights of Children in Pediatric Intensive Care Units was validated by 15 nursing specialists in the child health field, distributed throughout Brazil's five regions. It comprises 99 items, distributed among the cognitive, affective and behavioral components of attitudes. The content validity coefficients for each dimension were 0.91, 0.86 and 0.89, respectively, and the final intraclass correlation coefficient for the scale was r=0.76.

Conclusion: the scale presented content validity evidence and the items addressed the attitudes of nurses when practicing care at pediatric intensive care units, which will enable the evaluation of the rights of hospitalized children.

DESCRIPTORS: Pediatric nursing. Hospitalized child. Pediatric intensive care unit. Child advocacy. Attitude. Test validation.

VALIDAÇÃO TEÓRICA DE ESCALA DE ATITUDES DAS ENFERMEIRAS SOBRE DIREITOS DA CRIANÇA EM TERAPIA INTENSIVA

RESUMO

Objetivo: construir e validar o conteúdo teórico da escala de atitudes das enfermeiras frente aos direitos da criança na unidade de terapia intensiva pediátrica.

Método: estudo metodológico que descreve a construção e validação teórica da escala mediante revisão bibliográfica, análise semântica e validação de conteúdo por juízes/enfermeiros, utilizando o coeficiente de validade de conteúdo e coeficiente de correlação intraclasse.

Resultados: a Escala de Atitudes das Enfermeiras frente aos Direitos da Criança na Unidade de Terapia Intensiva Pediátrica foi validada por 15 enfermeiros especialistas na área da saúde da criança, distribuídos pelas cinco regiões do Brasil, e ficou composta por 99 itens, distribuídos pelas dimensões dos componentes cognitivo, afetivo e comportamental da atitude. O coeficiente de validade de conteúdo de cada dimensão foi de 0,91, 0,86 e 0,89, respectivamente, e o coeficiente de correlação intraclasse final da escala de r=0,76.

Conclusão: a Escala apresentou evidências de validade de conteúdo e os itens abordaram as atitudes das enfermeiras na prática assistencial em Unidade de Terapia Intensiva Pediátrica, o que permitirá a avaliação dos direitos da criança hospitalizada.

DESCRITORES: Enfermagem pediátrica. Criança hospitalizada. Unidades de terapia intensiva pediátrica. Direitos da criança. Atitude. Validade dos testes.

VALIDACIÓN TEÓRICA DE ESCALA DE ACTITUDES DE LAS ENFERMERAS SOBRE DERECHOS DE LA NIÑEZ EN TERAPIA INTENSIVA

RESUMEN

Objetivo: construir y validar el contenido teórico de la escala de actitudes de las enfermeras frente a los derechos de la niñez en la unidad de terapia intensiva pediátrica.

Método: estudio metodológico que describe la construcción y validación teórica de la escala mediante revisión bibliográfica, análisis semántico y validación de contenido por jueces/enfermeros, utilizando el coeficiente de validez de contenido y coeficiente de correlación intraclase.

Resultados: la Escala de Actitudes de las Enfermeras frente a los Derechos de la Niñez en la Unidad de Terapia Intensiva Pediátrica fue validada por 15 enfermeros especialistas en el área de la salud del niño, distribuidos por las cinco regiones de Brasil, y quedó compuesta por 99 ítems, distribuidos por las dimensiones de los componentes cognitivos, afectivos y conductuales de la actitud. El coeficiente de validez de contenido de cada dimensión fue de 0,91, 0,86 y 0,89, respectivamente, y el coeficiente de correlación intra-clase final de la escala de r = 0,76.

Conclusión: la Escala presentó evidencias de validez de contenido y los ítems abordaron las actitudes de las enfermeras en la práctica asistencial en Unidad de Terapia Intensiva Pediátrica, lo que permitirá la evaluación de los derechos del niño hospitalizado.

DESCRIPTORES: Enfermería pediátrica. Niño hospitalizado. Unidades de terapia intensiva pediátrica. Derechos del niño. Actitud. Validez de las pruebas.

INTRODUCTION

Children are vulnerable beings who need special care and who must be protected. When they become ill, they experience a multitude of experiences and depending on the disease's progression, hospitalization is unavoidable.[1-3] For children, illness corresponds to a condition of weakness and dependency, in addition to experiencing organic and psychological distress.[4] When they become severely ill and the disease threatens their lives, rigorous treatment and hospitalization in pediatric intensive care units (PICUs) are necessary.[5]

The experience of hospitalization is extremely difficult and can leave marks in children due to changes in their daily and environmental routines such as: isolation from their toys and school routine, stress and traumas during treatment, severance of affective bonds with their families and friends, and feelings of abandonment. These facts generate high physical and emotional distress, fear of pain and death, anxiety and behavioral changes.[2-4]

All these feelings and behaviors are intensified when they are hospitalized in PICUs – defined by children and families as places related to suffering. Facing this context, nurses have crucial roles in minimizing the effects of hospitalization in children and their families.[6-8]

In order to promote comprehensive and humanized care, nurses must act on the preservation and protection of children's lives with adequate understanding and recognition of their biopsychosocial and spiritual needs, in addition to guaranteeing the observation of child advocacy as defined by law during the care practice.[1,9-10]

In Brazil, childhood protection rights were established with the enactment of the 1988 Federal Constitution, which was a large step towards guaranteeing child advocacy.[11] However, what indeed definitely marked the progress of child advocacy in society, as well as during hospitalization, was the enactment of Law no. 8069, of July 13, 1990, which addresses the Brazilian Children and Adolescents Statute (ECA, as per its acronym in Portuguese).[12]

Regarding the specific preoccupation with protecting children during hospitalization, another step forward was achieved in Brazil with the 20 items on the rights of children and adolescents when hospitalized. This achievement became reality through a project by the Brazilian Pediatrics Society that was created in 1995, approved by the 27th Extraordinary Assembly of the National Council for Children and Adolescents' Rights (CONANDA, as per its acronym in Portuguese) and enacted by Resolution No. 41 of October 13, 1995.[13]

Literature shows that, despite all advancements in hospitalized child advocacy, there still is a need for more efforts from the State, from hospital institutions and professionals in order to guarantee the observation of rights as defined by law during practice.[1,14-15]

It is a fact that, even 26 years after the enactment of the ECA and 20 years of the implementation of Resolution No. 41 of CONANDA, there are still problems to guarantee these rights during hospitalization. Nurses, as team leaders, have a crucial role in guaranteeing them.

When reviewing studies that address child care at PICUs, it can be learned that the rights of hospitalized children still have barriers to come to full effect. These difficulties are related to disease-oriented care, family members/companions not being able to be at bedside full-time at PICUs, lack of systematization for pain assessment and management, the vertical-

ization of information on children's hospitalizations, restriction of play and lack of coping strategies for the death and dying process.[15-18]

Although positive attitudes from nurses were found regarding child advocacy, literature shows that a part of the professionals is still pathology-oriented. This approach is focused on caring for the ill body, not for the health needs of children.[1,16]

With this, it is crucial to analyze the attitudes of nurses when handling child advocacy at PICUs, because these attitudes are seen as capable of influencing the care offered to children and their families.

According to the social psychology definition, a person's attitudes derive from common processes of learning and experience and are, frequently, a result of individual personality characteristics or influenced by environmental determinants. They can also be a consequence of interactions or previous experiences.[19] Attitudes referenced in this study are defined as multidimensional, seeing how they present cognitive, affective and behavioral components in their constitution.[19]

In order to analyze nursing attitudes, it is relevant to build and use instruments capable of assessing nursing care practice, whose results could enable the creation of strategies to offer comprehensive care for children.

Considering the small number of scientific studies addressing child advocacy at PICUs as their central theme; the lack of instruments in national and international literature assessing nursing attitudes in children care practice at PICUs, with emphasis on the observance of their rights; and the scarcity of research with scales for transcultural adaptation and that didactically describe the stages of constructing instruments,[1,15] this study had the goal of constructing and validating the theoretical content of the Nursing Attitude Scale regarding child advocacy in pediatric intensive care units (EAEDC-UTIP, *Escala de Atitudes das Enfermeiras frente aos Direitos da Criança na unidade de terapia intensiva pediátrica*).

METHOD

A methodological study[20] describing the construction and theoretical validation of the EAEDC-UTIP was conducted between October, 2013 and February, 2014. These two stages were developed through bibliographical review, semantic analysis and content analysis by pediatric nursing experts, observing the stages of the theoretical framework, which corresponded to the theory on which the construct was based.[21-22]

The theoretical framework is the definition of the construct to be assessed and the its properties; constitutional definition, identification of its dimensions and operational definition; construction of the items that will make up the instrument and the content validation of these items.[21]

In observance of criteria and ethical principles for research on humans as defined in Resolution no. 466/2012 of the Brazilian National Health Council/Ministry of Health, this study was approved by the Human Research Ethics Committee of the Anna Nery School of Nursing and the São Francisco de Assis School Hospital, through ruling no. 404.554/2013 and CAAE 20837713.9.0000.5238.

The scale was constructed using a bibliographical review with descriptors recorded at the Virtual Health Library that related to the theme: pediatric intensive care units, hospitalized children, nursing team, pediatric nursing, child advocacy and nurses. These descriptors were paired using the boolean operator *and*.

Electronic searches were conducted in the following databases: Cumulative Index to Nursing and Allied Health Literature (CINAHL), Latin American and Caribbean Center on Health Sciences Information (LILACS), Medical Literature Analysis and Retrieval System Online (MEDLINE), Scientific Electronic Library Online (SciELO) and Coordination for the Improvement of Higher Education Personnel (CAPES).

As inclusion criteria, it was established that publications should be research articles, dissertations or theses; national literature, seeing how this study is based on Brazilian laws that guarantee hospitalized child advocacy; availability in full; developed by health professionals, especially nursing teams. Exclusion criteria were publications that did not have abstracts in the databases; review research, experience reports, historical and documentary research. A total of 2,372 publications were selected, of which nine met the inclusion criteria.

For the constitutional definition phase,[21] a thematic analysis of the nine selected publications was conducted, following these steps: selection of the studies' thematic approaches; identification of themes emerging from the thematic approaches; grouping of themes; establishment of theme recurrence; and construction of items based on recurring themes.

After literature analysis, the constitutional concepts were defined[21] according to attitude components[19] in order to support the scale's structure. The dimensions were: cognitive component; affective component; and behavioral component.

For the operational definition,[21] a variety of operational concepts was extracted from the bibliographical review, representing these attitudes when handling child advocacy at PICUs; interaction/communication between nurses and children; presence/permanence of parents in PICUs; children in terminal phase/death of children at PICUs; children care at PICUs; nursing team at PICUs; environment of PICUs; relationship between nurses and families; children pain at PICUs; procedures conducted on children; recreation and playing at PICUs; pediatric intensive nursing training; hospitalization of children in PICUs; spiritual values of children and their families.

Once the behavioral approaches of attitudes had been defined, the instrument – Likert scale – creation phase followed. It was constructed based on the list of behavioral categories expressed in unitary and specific tasks, titled "items".[21-22] On the Likert scale that was applied to this study, participants had to express their opinions using five degrees: totally agree, partially agree, uncertain, partially disagree, totally disagree.

The first version of the EAEDC-UTIP was built with three dimensions, based on attitude components, and 198 items were constructed from the constitutional and operational definitions of nursing attitudes, alternating between direct (positive) semantic construct, favorable to practice, and reverse (negative) semantic construct, unfavorable to practice.

Of the 198 constructed items, 79 are in the cognitive component dimension, 55 in the affective component and 64 in the behavioral component. All items were constructed as phrases, expressing nursing attitudes.

For the scale's theoretical validation stage, 62 experts were invited. They were pediatric nursing specialist nurses, chosen for their Lattes curricula, based on their academic training and considering: whether they were nurses with doctorate degrees in children's health nursing and specializing in pediatric nursing; and/or nurses, with master's and doctorate degrees in children's health.

In October, 2013, the chosen nurses received via email a "letter to experts", containing the objectives for participation in the theoretical validation of the scale, the first version of the EAEDC-UTIP; and a free and informed consent form. Of the 62 experts, 15 answered and met the proposed objectives, being considered able experts in the field of the construct. The number of approved participants (15) was adequate according to literature recommendations.[22]

For the semantic analysis stage, the board of specialist nurses was invited to descriptively express themselves in an open field next to each scale item regarding semantic adequacy, language clarity and ease of comprehension, pointing to possible necessities for repositioning, rewriting or exclusion of items.

The content validation of the EAEDC-UTIP had the aim to analyze the degree of theoretical relevance for each item in the scale's three dimensions, as well as to verify the quality of each dimension concerning content validity. For this stage, experts were asked to assess each item according to its relevance to measure nursing attitudes when handling child advocacy at PICUs, using the agreement levels: totally agree, partially agree, uncertain, partially disagree and totally disagree. The content validity coefficient (CVC) was used for analysis.[23] The CVC was created with the aim of providing information on how a group of specialists assesses a scale and its items. The index was used for two different analysis levels: (1) content validity coefficient for item (CVCi) and (2) content validity coefficient for each dimension (CVCd).

The CVCi was calculated with the ratio between the mean of the scores of each expert for the items and the maximum value of the last category of the scale. The CVCd was calculated with the difference between the mean of the CVCi scores and the ratio between 1 and the total number of experts, raised to the power of the same value. According to literature, the acceptable value for the CVC must be equal to or over 0.80. If the analyzed item presents a CVC below 0.80, it is recommended that they be eliminated or redefined by experts for better understanding by the target population.[23] The CVC indexes were calculated using Microsoft® Excel® 2016.

As complementary analysis, the intraclass correlation coefficient (ICC) was calculated for each dimension/subscale of the instrument and final format of the scale. The ICC is a method to assess the degree of agreement among experts.[24] For the authors, ICC values between 0.40 and 0.75 present "fair" or "good" levels of agreement. The coefficient was calculated using the SPSS® v.23.[25]

RESULTS

The experts participating in this study were all women (100%), with mean age of 47.6 years and mean education length of 23.9 years (varying from 9 to 44 years). The 15 selected experts were distributed throughout the five regions of Brazil, with nine in the Southeast, three in the South, one in the North,

one in the Northeast and one in the Central-West region. Of the 15 experts, 86.6% were professors and 13.4% practiced nursing, with 100% presenting master's and doctorate degrees in children's health and 73.3% were specialists in pediatric nursing.

In the semantic analysis, experts assessed the 198 items that composed the scale in its initial structure. Of these, 68 items were considered adequate to be part of the EAEDC-UTIP without changes in their structures and 130 items received observations by the assessors.

Of these 130 items, 99 also received considerations by the experts. They found items with repeated information, confusing writing, demands for improved writing, information with double meaning, lack of understanding and a variety of attitudes to be assessed in the same item. Considering these issues, the items were deleted. For the 31 items remaining from the original 130, experts suggested rewriting in order to improve the text's objectivity, clarify the items' meanings or fit them to the corresponding dimensions of the EAEDC-UTIP.

Through consensus, items "49 - of the cognitive component" and "31 - of the affective component" were repositioned, since they corresponded to behavioral attitudes, according to experts' suggestions.

The EAEDC-UTIP, after semantic analysis by the experts, comprised 99 items, with 38 in the cognitive component dimension, 28 in the affective component and 33 in the behavioral component.

The CVCi values were calculated by the experts during content validation, according to the theoretical relevance of the 99 items. In 86 items, values were over 0.80 and in 13 items, values were below what is recommended by literature, as presented in charts 1, 2 and 3.

Chart 1 - Items of the cognitive component dimension of the EAEDC-UTIP and CVCi

Items of the dimension - cognitive component	CVCi
1 - Children in coma or sedated do not hear me during care.	0.96
3 - The decoration of the PICU distracts awake children.	0.97
11 - The beds in the PICU where I practice are not adequate for the children's age group.	0.59*
16 - Children stress is unavoidable during the period in the PICU, since they experience changes in environment, absence of parents, fear, pain and long periods without sleep.	0.84
20 - My nursing practice demands technical competence, scientific knowledge and constant updating in the field of children's health.	1.00
22 - I recognize children are suffering and in pain by their behavior, their body language and facial expressions.	0.96
25 - The disease-centered care model and the "fight for life at any cost" is still experienced daily at PICUs.	0.87
31 - I do not know the methods for treatment and pain assessment in pediatrics.	0.83
32 - When children improve their clinical picture, at the PICU where I practice, they are readily transferred to another lower complexity unit, along with their families.	0.76*
34 - I recognize that children at PICUs have the right to receive visits from family and friends.	0.95
37 - The care dynamics at PICUs harms the rights for health education programs and for following the school curriculum for awake and lucid children hospitalized for long periods of time.	0.89
38 - I believe that pain in children should be assessed and treated constantly during their stay at PICUs.	0.92
40 - I recognize that the presence of families/companions with children at PICUs facilitates pain assessment, since they can offer information on children's behavior.	0.97
41 - The association of pharmacological and non-pharmacological strategies, such as non-nutritional suction and sweetened suction, are not effective in treating children's pain at PICUs.	0.92
42 - The standardization of pain treatment and assessment would facilitate my decision making in pain relief for children in PICUs.	0.89
44 - I identify as pain behaviors in children: crying, agitation, frowning, dull eyes and irritability.	0.99
45 - Recreational activities, such as playing, reading and music are neglected due to the characteristics of PICU care and of the children's clinical picture.	0.99
46 - When using toys and conducting recreational activities, I notice that children let their feelings flow and interact more easily.	1.00

Items of the dimension - cognitive component	CVCi
47 - I believe that the presence of parents/companions at PICUs harms children's recovery.	0.95
50 - Full-time presence of parents/companions at PICUs is a children's right.	1.00
51 - Family members/companions, when present at PICUs with children, do not know hospital routine and the therapy children are undergoing.	0.89
52 - Next to children's beds at PICUs there are places for full-time permanence of family members/companions, with chairs for resting.	0.61*
53 - Children's families are not full part of the care I practice at PICUs.	0.95
54 - I consider family members/companions sources of information on the habits, customs and life stories of children.	0.95
55 - I recognize that children's families have minor and passive roles in care, in which decision making is vertical and centered on the units' teams.	0.85
60 - I consider that the presence and participation of families in care must be encouraged, with the aim of valuing cultural heritage and exchange of experiences among children, families and health teams.	0.97
61 - O recognize that not all parents are able to be at their children's bedside during their stay at PICUs.	0.83
62 - I recognize that support groups for children's families facilitate the relationship with teams, decrease stress and standardize information to be disseminated.	0.95
65 - I believe that families harm the interrelationship between children and teams.	0.97
66 - My relationship with children's families has the aim of exchanging and discussing ideas, of interacting sensibly, empathetically and honestly, to enable good understanding between teams and families.	0.93
68 - I understand that spiritual support is a resource employed by children and families to decrease suffering and cope with the period of disease in PICUs.	0.99
70 - I recognize that families must be prepared to experience children's deaths, with emotional support, information on children's clinical pictures and on the possibility of cure being out of reach.	0.97
71 - Nursing undergraduate education prepares nurses for handling children's deaths.	0.99
72 - I believe that the health teams' preparation for handling death facilitates the acceptance of irreversible clinical pictures in children and supports decision making to help families.	0.97
73 - I recognize that there is a knowledge gap in nursing training regarding the rights of hospitalized children.	0.97
75 - I consider PICUs inadequate places for children during the terminal stages of their lives.	0.83
76 - I recognize that children in the terminal stages of life must remain with their families, in favorable environments, ensuring privacy and comfort.	0.97
79 - I believe that toys and other objects brought from home increase hospital infections rates.	0.85

*Items with CVCi below 0.80.

Chart 2 - Items of the affective component dimension of the EAEDC-UTIP and CVCi

Items of the dimension - affective component	CVCi
3 - I notice that children who are kept away from their parents are fearful and anxious during their stay at PICUs.	0.99
4 - I prefer to care for children with severe cases and sedated than those who are awake and communicating.	0.83
6 - I notice that working with children at PICUs does not cause psychic distress for the health team.	0.89
7 - I appreciate the input of children at PICUs during care.	0.96
11 - I like to practice at PICUs because of the possibility to work with life-support equipment and to heal severely ill children.	0.73*
12 - Children hospitalized at the PICU where I practice do not receive care support from psychology professionals to help them cope with the hospitalization with less anxiety.	0.59*

Items of the dimension - affective component	CVCi
14 - I miss recreational activities, like reading, playing, and the "doctors of joy" for children at the PICU where I practice.	0.89
16 - I feel that children get more agitated after recreational activities at PICUs.	0.95
17 - I find that sedated children or those with neurological deterioration are stimulated by recreational activities.	0.68*
18 - I feel that the presence of family members/companions in PICUs make children more agitated.	0.91
19 - I feel the need to interact with family members/companions by talking to them.	0.99
21 - I feel safe when caring for children at PICUs in presence of family members/companions.	0.95
22 - I feel that nursing teams are against the full-time presence of families in PICUs.	0.80
23 - I appreciate the presence of family members/companions in PICUs because they offer love and comfort to children.	0.99
24 - I notice that relationships between nursing teams and family members/companions are not conflicted.	0.71*
25 - Practicing while family members/companions are present in PICUs makes me care more for the life stories of children and their families.	0.93
26 - I have difficulties to meet the informational needs of family members/companions.	0.80
27 - I value dialog, active listening and guidance for families during children's stays at PICUs.	0.97
28 - I notice that the first contact with family members/companions of children at PICUs is traumatizing due to the extensive use of equipment and invasive procedures.	0.93
29 - I appreciate family members/companions as partners and collaborators in the nursing care offered to children at PICUs.	0.93
30 - I do not understand the emotional state of family members/companions of children and prefer staying away.	0.88
34 - I notice that the biopsychosocial needs of family members are not considered at PICUs.	0.71*
35 - I sympathize with the suffering of children and their families and appreciate the presence of family members/companions in PICUs.	0.91
43 - I appreciate the presence of images, prayers and other spiritual support objects of families and children on bedside.	0.91
44 - I notice that the relationship of multi-professional teams with children's family members are cold and distant.	0.68*
46 - I notice that few professionals care about being close to families in order to talk to them and hear them.	0.79*
48 - My activities as a nurse end when children die, since I have no time to support families after their bodies leave the PICU.	0.87
52 - I feel unhappy and impotent in cases of acute death of children who were previously healthy.	0.85

*Items with CVCi below 0.80.

Chart 3 - Items of the behavioral component dimension of the EAEDC-UTIP and CVCi

Items of the dimension - behavioral component	CVCi
3 - Before conducting the care, I explain to sedated or comatose children everything that will be done.	0.92
4 - The technological resources available at PICUs for maintenance of children's lives take me away from a more sensitive care.	0.84
5 - According to children's ages, I explain what will be done and ask their opinions, for example: on which hand I should puncture a vein.	0.97
7 - I satisfy all health needs of children at PICUs, offering individualized and humanized care.	0.87

Items of the dimension - behavioral component	CVCi
8 - I have difficulties communicating with comatose or sedated children who are under mechanical ventilation.	0.88
10 - I conduct procedures on severely ill children and do not explain to them what I am doing.	0.88
11 - I offer care for children at PICUs while observing biological, psychological and spiritual aspects.	0.93
13 - I register all procedures conducted on children in the nursing records, without restricting any information.	0.96
15 - According to children's ages, I lecture them about their disease and all therapeutic procedures to which they will be submitted.	0.95
17 - I establish interaction with children at PICUs using toys, drawings and music.	0.92
18 - I take toys and personal objects of children away from their beds, because the hospital infection commission claims they increase infection rates.	0.85
21 - When I think that children will be calmer with their family members/companions, I allow their entrance to PICUs outside visitation hours.	0.85
22 - I do not conduct procedures on children when family members/companions are present.	0.92
23 - When conducting procedures at PICUs, I employ toys to distract the children.	0.92
26 - In situations of conflict between teams and family members/companions, I seek support from guidelines and institutional routines in order to keep order in the sector.	0.73*
27 - I respect the opinion of aware children hospitalized at PICUs.	0.95
28 - I ask family members/companions to remain outside PICU during procedures on children.	0.61*
29 - I participate in decisions concerning children treatment and measures to be taken through discussions with multi-professional teams at PICUs.	0.91
31 - I invite family members/companions to help bathing children at PICUs.	0.88
33 - I lecture the nursing team on the importance of the presence of family members/companions in PICUs with the children.	0.99
34 - I only inform family members/companions what I consider necessary information about the therapeutic procedures applied to children.	0.85
35 - I show family members/companions my interest in children's life stories.	0.99
36 - I keep away from families when they are too argumentative.	0.85
37 - If I notice at PICUs that children are being mistreated I call child protective services	0.88
41 - I allow family members/companions of children at PICUs to express their feelings.	0.99
43 - In case of children with chronic diseases, which normally require prolonged PICU stays, I develop closer relationships to children and families by sharing good and bad routine experiences.	0.96
44 - I do not previously notify family members/companions about procedures to be conducted on children.	0.83
49 - I encourage families to bring children's personal objects, such as toys.	0.93
59 - I allow unrestricted entrance of spiritual supporters of children and families to PICUs.	0.87
60 - I have difficulties understanding spiritual values and religious practices of children and their families at PICUs.	0.99
61 - After confirming death, I allow families to have a last moment with children to say their goodbyes still at PICUs.	1.00
31** - In the cases of children with less severe conditions who cry, I allow the presence of family members/companions in PICUs.	0.93
49** - Because of the time spent explaining the administered care, I do not encourage family members/companions to participate in care for children at PICUs.	0.72*

*Items with CVCi below 0.80; **Repositioned items.

Considering the theoretical relevance of the items content for the theme addressed in the research and their pertinence to the proposed objectives, the 13 items with CVCi below 0.80 were reassessed according to suggestions from experts, without changing the central idea. Eight items were

adjusted for clarity and ease of comprehension, as presented in chart 04, and five items (24 and 44 of the affective component; 26, 28 and 49 (repositioned) of the behavioral component) remained unchanged.

It is worth noting that the option to maintain items with CVC values below recommended also took in consideration that the scale will be submitted, in further studies, to new analyses that will check its construct validity and reliability.

Chart 4 - Results of experts' contributions for rewriting of items

Original Item	Modified Item
Cognitive Component Dimension	
11 - The beds at the PICU where I practice are not adequate for the children's age group.	11 - I recognize that the PICU beds are not adequate for the children's age group.
32 - When children improve their clinical pictures, at the PICU where I practice, they are readily transferred to another lower complexity unit, along with their families.	32 - When children improve their clinical pictures, they are readily transferred to another lower complexity unit, along with their families.
52 - Next to children's beds at PICUs there are places for full-time permanence of family members/companions, with chairs for resting.	52 - A place for fill-time permanence of family members/companions at PICUs, with chairs for resting, is a children's right.
Affective Component Dimension	
11 - I like to practice at PICUs because of the possibility to work with life-support equipment and to heal severely ill children.	11 - I like to practice at PICUs because of the possibility to work with life-support equipment that enable to heal severely ill children.
12 - Children hospitalized at the PICU where I practice do not receive care support from psychology professionals to help them cope with the hospitalization with less anxiety.	12 - I feel the lack of care support from psychology professionals to help children hospitalized at PICUs to cope with the hospitalization with less anxiety.
17 - I find that sedated children or those with neurological deterioration are stimulated by recreational activities.	17 - Sedated children or those with neurological deterioration must be stimulated with recreational activities.
34 - I notice that the biopsychosocial needs of family members are not considered at PICUs.	34 - I feel that the biopsychosocial needs of family members are not considered at PICUs.
46 - I notice that few professionals care about being close to families in order to talk to them and hear them.	46 - I feel that few professionals care about being close to families in order to talk to them and hear them.

After verification of the items' CVC, the CVC for each dimension of the scale was calculated. The cognitive component dimension presented CVCd of 0.91, 0.86 in the affective component and 0.89 in the behavioral component.

In addition to the content validity coefficient, the intraclass correlation coefficients were also calculated for each dimension of the scale and final format. It was observed that all subscales presented values recommended by literature.[24] For the cognitive component dimension items, the obtained ICC was r=0.78 (C.I.95% [0.66;0.87], p<0.001). The ICC for the affective component dimension was r=0.78 (C.I.95% [0.64;0.88], p<0.001). The behavioral component dimension reached the intraclass correlation coefficient of the set of measures for a value of r=0.70 (C.I.95% [0.52;0.83], p < 0.001).

The final format of the EAEDC-UTIP presented an ICC of r=0.76 (C.I.95%[0.69;0.83], p < 0.001).

DISCUSSION

It is important to highlight that this study is pioneering the construction of nursing attitude scales that address child advocacy at PICUs. All developments in the construction and theoretical vali-

dation of the EAEDC-UTIP were rigorously based on procedures that exposed its content validity.[21]

The dimensions of the EAEDC-UTIP, which were initially proposed and based on the attitude components, made it possible to search the cognitive component for knowledge and beliefs of nurses regarding care for children and their families at PICUs, and aspects related to rights. They correspond to what nurses know, recognize, consider and believe to be adequate or not in their practice according to experience.

In the affective component dimension, positive and negative feelings that nurses present when performing their activities were studied, along with the relationships established with children and their families at PICUs, which can or cannot be facilitators to guarantee child advocacy, highlighting what is valued, the capacity to establish relationships and the display of interest and affection for others. The behavioral component dimension corresponded to nursing behavior, to their care practice at PICUs; in other words, their positions, actions and reactions to practice issues during care in order to guarantee rights, and in the relationship with children and families.

Theoretical validation made the EAEDC-UTIP extremely relevant, because it was validated by experts from all over Brazil, who had the responsibility to verify whether the items were relevant for the proposed theme, in addition to giving their insight for improving how items were written and the adequacy of the scale. This wide gamut of views and knowledge coming from various childcare locations throughout the country enabled the scale to be constructed while considering the realities of nursing practice and their professional contexts. Thus, there is a strong guarantee for the representation level of the scale.

It is worth noting that the items had elements that were related to hospitalized child advocacy through aspects of daily practice of nurses at PICUs and that the variety of aspects incorporated to the items became evident because of the need for better comprehension of the theme at hand.

These aspects focused on respect and dignity of children as human beings and beings with rights, with the preservation of their physical, psychical and moral integrity; right for protection of life and health; of being accompanied full-time by family members/companions during their whole stay at PICUs; rights to play and participate in recreational activities; right to information for children and their families, with adequate knowledge of their diseases, treatment, administered care and their participation; right to not be or not remain hospitalized unnecessarily; the preservation of their autonomy and values, of personal spaces and objects; right to not feel pain; right to receive spiritual and religious support; right to protection against maltreatment; and right to a dignified death.[12-13]

Concerning the results reached by this research, CVCd and ICC presented satisfactory results[23-24] and allowed a closer empirical look at the consensus among specialists. Thus, it was possible to decrease the number of variables according to their levels of representativeness and relevance for the construction, as well as to ensure that others adequately portray the relevant object. It is important to remember that in the scale construction process, items correspond to observable behaviors, while constructs are assessed through factors or non-observable variables. This means that psychological or attitudinal objects consist formatively of a set of items that varies according to the latter's representation.[26]

Although the EAEDC-UTIP presents good content validity characteristics, it should be emphasized that the study presented limitations by accepting the presence of items with CVCi below what is recommended by literature. Thus, the scale needs to be applied to the target population, in this case, PICU nurses, and be submitted to various psychometric procedures to be considered an instrument with construct validity, which will enable the verification of nursing attitudes at PICUs. The restrictions to apply the scale in PICUs are also considered a limitation of the study.

It is important to mention that content validity corresponded only to an instrument creation phase, which was especially directed by specialist knowledge on the purpose of scale assessment. It is still necessary to conduct a construct validity study with the goal of investigating the interaction between constructs and behaviors in the empirical sphere without control or direct knowledge from professionals of involved factors. Factorial procedures make it possible to construct instruments not only considering the static theories of literature, but also considering the mental representation of attributes inside response variability.[26-27]

Beyond content and construct validity, it is also this teams' interest to learn which aspects of professional practice the EAEDC-UTIP is capable of predicting. In this sense, the Holy Grail of instruments and scales consists of the ability to predict real events.[28] In literature, the attribute is named predictive validity and other attributes of interest to be investigated should still involve the probability of manifestations from each item – this is called difficulty parameter – as well as the ability of

the instrument to discriminate subjects during the problematized traces.[29]

CONCLUSION

The EAEDC-UTIP presented content validity evidences and the items addressed the attitudes of nurses when practicing care in PICUs, which will enable the evaluation of the rights of hospitalized children. The construction of this scale as an assessment instrument for nursing practice is extremely relevant when considering the scarcity of studies that address the theme of child advocacy at PICUs.

Some outstanding contributions from this article are the didactic presentation of the stages of an attitude scale construction, making it possible for other researchers to have directions when developing measurement instruments capable of assessing practice and providing resources for decision making through the presentation of scientifically reliable results.

This research was the first phase in the construction and content validation of EAEDC-UTIP.

Application of EAEDC-UTIP is expected to provide resources for the establishment of strategies focused on observing child advocacy at PICUs, for example, by establishing norms, projects, programs and guidelines that guarantee the enactment of advocacy for hospitalized children as defined in the legislation for the promotion of children's health in the country.

REFERENCES

1. Kelly M, Jones S, Wilson V, Lewis P. How children's rights are constructed in family-centred care: a review of the literature. J Child Health Care [Internet]. 2012 Jun [cited 2015 Feb 10]; 16(2):190-205. Available from: http://www.ncbi.nlm.nih.gov/pubmed/22363046
2. Costa TS, Morais AC. Child hospitalization: child living from graphical representations. J Nurs UFPE [Internet]. 2017 Jan [cited 2017 Feb 05]; 11(Suppl. 1):358-67. Available from: http://www.revista.ufpe.br/revistaenfermagem/index.php/revista/article/view/10524/pdf_2394
3. Andrade RD, Santos JS, Pina JC, Furtado MCC, Mello DF. Integrality of actions among professionals and services: a necessity for child's right to health. Esc Anna Nery [Internet]. 2013 [cited 2015 Nov 20]; 17(4):772-80. Available from: http://dx.doi.org/10.5935/1414-8145.20130023
4. Caleffi CCF, Rocha PK, Anders JC, Souza AIJ, Burciaga VB, Serapião LS. Contribution of structured therapeutic play in a nursing care model for hospitalised children. Rev Gaúcha Enferm [Internet]. 2016 Jun [cited 2017 Feb 05]; 37(2):e58131. Available from: http://dx.doi.org/10.1590/1983-1447.2016.02.58131
5. Pontes EP, Couto DL, Lara HMS, Santana JCB. Non-verbal communication in the pediatric intensive care unit: perception of the multidisciplinary team. REME - Rev Min Enferm [Internet]. 2014 Jan-Mar [cited 2016 Jan 15]; 18(1):152-7. Available from: http://www.reme.org.br/exportar-pdf/915/v18n1a12.pdf
6. Majdalani MN, Doumit MA, Rahi AC. The lived experience of parents of children admitted to the pediatric intensive care unit in Lebanon. Inter J Nurs Stud [Internet]. 2014 Feb [cited 2016 Jan 15]; 51(2):217-25. Available from: http://dx.doi.org/10.1016/j.ijnurstu.2013.06.001
7. Mortensen J, Simonsen BO, Eriksen SB, Skovby P, Dall R, Elklit A. Family-centred care and traumatic symptoms in parents of children admitted to PICU. Scand J Caring Sci [Internet]. 2015 Sep [cited 2016 Jan 15]; 29(3):495-500. Available from: http://www.ncbi.nlm.nih.gov/pubmed/25236928
8. Silva ACO, Santos DMA, Silva DCM, Sousa FGM, Lima HRFO, Moura MRLA. Identifying the needs of support, safety, information, proximity and comfort of families of children hospitalized. Rev Enferm UFPI [Internet]. 2014 [cited 2016 Feb 10]; 3(2):42-8. Available from: http://www.ojs.ufpi.br/index.php/reufpi/article/viewFile/1700/pdf
9. Rodrigues AC; Calegari T. Assistance humanization in pediatric intensive care unit: perspective of nursing staff. REME - Rev Min Enferm [Internet]. 2016 [cited 2017 Feb 05]; 20:e933. Available from: http://www.dx.doi.org/10.5935/1415-2762.20160003
10. Angelo M, Prado SI, Cruz AC, Ribeiro MO. Nurses' experiences caring for child victims of domestic violence: a phenomenological analysis. Texto Contexto Enferm [Internet]. 2013 Jul-Set [cited 2016 Aug 23]; 22(3):585-92. Available from: http://www.scielo.br/pdf/tce/v22n3/en_v22n3a03.pdf
11. Manole EJE. Constituição Federal. Atualizada até a EC n. 95/2016. 9ª ed. São Paulo (SP): Manole, 2017.
12. Nucci GS. Estatuto da Criança e do Adolescente / Comentado: Em busca da Constituição Federal das Crianças e dos Adolescentes. 3ª ed. São Paulo (SP): Gen/Forense, 2017.
13. Brasil. Conselho Nacional dos Direitos da Criança e do Adolescente. Resolução n. 41, de 13 de outubro de 1995: dispõe sobre os direitos da criança e do adolescente hospitalizados. Resoluções, junho de 1993 a setembro de 2004. Secretaria Executiva do Conanda [Internet]. Brasília (DF): Secretaria Especial dos Direitos Humanos; 2004 [cited 2015 Nov 05]. Available from: http://dh.sdh.gov.br/download/resolucoes-conanda/res-1-a-99.pdf
14. Lira SFL. O desrespeito aos direitos das crianças e adolescentes no ambiente hospitalar. Univ JUS Brasília [Internet]. 2010 Jul-Dez [cited 2016 Mar 22]; 21(1):129-43. Available from: http://www.publicacoesacademicas.uniceub.br/index.php/jus/article/view/675

15. Bisogni S, Aringhieri C, McGreevy K, Olivini N, Lopez JRG, Ciofi D, et al. Actual implementation of sick children's rights in Italian pediatric units: a descriptive study based on nurses' perceptions. BMC Medical Ethics [Internet]. 2015 May [cited 2016 May 18]; 13:16-33. Available from: http://www.ncbi.nlm.nih.gov/pubmed/25964120
16. Amaral LFP, Calegari T. Humanization of nursing care for the family at the pediatric intensive care unit. Cogitare Enferm [Internet]. 2016 Jul-Sep [cited 2017 Feb 06]; 21(3):. Available from: http://dx.doi.org/10.5380/ce.v21i3.44519
17. Mattsson J, Forsner M, Castrén M, Arman M. Caring for children in pediatric intensive care units: an observation study focusing on nurses' concerns. Nurs Ethics [Internet]. 2013 Aug [cited 2015 Nov 30]; 20(5):528-38. Available from: http://www.ncbi.nlm.nih.gov/pubmed/23329781
18. Halal GMAE, Piva JP, Lago PM, Halal MGE, Cabral FC, Nilson C, et al. Parents' perspectives on the deaths of their children in two Brazilian paediatric intensive care units. Int J Palliat Nurs [Internet]. 2013 [cited 2016 Jan 26]; 19: 495-502. Available from: http://www.magonlinelibrary.com/doi/abs/10.12968/ijpn.2013.19.10.495
19. Rodrigues A, Assmar EML, Jablonski B. Psicologia social. 32ª ed. Petrópolis (RJ): Vozes; 2015.
20. Polit DF, Beck CT, Hungler BP. Fundamentos de pesquisa em Enfermagem: avaliação de evidências para a prática de enfermagem. 7ª ed. Porto Alegre (RS): Artmed; 2011.
21. Pasquali L, organizador. Instrumentação psicológica: fundamentos e oráticas. Porto Alegre (RS): Artmed; 2010.
22. Medeiros, RKS, Júnior MAF, Pinto DPSR, Vitor AF, SantosVEP, Barichello E. Pasquali's model of content validation in the Nursing researches. Rev Enf Ref [Internet]. 2015 Feb [cited 2016 May 06]; serIV(4):127-35. Available from: http://www.scielo.mec.pt/scielo.php?script=sci_arttext&pid=S0874-02832015000100014&lng=pt.
23. Hernández-Nieto, RA. Contributions to Statistical Analysis. Mérida (VE): Universidad de Los Andes; 2002.
24. Shrout PE, Fleiss JL. Intraclass correlation: uses in assessing rater reliability. Psychol Bull [Internet]. 1979 [cited 2016 May 10]; 86(2):420-8. Available from: http://www.aliquote.org/cours/2012_biomed/biblio/Shrout1979.pdf
25. IBM. SPSS Statistics for Windows, Version 23.0. Armonk (US): IBMCorp; 2015.
26. Tucker LR, MacCallum RC. Exploratory factor analysis. Unpublished manuscript, Columbus (US): Ohio State University; 1997.
27. Hair J, Black W, Babin B, Anderson R, Tatham R. Multivariate Data Analysis. 7th ed. Upper Saddle River (NJ): Pearson Educational; 2010.
28. Cohen RJ, Swerdlik ME, Sturman ED. Testagem e avaliação psicológica: introdução a testes e medidas. 8ª ed. Porto Alegre (RS): AMGH; 2014.
29. Pasquali L. Psicometria: teoria dos testes na psicologia e na educação. 5ª ed. Petrópolis (RJ): Vozes; 2013.

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