

Validation of content and appearance of an educational manual to promote children's mental health

Validação de conteúdo e aparência de manual educativo para promoção da saúde mental infantil

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-  Marina Nollí Bittencourt¹
-  Raissa dos Santos Flexa¹
-  Ingrid Souza Reis Santos¹
-  Larissa Duarte Ferreira¹
-  Camila Rodrigues Barbosa Nemer¹
-  José Luís da Cunha Pena¹

¹Universidade Federal do Amapá.
Macapá, AP, Brazil.

Corresponding author:

Marina Nollí Bittencourt
Rodovia JK S/N, Condomínio Arboretto, casa 46,
Chefe Clodoaldo, CEP: 68903-197.
Macapá, AP, Brazil.
E-mail: marinanolli@hotmail.com

ABSTRACT

Objective: to validate the content and appearance of an educational manual to promote children's mental health. **Methods:** this is a methodological study, in which 16 specialists (health and education professionals) and six of the target audience (nurses) participated. The Content Validity Index and the Agreement Index were calculated according to the response to the instrument, which assessed the objectives, appearance, structure, organization, relevance and didactics of the manual. **Results:** the Content Validity Index was 0.984 for the target audience, and the Agreement Index was 100.0%. The main changes were in the title, objectives and theoretical framework, excluding workshops and spelling and grammatical revision. **Conclusion:** the manual presented satisfactory Content Validity and Agreement indexes. It can assist nurses and other health professionals in promoting children's mental health, promoting the development of emotional intelligence.

Descriptors: Child; Mental Health; Health Promotion; Expressed Emotion; Nursing Care.

RESUMO

Objetivo: validar o conteúdo e a aparência de um manual educativo para promoção da saúde mental infantil. **Métodos:** trata-se de estudo metodológico, do qual participaram 16 especialistas (profissionais da saúde e educação) e seis do público-alvo (enfermeiros). O Índice de Validade de Conteúdo e o Índice de Concordância foram calculados conforme resposta ao instrumento, que avaliava objetivos, aparência, estrutura, organização, relevância e didática do manual. **Resultados:** o Índice de Validade de Conteúdo foi de 0,984 para o público-alvo, e o Índice de Concordância foi de 100,0%. As principais modificações foram no título, nos objetivos e no referencial teórico, com exclusão de oficinas e revisão ortográfica e gramatical. **Conclusão:** o manual apresentou Índices de Validade de Conteúdo e de Concordância satisfatórios. Ele pode auxiliar o enfermeiro e demais profissionais da saúde na promoção da saúde mental de crianças, difundindo o desenvolvimento da inteligência emocional.

Descritores: Criança; Saúde Mental; Promoção da Saúde; Emoções Manifestas; Cuidados de Enfermagem.

Introduction

Childhood and adolescence are phases in which children are most vulnerable to the development of mental disorders, and, when these symptoms start to appear, they can negatively influence their development throughout life⁽¹⁾. For this reason, it is undeniable the importance of promoting mental health for healthy development in childhood, and must be considered the interaction of the child's characteristics with their caregivers in the family environment and their socioeconomic and cultural contexts⁽²⁻³⁾, since mental health means having a pleasant, productive and fulfilled life⁽¹⁾.

Taking childhood as a complex period of development, in which there are intense biopsychosocial transformations inherent to it, so that the child can pass through these phases of life in a healthy way, it is important that they acquire new knowledge and change the behaviors and the way they see themselves. Nursing integrates this scenario with an important role in proposing interventions that aim to ensure the transition process in a healthy way⁽⁴⁻⁵⁾.

The nurse assumes the role of an important agent in proposing strategies that promote children's mental health and healthy development, in partnership with other health and education professionals, developing strategies aimed at emotional intelligence. This involves strengthening the interactions between emotion and intelligence, which are fundamental for the consolidation of the child's neurosensory functions⁽⁵⁻⁶⁾.

It can be observed in the international literature, educational technology proposals devised by nurses, with the aim of promoting the mental health of children and adolescents, in the perspective of some emotional intelligence competencies, which have been shown to be effective in strengthening the resilience and mental health of these individuals^(2,7).

However, in the national literature, there are no proposals for educational technologies aimed at mental health in childhood. Thus, the proposition of tools

that enable nurses and other professionals interested in promoting and maintaining children's mental health, from the perspective of emotional intelligence, is of great relevance to the area of nursing and children's mental health^(2,7), especially in Brazil, where social inequalities are alarming and make children even more vulnerable.

In this scenario, an educational manual for the promotion of children's mental health appears as a tool that serves to strengthen some of the children's emotional intelligence skills, and should not only guarantee the quality and safety of the information contained in the technology through the validation of its content and appearance⁽⁷⁾, but, above all, consider childhood as an important transition phase.

The aim of this study was to validate the content and appearance of an educational manual to promote children's mental health.

Methods

This is a methodological study, carried out from November 2017 to November 2018. The proposal was to validate the content and appearance of an educational technology in the form of a manual called "I feel, therefore I think".

The first phase consisted of the construction of the manual, which was prepared between the months of November 2017 and March 2018 as an activity of an extension project, the result of a research project, which, in turn, evaluated the mental health of children aged 6 to 12 years in the state of Amapá. The group that proposed it was composed of students and professors of the Nursing course at the Federal University of Amapá, being formed by three nurses, a psychologist and six nursing students.

Considering that the educational manual should respond to the results presented by the research with school children, it was initiated the search for a referential that justified the proposal of a strategy to promote mental health for the age group of 6 to 12 years old by nurses. The Transition Theory⁽⁵⁾ was

taken as a theoretical basis for the proposal of the manual, since the school age addressed corresponds to a transition phase of a developmental nature - the school phase. This phase takes place in a sequence of episodes, which involve the acquisition of new life skills, and the child is expected to develop positive strategies to face the reality in which they live, ensuring their well-being as well as that of their family.

With the understanding of the nurse's role in this transition, the group sought a reference that would guide the proposed workshops, which would compose the manual. Thus, the emotional intelligence model⁽⁶⁾ was chosen, which focuses on the following competencies: self-awareness; empathy; self-control and self-efficacy and emotional resilience.

Thus, each month, during the first 4 months, a competency of the emotional intelligence model was selected, and the group searched and proposed activities to compose the workshops, which would later form the final version of the manual.

It was decided to propose the workshops as group activities, to facilitate the work of the future applicator. In addition, each workshop was designed to contain objectives; methodology; main points to be addressed in order to achieve the goals and attitude of the applicator in the face of involvement with children. The proposed activities should always have served the school age population (6 to 12 years old).

At the end of each month, an *online* folder was set up, in which the group placed their workshop proposals and presented them, so that they could be assessed as to their coherence with the emotional intelligence competence that was aimed at.

At the end of the first phase, the first version of the elaborated manual was called "I think, therefore I feel". The target audience was nurses and objective audience, school children (6 to 12 years old). The manual consisted of 23 workshops, six of which were self-awareness, six of empathy, six of self-control and self-efficacy and five of resilience. It was an online document, of 70 pages, evaluated and compiled by

the responsible teachers, which was followed by the evaluation of qualified judges/professionals, for judgment and analysis of the items to be measured⁽⁸⁾.

In the second phase, of content and appearance validation, the analysis of the validation process took place with the participation of two different groups: one that analyzed the content dimension and another that verified the semantic dimension and appearance⁽⁸⁾. The inclusion criterion for the participants in the content dimension analysis was to have academic attributes (undergraduate, specialization, Master or Doctorate) focused on the areas of mental health, pediatrics, educational technologies, or early childhood education; for the semantic and appearance dimension, the criteria were: to be the target audience of this instrument, that is, to have training in nursing and to be working in the various health care services, since the manual was proposed for the nurse to apply it in any scenario where the objective was to promote child mental health.

Considering the inclusion criteria, the study participants were chosen from an intentional, non-random non-probabilistic sampling, by analyzing the curriculum of researchers in the field and nurses. For the content dimension analysis, 22 professionals from Brazil and one from Portugal were invited; 16 agreed to participate in the study, all Brazilian. Thus, the content dimension had participants with training, performance and scientific production in the area of mental health, child health, educational technologies and early childhood education, with ten nurses, three psychologists and three pedagogues. In the semantic and appearance dimension, ten nurses were invited; six nurses working in different health care services agreed to participate. These participants were invited via email.

Considering that the participants were from different regions of Brazil, two instruments were built on Google Forms, which were sent by email to all of them. The instruments consisted of three sections: the first contained the Informed Consent Form for reading

and acceptance; the second, identified the participant, who should enter information about his professional activity (education/profession, area of work and professional title); the third section exposed the different instruments for each type of participant. This last section was preceded by a framework that guided the organization of the workshops, identifying their axes, and another framework that explained the model of competencies that underpinned these axes and their corresponding workshops, namely: self-awareness, empathy, self-control and self-efficacy, and emotional resilience⁽⁶⁾.

The validation instrument for the group of participants who performed the content analysis had affirmative phrases related to the objectives (two questions), appearance, structure and organization (four questions), relevance (one question) and didactics (two questions) of educational technology under evaluation. The instrument for the group that performed the analysis of semantics and appearance had four affirmative phrases related to appearance, structure and organization. The validation instruments, present in the third section of the form, were adapted from another instrument⁽⁹⁾.

For the answers in the validation instruments, the participants had a Likert-type scale, with four options for response: 1. Strongly disagree, 2. Partly disagree, 3. Partly agree and 4. Totally agree. After each statement, the evaluator had a space for comments and suggestions.

For data analysis, the degree of agreement between expert judges (health and education professionals) was calculated for each item of the instrument and for the instrument as a whole, by calculating the Content Validity Index (CVI), which corresponds to the division between the sum of the number of responses in agreement (items that were marked as 3 or 4) by the total number of responses⁽⁸⁻¹⁰⁾.

The calculation for the general CVI was performed by adding all the CVI calculated for each item of the instrument, divided by the number of items. The minimum CVI agreement index considered in this stu-

dy was 0.75⁽¹⁰⁾. To qualify the responses of the target audience, the calculation of the Agreement Index (CI) was used. A CI of at least 70% was admitted⁽⁸⁾. The CVI and CI estimates were presented with a 95% confidence interval.

The suggestions made by expert judges (health and education professionals) and target audience (nurses) were passed on to Word and organized according to the dimension to which it was addressed. All suggestions relevant to the purpose of the technology were met.

The study was sent to the Ethics Committee of the Federal University of Amapá, with its consent with opinion nº 2,853,177/2018 and Certificate of Presentation for Ethical Appreciation nº 95595018.1.0000.0003.

Results

Among the 16 expert judges who evaluated the manual, ten were specialists in mental health and children's health, one was a Master in collective health and educational technologies, and four were Doctors in mental health and educational technologies. The target audience was formed by six nurses with expertise and performance in various health devices.

All items of the instrument obtained satisfactory evaluation, 77.8% with CVI 1.0 and 22.2% with CVI 0.93 of acceptance. The general CVI of the manual was 0.984 (Table 1).

Regarding the analysis of the target audience, the CI was 100%, with responses "partially agree" and "totally agree" in all the items evaluated, as shown in Table 2.

Comments and suggestions led to adjustments in several aspects of the manual. 13 participants included suggestions for the manual, totaling 36 comments or suggestions, six of which in the objective item; 15 in the item appearance, structure and organization; six in the relevance item; and five referring to didactics, described in Figure 1.

Table 1 – Responses of expert judges to the assessment instrument containing the objective items, parity, structure and organization, relevance and didactics. Macapá, AP, Brazil, 2017

Items	Strongly disagree	Partly disagree	Partly agree	I totally agree	*CVI	†CI95%
1. Objectives						
1.1 Achieves the proposal to strengthen children's emotional intelligence	0	0	2	14	1	1.00-1.00
1.2 Can help promote autonomy and empowerment in children	1	0	5	10	0,9	0.81-1.07
2. Appearance, structure and organization						
2.1 It is consistent in terms of agreement and spelling	0	1	4	11	0,9	0.81-1.07
2.2 The organization of the activity into integration, activity, completion and completion allows an easy understanding of the manual	0	0	4	12	1	1.00-1.00
2.3 The cover is attractive and in keeping with the proposed theme	0	0	2	14	1	1.00-1.00
2.4 The font size and title and content are adequate	0	0	6	10	1	1.00-1.00
3. Relevance						
3.1 Acts as a scientific support for nurses to promote child mental health	0	0	3	13	1	1.00-1.00
4. Didactics						
4.1 Fits the 6 to 12 age group	0	0	2	14	1	1.00-1.00
4.2 The number of activities is adequate	0	0	5	11	1	1.00-1.00

*CVI: Content Validity Index; †CI: 95% confidence interval

Table 2 – Answers regarding the nurses' assessment of appearance, structure and organization. Macapá, AP, Brazil, 2017

Appearance, structure and organization	Strongly disagree	Partly disagree	Partly agree	I totally agree	*CVI	†CI95%
1.1 It is coherent in terms of agreement and spelling	0	0	1	5	100	1.00-1.00
1.2 The organization of the activity in: integration, activity, conclusion and completion allows an easy understanding of the manual	0	0	1	5	100	1.00-1.00
1.3 The cover is attractive and in keeping with the proposed theme	0	0	1	5	100	1.00-1.00
1.4 The font size and title and content are adequate	0	0	1	5	100	1.00-1.00

*CVI: Content Validity Index; †CI: 95% confidence interval

Item	Topics Covered	Adjustments met
Objectives	Adjustments in workshops that did not fit the objective of educational technology	Yes
	Questioned if autonomy and empowerment are part of the technology construct	Yes
	Increasing the theoretical framework in educational technology	Yes
	Affirmed that educational technology improves children's mental health	Yes
Appearance, structure and organization	Incomplete or confusing workshops	Yes
	Review grammatical concordance	Yes
	Graphic accent erros	Yes
	Spell check	Yes
	Adjust workshop order	Yes
	Adjust pagination	Yes
	Title change suggestions	Yes
	Increase line spacing	Yes
	Praising for the colors and look of educational technology	Yes
	Make the look more attractive to children	Yes
Convene the use of terms, such as: workshop or activity? Students or children? Advisor or nurse, responsible, dynamizer?	Yes	
Relevance	Add photocopy materials proposed in workshops to the insert and specify the page number	Yes
	Training to use educational technology: increase your audience	Yes
Didactics	Focus more on mental health and child health on the theoretical basis	Yes
	Number of activities considered adequate	Yes
	Equivalence in the number of activities per module	Yes
	Increase the age range of application of the workshops	Yes

Figure 1 – Subjects addressed in the comments and suggestions of the judges and target audience in the validation instrument of the manual "I feel, soon I think". Macapá, AP, Brazil, 2017

After the evaluation and adequacy, the manual was left with 62 pages, font Trebuchet MS, size 11.5, spacing 1.5, containing 20 workshops divided equally into four modules, also with: cover, back cover, summary, catalog, presentation, concepts, 15 pages of insert and, finally, references.

Discussion

The study has limitations, since it was the validation of a manual that, despite having used the Transition Theory⁽⁵⁾ and the emotional intelligence model⁽⁶⁾ as a basis for its design and construction, did not involve a specific theory about promotion of mental health. Still, the development in a state in the extreme North of Brazil, with extremely vulnerable social characteristics, and the use of an intentional, non-random non-probabilistic sample, limit the generalization of technology.

However, despite the lack of a specific theory in the literature⁽⁴⁾, educational technology of the manual type, as in “I feel, therefore I think,” proved to be valid as a work tool for nurses and other trained professionals, and can be used for promotion mental health, through the strengthening of some child emotional intelligence skills.

The educational technology evaluated can be configured as an example of one of the biggest challenges in nursing today, which is to use technologies to promote conditions for empowerment and autonomy in the relationships of therapeutic care⁽⁸⁾, so that, in this way, the balance in the humanization of care is not lost⁽¹¹⁾.

The inclusion of professionals from different areas to compose the panel of expert judges in the manual, such as nursing, psychology and education, allowed the study to have an important multidisciplinary contribution^(2,8,12), rescuing the idea of a technology that would strengthen critical practice -reflective⁽¹¹⁾ by the professionals who use it and the children who receive it.

As for the objective, the judges suggested a better description of the theoretical basis in the manual. Thus, a more detailed description of the Transition Theory⁽⁵⁾ and the emotional intelligence model⁽⁶⁾ was included. The Transition Theory considers that, for the person to move to a new way of living, it is essential that they incorporate new knowledge and change behaviors, starting to have a new definition of themselves⁽⁵⁾. The emotional intelligence model points out skills to be worked on and incorporated to better deal with environmental demands and pressures, such as self-awareness to recognize feelings, self-control to deal with feelings, empathy to know how to identify emotions in others, and resilience to use emotions to your advantage, when you aim to achieve a goal⁽⁶⁾. Thus, this technology is based on strategies aimed at promoting child mental health, so that the child can go through a developmental transition process in a healthy way.

Still on the objectives of technology, workshops that did not meet the objective proposed by the manual were excluded, as it is important that the educational material reaches the target audience in an appropriate manner, as suggested by the judges⁽¹²⁾, and thus constitutes an interesting instrument for the professional who chooses to use it.

Regarding the semantic and appearance dimension, the title of the tool - before, called “I think, therefore I feel”, in an allusion to the famous phrase of the French philosopher René Descartes, *Cogito, ergo sum* -, was changed to “I feel, therefore I think”. This is because more contemporary theorists, such as Vygotsky, point out the relevance of emotions in the development of several cognitive functions, including thought, and affirm that the understanding of thought is linked to the understanding of its affective basis⁽¹³⁾. In this sense, the emotional intelligence construct welcomes, therefore, the balance between emotion and reason. For this, it is necessary to practice⁽⁶⁾, because when we are more aware of our emotions, we are able to think better.

The instrument's subtitle was changed to "Child mental health promotion", as suggested by the judges. It was understood that the workshops can be held in environments other than the school, reinforcing the intersectoral use of this instrument, allowing better results in the health care process⁽¹⁴⁾ and reducing the limitation of the manual. By expanding the application sites, more children can be reached and more professionals can be trained.

It was suggested to make the look more attractive to children, however, as it is an educational technology to be handled by a health, education, or other trained professional, the group made some adjustments to the photocopies of the booklet, which are activity materials aimed at children, as the literature points to the importance of attractive images for working with children^(2,7,14-15). However, it maintained the *layout* of the workshops - aimed at the workshop supervisors.

Regarding relevance, there was a suggestion to expand the theoretical content in the manual and remember the importance of a form of playful approach to work with the child, as studies have pointed out^(2,7,14-15). It was also suggested that the target audience of nurses be expanded. In this perspective, it was understood that such expansion should allow this new educational technology to also be a call to reinforce transdisciplinary work and to share knowledge and practices in mental health care, through health promotion, which is a multidisciplinary practice⁽⁴⁾.

Finally, in relation to didactics, the minimum age of the manual was increased to 8 years, as instructed by experts. It is worth mentioning that childhood is a phase in which the child develops their emotions, being already able, at 10 years of age, to identify the emotional state more accurately⁽¹⁶⁾, therefore, increasing the minimum age to 8 years would enable better understanding of the emotional intelligence skills worked on in the manual workshops with children.

Conclusion

The evaluation of the expert judges showed that the educational technology presented relevant and valid content, with regard to the objectives, appearance, structure, organization, relevance and didactics presented, reaching an acceptable Global Content Validity Index. The target audience's evaluation also had a positive Concordance Index, making the instrument valid for the work of nurses and other qualified professionals for its use in the strategy of promoting children's mental health, by strengthening some intelligence skills childish emotional.

Collaborations

Bittencourt MN contributed to the conception and design, analysis and interpretation of data, relevant critical review of the intellectual content and final approval of the version to be published. Flexa RS, Santos ISR, Ferreira LD, Nemer CRB and Pena JLC contributed to the conception and project, relevant critical review of the intellectual content and final approval of the version to be published.

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