

Almanac for preventing the use of alcohol and other drugs among adolescents: construction and validity

Almanaque para prevenção do uso de álcool e outras drogas entre adolescentes: construção e validação
Almanaque para la prevención del uso de alcohol y otras drogas entre adolescentes: construcción y validación

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ABSTRACT

Objectives: to build and validate an almanac to prevent the use of alcohol and other drugs among adolescents. **Methods:** a methodological study, based on the adaptation of Echer's stages and on Culture Circles. The Content Validity Index and the Concordance Index were used for validity. **Results:** problematization in Culture Circles and literature review supported the elaboration of an almanac. In validity with eleven health judges, the material obtained a global Content Validity Index of 0.73 in the first version and 0.84 in the second version, with validation with five judges. In terms of concordance, the 95% value was obtained with four technical judges and 86.2% with nine participants from the target audience. **Conclusions:** the constructed and validated almanac has playful, dialogic and problematizing potential. **Descriptors:** Adolescent; Validation Study; Health Education; Educational and Promotional Materials; Nursing.

RESUMO

Objetivos: construir e validar um almanaque para prevenção do uso de álcool e de outras drogas entre adolescentes. **Métodos:** estudo metodológico, pautado na adaptação das etapas de Echer e na realização dos Círculos de Cultura. Utilizaram-se o Índice de Validade de Conteúdo e o Índice de Concordância para validação. **Resultados:** a problematização nos Círculos de Cultura e a revisão da literatura embasaram a elaboração do almanaque. Na validação com onze juízes da saúde, o material obteve Índice de Validade de Conteúdo global de 0,73 na primeira versão e de 0,84 na segunda versão, com a validação junto a cinco juízes. Em relação à concordância, obteve-se o valor de 95% com quatro juízes técnicos e de 86,2% com nove participantes do público-alvo. **Conclusões:** o almanaque construído e validado tem potencial lúdico, dialógico e problematizador. **Descritores:** Adolescente; Estudo de Validação; Educação em Saúde; Materiais Educativos e de Divulgação; Enfermagem.

RESUMEN

Objetivos: construir y validar un almanaque para la prevención del uso de alcohol y otras drogas entre los adolescentes. **Métodos:** estudio metodológico, basado en la adaptación de las etapas de Echer y en la realización de Círculos de Cultura. Para la validación se utilizaron el Índice de Validez de Contenido y el Índice de Concordancia. **Resultados:** la problematización en los Círculos de Cultura y la revisión bibliográfica apoyaron la elaboración del almanaque. En la validación con once jueces de salud, el material obtuvo un Índice de Validez de Contenido global de 0,73 en la primera versión y de 0,84 en la segunda versión, con validación con cinco jueces. En términos de acuerdo, el valor del 95% se obtuvo con cuatro jueces técnicos y el 86,2% con nueve participantes del público objetivo. **Conclusiones:** el almanaque construido y validado tiene un potencial lúdico, dialógico y problematizador. **Descriptorios:** Adolescente; Estudio de Validación; Educación en Salud; Materiales Educativos y de Divulgación; Enfermería.

INTRODUCTION

Adolescents, a population group that demands new ways of producing health, have an apparently healthy life cycle, and health problems, for the most part, are caused by lifestyle habits and behaviors, which, in certain contexts, leave the vulnerable, which may predispose to the initiation of alcohol or other drugs⁽¹⁾.

According to the Brazilian National School Health Survey (PeNSE - *Pesquisa Nacional de Saúde do Escolar*), 55.5% of students in the 9th year of elementary school had already tried alcoholic beverages, 9.0% of them reported having used illicit drugs and 7.3% had already problems with family or friends, skipped school, or got into fights because they had been drinking alcohol⁽²⁾.

Considering real data and the vulnerabilities to which adolescents are exposed, the need for assistance from the perspective of comprehensiveness is highlighted. Therefore, the most efficient way to face the problem refers to the development of preventive health actions, with the inclusion of adolescents in the increase of these, making them protagonists of care⁽¹⁾.

However, in the practice of health education, there is still a predominance of banking methods, such as the lecture, a moment focused on clinical, individual and curative practice⁽³⁾. Given this limitation, educational technologies (ET) stand out as an innovative means, which corroborate the strengthening of health education actions.

Considering the possibilities of NT, educational materials are emphasized, in which nursing has stood out in the development of these, aimed at adolescents⁽⁴⁻⁶⁾.

From an integrative review, which identified ET developed, validated and/or applied to promote adolescents' health, it was noticed a predominance of educational materials focused on sexual and reproductive health, giving incipience in the area of prevention of use and abuse of alcohol and other drugs⁽⁷⁾.

Thus, it is necessary to develop materials of this nature. The relevance of an almanac in the comic book format is emphasized here, with the potential for use in dialogic education environments, with the aim of promoting the reflection of practices through the playful and critical character⁽⁶⁾.

In view of these considerations, the following question emerged: what elements should be included in the development of an almanac aimed at preventing the use of alcohol and other drugs among adolescents?

OBJECTIVES

To build and validate an almanac to prevent the use of alcohol and other drugs among adolescents.

METHODS

Ethical aspects

The research is part of a broader project, submitted and approved by the Research Ethics Committee of the *Universidade Regional do Cariri* (REC/URCA), guided by ethical principles⁽⁸⁾.

Study design, period and place

This is methodological research, developed between March 2019 and February 2020, part of a dissertation entitled "*Desenvolvimento de almanaque educativo para prevenção do uso de álcool e outras drogas entre adolescentes*". The research followed the reference of studies to improve health care quality⁽⁹⁾.

The almanac development was guided through adapted steps⁽¹⁰⁾, namely: project elaboration for material construction and submission to REC; Search in the specialized literature of scientific knowledge and Culture Circles; Language transformation, with the almanac construction; and Material qualification, with validity with experts and the target audience.

The research was developed in a municipality of Ceará, located in the Cariri region, in a public high school institution, part of an extension project entitled "*Prevenção do uso de drogas no ambiente escolar: uma abordagem para educadores e educandos de escolas públicas*"; which has the Culture Circles as its main method. The aforementioned extension project has the URCA as a proposing institution, through the nursing course.

Population or sample; inclusion and exclusion criteria

For the participation of Culture Circles (step two of almanac construction), participants were selected by intentional sampling. Adolescents with regular participation in the extension project's Culture Circles, belonging to the second year of high school class, were included. Therefore, 12 adolescents participated, aged between 15 and 18 years, seven males and five females.

In the almanac validity stage, 11 health judges participated (nurse, physical education professional, doctor, nutritionist, psychologist and social worker), four technical judges from the comic book area (with training in fine arts, social communication and fine arts) and nine adolescents belonging to the target audience.

The selection of health judges and technicians took place through snowball sampling. The search and selection of these were carried out by a resume platform, *Plataforma Lattes*. As for the selection of the first group of judges, health professionals, the inclusion criterion referred to work in the areas of adolescent mental health and/or health. Those who did not obtain the minimum score of five points from the selection criteria of the adapted classification system were excluded⁽¹¹⁾. As for the selection of technical judges, it was defined as an inclusion criterion to be judges with experience in comics. Professionals who did not obtain the minimum score of five points from the selection criteria developed by the study authors, which included academic training, scientific production and professional experience were excluded.

Study protocol

To bring the development of educational material closer to a dialogic perspective, almanac knowledge production took place through Culture Circles with school adolescents from a public education institution.

Three Culture Circles were held. The first moment involved the discovery of vocabulary universe and the identification of generating themes; the second emphasized thematization and problematization;

and the third, reflection focusing on action-reflection-action. The three moments lasted, on average, 40 minutes, took place in the afternoon at the aforementioned educational institution for the students and involved the participation of 12 adolescents.

After analyzing the material resulting from these Circles and literary immersion of the literary contribution on the problem, the script, storyboard and image and almanac diagramming followed, with the support of a professional comic artist.

For the script development, the comic of a previous study⁽¹²⁾ and the analysis of Culture Circle moments were considered. Subsequently, the data were corroborated with the scientific literature in order to share secure knowledge, involving scientific and popular knowledge.

In the stage of appearance validity content with health judges, they were invited by an invitation letter via email, sent to 29 judges, containing link availability to access the assessment questionnaire on Google Forms® and the attached almanac. Only eleven responded to the e-mail sent, agreeing to participate in the process by expressing interest through the "ACCEPT" ending of ICF, sent electronically.

Thus, the validity process of the almanac's first version began with 11 health judges, with a total period of 60 days for returning the material.

After the reformulations suggested by health judges, the second version of the almanac was obtained, which was sent to 15 technical judges. For this, a period of ten days was established for returning the material, with an extension for another seven days, as necessary. It is reinforced that only four technical judges participated in the validity process.

The educational almanac, after reformulations based on technical and health judges' considerations, moved on to its third version. Afterwards, he returned to the group of health judges for material appreciation/assessment according to considerations outlined in previous steps. Finally, the appearance validity was carried out with the target audience, with nine school adolescents in the educational institution.

Analysis of results

For the analysis of data from Culture Circles, in order to identify the meanings expressed, we used triangulation. Then, we proceeded to description of each circle, from the perspective of participant observation, analysis of logbook records and assessment of photographs and videos. Subsequently, there was a description and analysis of these elements with the relevant literature⁽¹³⁾.

In the description of adolescents' speeches, in order to preserve their identity, it was decided to identify them according to the name of Marvel heroes.

For content validity by health judges, an adapted instrument was adopted⁽¹⁴⁻¹⁵⁾, with judgments as to content, writing, illustration, appearance, motivation, and cultural appropriateness.

In appearance validity by technical judges, the adapted instrument was used, which included items regarding image characteristics, understanding, size, quantity, colors, shapes, harmony, logical visual narrative, relevance and attractiveness⁽¹⁶⁾. With the target audience, an adapted instrument was used that includes items regarding organization, writing style, appearance and motivation⁽¹⁷⁾.

The Content Validity Index (CVI) was used in the content and appearance validity process by health judges, with a Likert-type scale with the following responses: (1) Do not agree; (2) Partially agree; (3) No not agree nor disagree; (4) Agree more than I disagree; (5) Totally agree. The items, the domain and the instrument as a whole should have a CVI greater than or equal to 0.78⁽¹⁸⁻²⁰⁾.

To calculate the CVI, the number of items assessed as relevant by judges was considered – marked with scores (4) or (5) – and divided by the total number of items in the instrument⁽²⁰⁾. The items marked as (1), (2) or (3) should be excluded or revised, according to evaluators' guidelines⁽¹⁸⁾.

In the analysis of validity with technical judges and adolescents, the Concordance Index (CI) was used, which divides the number of participants who agree with the item by the total number of participants and multiplies it by one hundred. To establish a valid score, there must be a minimum of 75% of positive responses marked⁽²¹⁾.

RESULTS

The results are described in three categories: a) Culture Circles to prevent the use of alcohol and other drugs among adolescents; b) Description of the educational technology built; c) Educational technology validity.

Culture Circles to prevent the use of alcohol and other drugs among adolescents

In the stage of discovering the vocabulary universe, adolescents were worried about the problematized theme verbalized phrases such as:

Say no to drugs. (Captain America)

Not to destroy the family. (Captain Marvel)

Be conscious. (Elektra)

#notodrugs (Spider-Man)

Family fights. (Scarlet Witch)

Still in this stage, a graphic animation of free interpretation was used, but with an intrinsic relationship with the questions about the phenomenon of using of alcohol and other drugs. The analyzes by adolescents were:

There are people who say they use [alcohol and other drugs] to forget about their problems [...]. He used it to forget about the problems he had (Captain Marvel)

From the first use of it, he found it interesting. Over the time he was using it, he became addicted, until there came a time in his life when he couldn't take anything anymore, he was weakened [...]. (Wolverine)

Through the reports and discussions, generating themes could be identified: use, abuse and addiction; types of licit and illicit drugs; effects of alcohol and other drug use and consequences.

In the stage of thematization and problematization, a board game with questions and answers was used, as well as the strategy of dramatization by adolescents, generating dialogues that inspired the comics construction, namely:

She went to buy the drug and he said, "darling, don't buy that! Are you wasting your money on this? There's a lot of cheap stuff." [...] the person gets kind of like that, because they think "I'm spending money because of this?" So, I'm going to smoke just this once, because I bought it and it's already been bought [...] so, I'm going to use it. (Elektra)

It was just selling agai. (Iron Man)

Then you'll sell drugs and become a dealer?! (Elektra)

Still, in the staging strategy, there were reflections such as:

History advises you to pay attention to your friendships [...]. Because, if you have this side here [drug side], you want to take other people to this side, and you end up influencing your friends, right? And those who have no conscience [...], go and fall. (Human Torch)

Considering the observed discourse, it can infer situations experienced by adolescents, which may point to a proximity to the context of their lives in the face of the group's behavior, the environment in which they are inserted and the factors that influence the use and abuse of alcohol and other drugs. This circle resulted in keyword identification: addiction, recreational use, protective factors and risk factors.

Finally, in the third Circle, adolescents' reflection on the theme was proposed in the production of hobby-type elements. For instance, the construction of a word search engine and an image, represented by Figure 1.

In order to assess the moment of Culture Circles, there were reflections on the problematized content. See below:

It's like a life lesson, right?! Because now we are all together here, then, over time, some of us here can stop studying, right?! Then want to use this, someone offer, then the caba is talking here [...], then the caba remembers [...]. (Captain America)

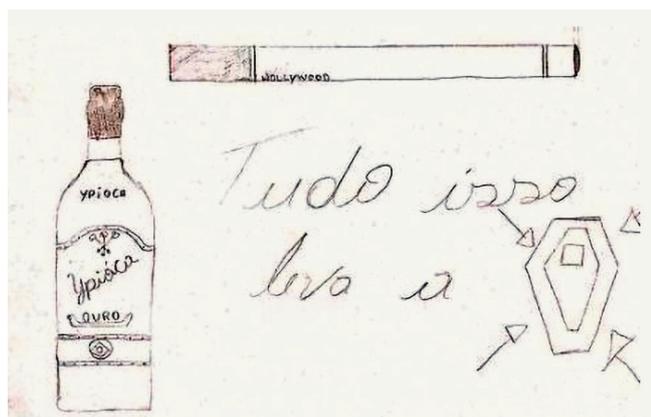


Figure 1 – Illustrative representation by adolescents on the use of alcohol and other drugs, Crato, Ceará, Brazil, 2019

Health promotion moments through the pedagogical strategy of Culture Circles – which resulted in reflections, concerns and knowledge – enabled the construction of horizontal knowledge about the importance of preventing the use of alcohol and other drugs in adolescence. Since the playful and dialogical character is paramount to reach the attractiveness of adolescents, these moments contributed to structuring the educational almanac's script from the language transformation process.

Description of educational technology built

From the perspective of the possible elements that could constitute the almanac from what was identified in the literature and from the experiences with school adolescents, structured dialogues in comics, crosswords, information board, word search, string and riddle were part of ET. The analysis of Culture Circles material enabled the script organization, storyboard and layout.

The educational almanac contains 21 pages, measuring 21x5cm, and was printed on bond paper, due to its flexibility and lower cost. The title "Prevention Almanac" seeks to attract the target audience and link to the aspect of prevention. The version is partially represented in Figure 2.

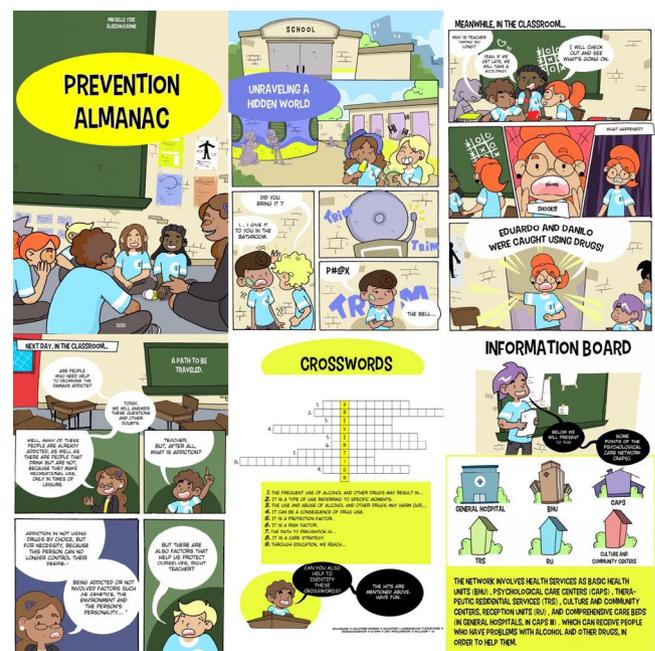


Figure 2 – Partial illustrative almanac representation, Crato, Ceará, Brazil, 2020

The first story, "Uncovering a hidden world," highlights the use of drugs in the school environment. The plot was organized from the vocabulary universe identification stage keywords and inspired by a previous comic book⁽¹²⁾ regarding the character definition (ten adolescents, educator and director), scenario delimitation and scene structuring.

In the second story, "A path to be traveled. Preventing without repressing," emphasis is given to issues involving addiction, recreational use, protective factors and risk factors. The plot was organized through of these keywords, identified in the problematization and thematization of Culture Circles. In this story,

a critical-reflexive production was elaborated with the purpose of sensitizing the public about essential aspects to prevention of the use of alcohol and other drugs. Therefore, it encompassed the construction of word search, crossword, information board, riddle and string, potential elements for attractiveness to the target audience, inspired by the image, word search and crosswords built by adolescents in Culture Circles.

Educational technology validity

In content and appearance validity of ET, the almanac was assessed by eleven health judges in two cycles (Table 1).

As described, it is observed that, in the validity process of the first version, it was not possible to reach the minimum CVI score (0.78) of the items referring to objectives/content (1.1, 1.2, 1.3 and 1.4), writing (2.1, 2.2, 2.4 and 2.5), motivation (5.2, 5.3 and 5.4) and cultural adequacy (6.1), demonstrating that the material needed reformulations of these items. It is also noted that it was not possible to reach the minimum score of the overall CVI. On the other hand, CVI of 0.81 to 1.0 was achieved in all items of illustrations and presentation.

Judges made suggestions and comments. The main suggestions involved the simplicity of language, such as the use of slang (judge 1), criticism of the non-establishment of information based on scientific sources (judges 2, 5 and 6), non-enlightening content (judges 2, 3 and 7) and compromising the sequence of dialogues (judges 3, 8, 9 and 11).

Regarding the content, judges judged the description of the phenomenon based on common sense phrases as a non-viable means of achieving prevention. They reaffirmed the need to reformulate these sentences based on scientific claims, on the premise that prevention is achieved through access to information. Still, judges argued that the focus of the material should not stop with drugs (judges 3, 4, 5), but with social determinants (judge 3), accountability for choices and consequences of the act (judge 2), to encourage behavior change (judge 3).

Among the requests, it was also suggested to name each character and link characteristics to them (judge 2), change the title of the almanac to "Prevent without repressing" (judge 1), differentiate recreational use from addiction (judge 2) and involve prevention responsibility for the choices (judge 2).

Judges emphasized the importance of this material in the context of prevention as a tool with the potential to contribute to the discussions on drugs (judge 4), which triggers reflections (judge 5), makes approximation with the real context of adolescents with lightness when addressing the theme (judge 6), provides openness to dialogue (judges 6 and 11) and presents itself as an important technology for promoting adolescents' health (judge 9).

After analyzing the comments and/or suggestions, the changes were made. The material was reformulated, and the second version was validated by five health judges. Regarding the CVI, a significant increase in the score in its items in its 2nd version is notorious, being, therefore, validated by health judges with a global CVI of 0.84, even with the exception of items 3.4, 5.3 and

Table 1 – Content Validity Index Score in the almanac's 1st version and 2nd version according to health judges' assessment, Crato, Ceará, Brazil, 2019

Assessment Items	n (N=11)		n (N=5)	
	CVI	1 st version	CVI	2 nd version
1. Objectives/content		(0.56)		(0.90)
1.1 Almanac contributes to the prevention of alcohol and other drug use	05	0.45	05	1.0
1.2 Almanac content is directly related to the prevention of alcohol and other drug use by adolescents	08	0.72	05	1.0
1.3 Content is adequate to achieve prevention of alcohol and other drug use by adolescents	05	0.45	04	0.80
1.4 Content addresses relevant topics for preventing the use of alcohol and other drugs by adolescents	07	0.63	04	0.80
2. Writing		(0.69)		(0.92)
2.1 Almanac reading is easy to understand	08	0.72	05	1.0
2.2 Reading is clear and concise	07	0.63	05	1.0
2.3 Words used are common from day to day	09	0.81	04	0.80
2.4 There is concordance among information	08	0.72	05	1.0
2.5 Topics make reading easier to understand	06	0.54	04	0.80
3. Illustrations		(0.93)		(0.80)
3.1 Images/figures contribute to understanding the information	10	0.90	04	0.80
3.2 Images/figures are suitable for material type	11	1.0	05	1.0
3.3 Images/figures are important	11	1.0	04	0.80
3.4 Images/figures contain clear information	09	0.81	03	0.60
4. Cephalic		(0.95)		(0.90)
4.1 Overall appearance (cover and all other pages) is attractive and appropriate	10	0.90	05	1.0
4.2 Font size and type are adequate	11	1.0	04	0.80
5. Motivation		(0.65)		(0.75)
5.1 The use of material provides interaction with other adolescents	10	0.90	04	0.80
5.2 Guidelines are clear and cite examples	07	0.63	05	1.0
5.3 Almanac causes behavior change	05	0.45	02	0.40
5.4 Almanac enables the acquisition of new knowledge	07	0.63	04	0.80
6. Cultural suitability		(0.68)		(0.80)
6.1 Almanac is an appropriate material for adolescents' reality of life	06	0.54	03	0.60
6.2 Almanac addresses information that is often present in adolescents' daily lives	09	0.81	05	1.0
OVERALL CVI		1 st version 0.73	2 nd version 0.84	

N – number of judges who participated in validity; n – number of judges who rated the item as "agree more than disagree" and "strongly agree"; CVI – Content Validity Index.

Table 2 – Almanac appearance validity Concordance Index score by technical judges, Crato, Ceará, Brazil, 2020

Assessment Items	n (N=04)	CI*
Image characteristics		
Images are appropriate for the target audience	04	100%
Images are clear and convey ease of understanding	04	100%
Images are in proper quantity and size in the almanac	04	100%
Images used are related to the almanac text and elucidate content	04	100%
Images' colors and shapes are suitable for the type of material	03	75%
Image layout is in harmony with dialogue	04	100%
Images help in the problematization of the theme and are in a logical visual narrative	04	100%
Images help in changing behaviors and attitudes of the target audience	03	75%
Images are relevant to the understanding content by the target audience	04	100%
Cover and back cover are appropriate to the type of material and are attractive to the target audience	04	100%
Overall Concordance Index		95%

N – total number of technical judges; n – partial number of technical judges; *Concordance Index.

Table 3 – Almanac appearance validity Concordance Index score by the target audience, Crato, Ceará, Brazil, 2020

Assessment Items	Yes (N=09)	No (N=09)	In part (N=09)	CI*
Image characteristics				
Cover caught the attention	07	01	01	77.78%
Cover shows the subject to which it refers	06	0	03	66.67%
Topics have sequence	09	0	0	100%
Content size in the topics is adequate	09	0	0	100%
Writing style				
Sentences are easy to understand	09	0	0	100%
There is an association between items and text	09	0	0	100%
Written content is clear	08	0	01	88.89%
Text is interesting	07	0	02	77.78%
Text is repetitive	00	07	02	77.78%
Appearance				
Illustrations are simple	05	01	03	55.56%
Illustrations are complicated	09	0	0	100%
Illustrations help for greater understanding of the text	08	0	01	88.89%
Illustrations make it difficult to understand the text	0	09	0	100%
Motivation				
In your opinion, any adolescent who reads this material understands what it is about	09	0	0	100%
You felt motivated to read all the way through	06	0	03	66.67%
The material suggested thinking about your health in terms of not using alcohol and other drugs	07	0	02	77.78%
Overall Concordance Index			86.2%	

N – number of target audience evaluators; *Concordance Index.

6.1, which did not reach the minimum CVI and needed to be reconsidered. Also in this new version, the items of objectives, writing and presentation were all validated with excellence, with CVI ranging from 0.80 to 1.0.

In appearance validity, there was the participation of four technical judges. According to assigned scores, CI was calculated (Table 2).

It is observed that, of ten items assessed, only two of them reached the minimum score of 75%, and all others reached the maximum score. The overall CI reached 95%.

The technical judges made comments and/or suggestions. With the modifications made to the material, the third version of the almanac was obtained.

As for the item “images’ colors and shapes”, judge 1 suggested coloring adolescents’ uniforms and standardizing the balloons in white. Regarding the item on image appropriation for the target audience, judge 4 praised the style of the material as an appropriate medium for the audience. As for images’ relevance for understanding the content, the same judge judged the illustrations as

a facilitating means for understanding the message transmitted.

There were also general comments, in which judges praised the importance of this work, in addition to classifying the reading as fast, informative, pleasant, clear, attractive and easily understood by the target audience.

Finally, regarding ET appearance validity with the target audience (Table 3), nine adolescents participated.

As demonstrated, it is possible to verify that the almanac in this type of validity reached an Overall CI of 86.2%, considering the material valid, despite lower CI values in items related to the relationship between cover and subject, the simplicity of illustrations and motivation criteria. All other items reached a minimum concordance score, and seven of them had a CI of 100%.

DISCUSSION

Among some points that stood out regarding the almanac elaboration, the intention to use the dialogue of adolescents in this

construction is discussed. However, sentences were interpreted as common sense by health judges and, therefore, their use was criticized. But even so, the importance of considering existing knowledge to foster discussions is highlighted, as it understands the moment of education as a construction process. It is worth inferring the importance of correlating scientific knowledge with common sense for production and discussion of knowledge, in a complementary relationship. Common sense induces questions that, in turn, produce science⁽²²⁾.

Another point that should be highlighted concerns the focus of adolescents' dialogues on drugs, also criticized by health judges. In this emphasis, in a study that aimed to unveil the perception of students of basic education on drugs, it was found that adolescents' understanding of the drug problem places them at the center of the discussion, but, at the same time, they point to the need for measures that will decentralize drugs from the context in which they occur, so that correlated factors and actions can be glimpsed⁽²²⁾.

Therefore, traveling the path of comprehensiveness in health requires attention from care and educational services regarding adolescents' multiplicity of demands, so that professionals can promptly exercise health care and worry the public about the need for mental health care⁽²³⁾.

In the ET validity process, changes guided by health judges stood out. It was possible to remove the drug from the central focus and discuss individual, family and/or social factors related to the problem. Thus, permeated by dialogues, prevention linked to responsibility for choices can be awakened. For this, the need for actions that encourage the participation of adolescents in their own care in the sphere of health promotion and prevention, related to the context of adolescents' lives, is highlighted⁽²³⁻²⁴⁾.

When considering some items judged in the validation, specifically in the objective items, the result was similar to the study that validated an educational booklet for overweight prevention in adolescents⁽²⁵⁾, in which none of the items was judged as inadequate, reaching a CVI of 0.81 in this category. The objective items refer to what you want to achieve with the use of the almanac, involving criteria specific to content.

In terms of illustration, one item did not reach the minimum index (3.4 Images/figures contain clear information). The flagging of this item as inappropriate was essential for the search for material readjustment and validity. In this sense, the importance of clarifying the information contained and/or the visual elements is emphasized, by expanding the field of communication between people, regardless of education level⁽¹⁶⁾.

Regarding item 5.3, "Almanac causes behavior change", of the motivation aspect, the CVI reached was 0.40, similar to the finding of the study, which validated an educational booklet to prevent excess weight in adolescents⁽²⁵⁾, with CVI of 0.44. In this regard, it is worth highlighting the reflection of judges in this study, stating that the material alone would not be able to promote a change in attitude and behavior.

In item 6.1, "Almanac is an appropriate material for adolescents' real life", which belongs to the emphasis on cultural adequacy, the index reached was 0.60. In the previously mentioned study⁽²⁵⁾, an equivalent item reached a score of 0.78, and this finding may be related to the limitations in the production of printed educational

materials and their use with adolescents, considering the development of digital-type materials.

Regarding assessment by technical judges, only two of the ten items assessed reached the minimum score of 75%, while the other items reached a score of 100%. There was a similar finding to this study, which validated a booklet to prevent excess weight in adolescents⁽²⁵⁾ and the study that validated a booklet for metabolic syndrome prevention in adolescents⁽⁵⁾. In these studies, in validity with technical judges, most items reached the maximum score, thus demonstrating relevance to the group of technical judges regarding the adequacy of the designer of educational materials produced.

As for the target audience, the CI of the items ranged between 55.56% and 100%, similar to the study that validated a booklet for the prevention of overweight in adolescents whose validity with the target audience reached a score between 61.1% and 100%⁽²⁵⁾. In this sense, it is worth discussing the items that obtained the lowest scores.

With regard to the content presented, most adolescents considered it clear, corroborating the study that validated a booklet on sleep hygiene⁽²⁶⁾. Specifically, the criterion of motivation, some adolescents thought they were partially motivated to read the material until the end. This finding may be related to adolescents' restlessness to finish reading and leave the environment, demonstrating limitations in the public's relations with the researcher at the time of instrument application⁽⁵⁾.

Two other items that presented the lowest validity scores were "cover shows the subject to which it refers" and "illustrations are simple". Two other items that presented the lowest validity scores were "cover shows the subject to which it refers" and "illustrations are simple". Thus, the need to shed light on this finding is highlighted, as it highlights how important the process of judging the target audience is regarding the understanding of images and/or figures and the relevance of suggestions for improvement, in order to enhance the material and clarify the level of understanding⁽²⁶⁾.

Study limitations

The limitations of this study refer to the participation of a limited number of adolescents, as well as technical judges and the target audience, in Culture Circles in a single scenario and single format of material reproduction. Therefore, studies are needed to publish the almanac in other formats (such as audiovisual and Braille versions), in order to promote accessibility, reproduce the material in media/social networks, in addition to applying ET to verify its effectiveness and feasibility in practice.

Contributions to nursing

The implications for nursing involve the possibility of using a dialogic, playful material that proposes problematization, when used in health education activities, both in the school environment and in health services. As a consequence, concerns and reflections about strategies to prevent the use of alcohol and other drugs in adolescence through access to information are provoked. Still, it strengthens educational autonomy in the construction and validity of ET in nursing.

CONCLUSIONS

The educational almanac development responds to a need to produce ET for adolescents in the context of preventing the use of alcohol and other drugs. For this, the use of Culture Circles with public school adolescents was of paramount importance for material

development. Validity involved different actors, reflecting on the development of a material aligned with the needs that justified this study. Therefore, according to data quantification, the material was validated, requiring adjustments regarding the items of motivation, illustration and cultural adequacy, which reached the lowest scores. However, these listed items should be revisited and enhanced.

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