

Construction and validation of a booklet to prevent overweight in adolescents

Construção e validação de cartilha para prevenção do excesso ponderal em adolescentes

Elaboración y validación de cartilla para prevención del exceso ponderal en adolescentes

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Overweight; Obesity; Health education; Educational technology; Adolescent

Descritores

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Descriptores

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Abstract**Objective:** To develop and validate an educational booklet to prevent overweight in adolescents.**Methods:** Methodological study developed in four stages: situational diagnosis; bibliographic survey; booklet preparation and material validation by experts, 15 judges (content and design) and representatives of the target public, 36 schoolchildren. For the data collection, three different questionnaires were used according to the focus of assessment of each group of participants. The data were analyzed through descriptive statistics, Content Validity Index assessment. It was considered a valid item the one that presented a value equal or higher than 0.78, and agreement level, presenting validation the item that obtained a minimum agreement of 75% in the positive responses. The judges' observations were analyzed and, when necessary, the booklet was modified.**Results:** The average Content Validity Index was 0.87 and 0.96 by the judges' content and design analysis, respectively. The main suggestions made by them were about the substitution or exchange of terms and suitability of texts. The target audience was adolescents aged 14 to 18 years. The agreement level in the positive responses given by adolescents was 82% and the main suggestions were associated with the booklet's colors and illustrations.**Conclusion:** The booklet proved to be valid and reliable for use as educational technology in interventions with adolescents aimed at making them agents of change and protagonists of care for their body.**Resumo****Objetivo:** Desenvolver e validar uma cartilha educativa para prevenção do excesso de peso em adolescentes.**Métodos:** Estudo metodológico desenvolvido em quatro etapas: diagnóstico situacional; levantamento bibliográfico; elaboração da cartilha e validação do material por especialistas no assunto, 15 juízes (conteúdo e design) e representantes do público-alvo, 36 adolescentes escolares. Para a coleta de dados, foram utilizados três questionários distintos, de acordo com o foco de avaliação de cada grupo de participantes. Os dados foram analisados por meio da estatística descritiva, avaliação do Índice de Validade de Conteúdo, sendo considerado item validado o que apresentar valor igual ou superior a 0,78, e nível de concordância, apresentando validação o item que obtiver concordância mínima de 75% nas respostas positivas. As observações dos juízes foram analisadas e, quando necessário, a cartilha foi modificada.**Resultados:** O índice de validade de conteúdo médio foi de 0,87 e 0,96 por meio das análises dos juízes de conteúdo e de design, respectivamente. As principais sugestões tecidas por eles versavam acerca da substituição ou troca de termos e adequação de textos. Em relação ao público-alvo, participaram adolescentes de 14 a 18 anos. O nível de concordância nas respostas positivas dadas pelos adolescentes foi de 82% e as principais sugestões estiveram associadas às cores e ilustrações da cartilha.**Conclusão:** A cartilha mostrou-se válida e confiável para utilização como tecnologia educativa em intervenções com adolescentes que visem a torná-los agentes de mudança e protagonistas do cuidado com seu corpo.**Resumen****Objetivo:** crear y validar una cartilla educativa para prevención del exceso de peso en adolescentes.**Métodos:** estudio metodológico desarrollado en cuatro etapas: diagnóstico situacional, recopilación bibliográfica, elaboración de cartilla y validación del material por especialistas del asunto, 15 jueces (contenido y diseño) y representantes del público destinatario, 36 adolescentes escolares. Para la recolección de datos, se utilizaron tres cuestionarios diferentes, de acuerdo con el foco de evaluación de cada grupo de participantes. Los datos fueron analizados por medio de la estadística descriptiva, análisis del Índice de Validez de Contenido, considerando como ítem válido aquel que presente valor igual o superior a 0,78 y nivel de concordancia, con validación del ítem que obtenga concordancia mínima de 75% en las respuestas positivas. Las observaciones de los jueces fueron analizadas y, cuando se consideró necesario, la cartilla fue modificada.**Resultados:** el índice de validez de contenido promedio fue de 0,87 y 0,96 por medio del análisis de los jueces de contenido y de diseño, respectivamente. Las principales sugerencias por ellos formuladas fueron referentes a la sustitución o cambio de términos y adecuación de los textos. Con relación al público destinatario, participaron adolescentes de 14 a 18 años. El nivel de concordancia de las respuestas positivas dadas por los adolescentes fue del 82% y las principales sugerencias estaban relacionadas con los colores e ilustraciones de la cartilla.**Conclusión:** la cartilla demostró ser válida y confiable para ser utilizada como tecnología educativa en intervenciones con adolescentes con el objetivo de tornarlos agentes de cambio y protagonistas del cuidado de su cuerpo.**Corresponding author**Jayne Ramos Araújo Moura
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Introduction

Currently, the epidemic of overweight and obesity is a serious public health problem in Brazil and worldwide. Data from the World Health Organization (WHO) indicate that by 2014, 1.9 billion adults aged 18 years or over were overweight, and, of these, more than 600 million were obese. It is noteworthy that, in that same year, 41 million children, under the age of five, were overweight or obese.⁽¹⁾

Furthermore, overweight is associated with the appearance of dyslipidemias, increased blood pressure, representing the most prevalent pathophysiological cause of insulin resistance.⁽²⁾ In those with overweight, at least one secondary risk factor is found. Furthermore, the higher the Body Mass Index (BMI), the greater the chances of changes in biochemical parameters such as triglycerides and HDL-c.^(3,4)

It is important to emphasize that both overweight and obesity are problems that can be prevented by adopting healthy habits of life. Adolescence is the period in which various habits and behaviors are established, incorporated, and possibly perpetuated into adulthood. In this way, it is essential to encourage adolescents to become active subjects of their care, through education strategies aimed at health promotion, prevention of injuries and self-care.^(5,6)

Health education is an important tool for the socialization of knowledge, health promotion and disease prevention, with a view to the construction and incorporation of practices that aim at changes in behaviors harmful to health through subject empowerment, including intervention models participatory and considering the knowledge of all those involved.^(5,7) These actions, when permeated through printed material, such as manuals, brochures, folders and booklets, constitute viable tools for information and awareness of children and adolescents, allowing the young people and their families a later reading, serving as a guide in cases of doubts and helping in everyday decision-making.^(8,9)

Taking into account the clear and essential need to develop strategies to address this prob-

lem, and that nurses deserve to be highlighted for developing educational actions in different contexts of care for children and adolescents, it is necessary to devise tools to aid development of these activities.

Therefore, after researching national databases using the descriptors “Technology”, “Overweight” and “Obesity”, no studies were found that reported creation and validation of booklets aimed at the prevention of overweight in the adolescent public. Thus, this study aimed to develop and validate an educational booklet for prevention of overweight in adolescents. It is hoped that the booklet will be used as a tool to support the development of educational strategies carried out by health professionals and/or educators, as well as being widely used in health promotion settings such as Basic Health Units and schools.

Methods

It is a methodological research that focuses on the development, assessment and refinement of tools and methodological strategies,⁽¹⁰⁾ carried out from May 2017 to February 2018.

The booklet construction was based on the situational diagnosis of 30 adolescents aged 14 to 17 years from a public school in the city of Picos, Piauí State, through the development of two focus groups conducted by the researcher. The sample was chosen by convenience and adolescents followed up by nutrition professionals were excluded, since they could present knowledge about the subject above the average of the other adolescents, adding 10 participants in each group.

The groups were conducted in the school itself, in a reserved classroom, at a different time from the classes, with an average duration of 30 minutes. The group was led by the following question: “How can being overweight influence my life?”. The most frequent points of questioning were registered by the researcher responsible.

After the situational diagnosis, a bibliographic survey was started. In this phase, Ministry of Health recommendations were assessed, as well

as scientific papers related to prevention of overweight in adolescents. The booklet's text preparation took into account the age group of adolescents, the result of situational diagnosis and bibliographic survey. In sequence, with the help of graphic designer, the art was elaborated through preparation of figures and formatting, configuration and layout of pages, concluding material construction.

The booklet called "Hey, what are the consequences of being overweight? Know how to prevent!" was validated, in content and appearance by expert judges, distributed in two categories of assessment: nine content judges (with methodological and technical experience related to the content of technology) and six judges with professional experience in design and marketing.^(11,12)

In relation to the expert judges, these were selected through the "snowball" type sampling, a convenience sampling that is widely used when the population is composed of people with characteristics difficult to find⁽¹⁰⁾ according to selection criteria, academic training, professional performance (teaching, research, extension), updating course and scientific production, for content judges;^(13,14) and proven experience of at least one year for design judges in any of the following areas: digital and offline communication; advisory in designer, communication, digital marketing; digital marketing analyst; creation; web designer; advertising and marketing.

An invitation was sent via email to the judges. Those who agreed to participate in the survey had online access through the Google Forms® tool to the Free and Informed Consent Term, booklet and validation protocol of the tool. The deadline for contact return was 15 days. A further term of 10 days could be granted.

After the judges' consideration, the necessary adjustments were made in the material to proceed with educational material validation by the target audience. Adolescents were enrolled in state public schools in Picos, according to the following inclusion criteria: being enrolled and attending school regularly; be available for 20 to 30 minutes to participate in the reading of the booklet and to answer

the assessment questionnaire. Thirty-six adolescents participated in the assessment.⁽¹⁵⁾

The booklet validation by the target audience occurred at school through an individual interview with the child, in a reserved room, after reading the printed booklet, with the application of the data collection tool. It is worth noting that adolescents who participated in validation were not the same ones that were included in the situational diagnosis phase.

The assessment questionnaire sent to the content judges was adapted (16) and structured in: I - information related to the area of practice and study; II - Likert type scale, with levels ranging from 1 = not suitable; 2 = partially suitable; 3 = suitable; 4 - fully suitable, on items related to objectives, structure and presentation, and relevance. The questionnaire for validation with design judges was the Suitability Assessment of Materials (SAM).⁽¹⁷⁾ Subjects were investigated with regard to professional performance, and then questions with Likert type scale responses, ranging from 1 = not suitable; 2 = partially suitable; 3 = suitable; 4 = totally appropriate, regarding the items referring to the educational booklet. The Content Validity Index (CVI) was used for validation of the tool and analysis, being considered as a validated item, which presented value equal or higher than 0.78.^(10,13)

CVI calculation was based on the sum of the "3" and "4" answers of each judge in each questionnaire item, and the sum divided by the total number of responses. Items that received "1" or "2" scores were either reviewed or deleted, and validated when they submitted suggestions for changes.⁽¹³⁾

The assessment questionnaire aimed at the target audience was divided into two parts, the first one containing identification information and the second representing the assessment area of the booklet. The educational tool was assessed according to the items' appropriateness: "Yes", "No" or "Partly". Items were considered validated when they presented a minimum agreement of 75% in the positive responses. Items with lower agreement index were considered to be subject to change.⁽¹³⁾

The study was submitted to the Ethics in Research Committee (REC) of the *Universidade*

Federal do Piauí (UFPI) through the *Plataforma Brasil* (Brazil Platform), obtaining an Opinion 853,499. The ethical precepts regarding Resolution 466/2012 of the Brazilian Health Board (CNS – *Conselho Nacional de Saúde*) were respected.

Results

The main points addressed by adolescents in the situational diagnosis revolved around how one determines overweight and the idea that illness does not exist during this phase of life. Then, with the bibliographical survey, the content was selected and organized chronologically. Publications published by the Brazilian Ministry of Health, the World Health Organization and scientific papers were used, which were added at the end of the booklet in the References section. The information was presented in a way that interacts with the adolescent, in the active voice.

In content validation, nine judges participated, content ranging in age from 26 to 43 years, with a prevalence of less than 35 years (55.6%); female (77.8%); nursing education (77.8%); with teaching (77.8%); degree (55.6%). The most frequent area of study was “Eating Habits” (77.8%), followed by “Adolescent Health” (55.6%).

According to the assessment questionnaire, the judges judged the booklet in accordance with the provisions of table 1.

In view of the assessment items (objectives, structure and presentation, relevance) set out in Table 1, the primer was successfully validated by the content judges, presenting an overall CVI of 0.88. Regarding the objectives, no item was considered inappropriate, and the booklet was validated, in this case, with CVI equal to 0.81. However, the goal “Promotes behavior change and attitude”, when assessed individually had CVI = 0.44. Although the judges judged the objective to be partially suitable, no changes were suggested, they only commented on the item assessment itself, emphasizing that only the booklets distribution would not necessarily promote behavior change and attitude.

Table 1. Assessment of content judges regarding objectives, structure and presentation, and relevance of the booklet

	Assessment				CVI
	Not suitable	Partially suitable	Suitable	Totally suitable	
Objectives					0.81
They are consistent with the needs of young people regarding the prevention of overweight	-	-	4	5	1.0
Promote behavior change and attitude	-	5	2	2	0.44
Can circulate in the scientific environment	-	-	3	6	1.0
Structure and presentation					0.86
The educational material is appropriate for guidance of young people regarding the prevention of overweight	-	1	2	6	0.89
Messages are presented in a clear and objective way	-	1	4	4	0.89
The information presented is scientifically correct	-	4	2	3	0.56
There is a logical sequence of proposed content	-	1	1	7	0.89
The material is appropriate to the sociocultural level of the target audience	-	2	3	4	0.78
The information is well structured in agreement and spelling	-	-	4	5	1.0
The writing style corresponds to the knowledge level of the target audience	-	1	4	4	0.89
Cover, back cover, acknowledgment and presentation information are consistent	-	2	3	4	0.78
Illustrations are expressive and sufficient	-	1	2	6	0.89
The number of pages is suitable	-	-	2	7	1.0
The size of the title and topics is suitable	-	-	2	7	1.0
No unnecessary information	-	2	2	5	0.78
Relevance					1.0
The themes portray key aspects that should be reinforced	-	-	4	5	1.0
The material proposes to the population to acquire knowledge about the management of overweight prevention	-	-	4	5	1.0
It is suitable for use by any health professional in educational activities	-	-	4	5	1.0

CVI – Content Validity Index

With respect to its structure and presentation, it is possible to observe that no item was judged as not suitable. CVI (0.86) was sufficient for booklet validation on structure and presentation. When analyzing each item individually, the CVI ranged

from 0.56 to 1.0, with the item “The information presented is scientifically correct”, the only one that presented CVI below 0.78, requiring changes. The judges made specific suggestions regarding, mainly, some terms that have been substituted, and/or explained in the text, accepting all the suggestions made by them. Regarding the relevance assessment, all items presented CVI 1.0, giving validation for each of them.

Following the material assessment, the booklet was appreciated by a group of professionals who observed technical issues in the material, especially those related to the design, layout, suitability of illustrations and material. Of the six that participated in validation, the majority were male (66.7%), less than 35 years old (66.7%), active in the design area (77.8%) in Picos, PI (83.3%).

Regarding the assessment, observing each domain of analysis, the CVI ranged from 0.87 to 1.0 and overall CVI of 0.96, conferring booklet validation by design and marketing judges. In the great majority of the items, the CVI presented maximum valuation (1.0) (Table 2). The main suggestions of this group of reviewers were between appropriateness of terms and expressions of difficult understanding, and these suggestions are accepted in the material for assessment by the target audience.

After the changes suggested by the judges, validation was concluded next to the observation by adolescents, it is worth noting that this process was performed to verify the booklet clarity, comprehension and relevance, not being a clinical stage. Thirty-six adolescents between 14 and 18 years of age participated in the study, boys (52.7%), brown color (41.7%), with income greater than one minimum wage (52.6%) predominated. The agreement level of positive responses ranged from 61.1% to 100.0% among the items addressed, with an overall agreement of 82%, enough to validate the material by the target audience (Table 3).

After adjustments, the booklet called “Hey, what are the consequences of being overweight? Learn how to prevent!” has 31 pages, 150 x 200 mm dimension, matte coated paper 115 g/m², with

Table 2. Assessment of the booklet by design and marketing judges

	Assessment				CVI
	Not suitable	Partially suitable	Suitable	Totally suitable	
Content					1.0
Purpose is evidente	-	-	3	3	1.0
The content deals with behaviors related to being overweight	-	-	-	6	1.0
Content is focused on the purpose	-	-	3	3	1.0
The content highlights the main points	-	-	2	4	1.0
Literacy requirement					0.87
Literacy is suitable for the reader's comprehension	-	2	3	1	0.67
Vocabulary uses common words	-	1	4	1	0.83
There is the contextualization before new information	-	-	4	2	1.0
Learning is facilitated by topics	-	-	3	3	1.0
Illustrations					1.0
The illustration's purpose relating to the text is clear	-	-	2	4	1.0
Figures/illustrations are relevant	-	-	1	5	1.0
Illustrations have caption	-	-	3	3	1.0
Cover draws attention and portrays the purpose of the material	-	-	2	4	1.0
Layout and presentation					1.0
Layout feature	-	-	2	4	1.0
Size and type	-	-	2	4	1.0
Subtitles are used	-	-	4	2	1.0
Motivation					0.89
Uses interaction	-	-	5	1	1.0
Guidelines are specific and give examples	-	-	4	2	1.0
There is motivation to change behavior	-	2	4	-	0.67
Cultural appropriation					1.0
The material is culturally appropriate to the logic, language, and experience of the target audience	-	-	5	1	1.0
Features culturally appropriate images and examples	-	-	3	3	1.0

CVI – Content Validity Index

polychrome printing, brochure-type binding, fastened by two clips.

After the cover, it is possible to visualize the index card with information about the authors, teaching institution linked to the material development (*Universidade Federal do Piauí*) and layout. Then the material is briefly presented (Figure 1).

Table 3. Booklet validation by the target audience

Content	Yes n(%)	No n(%)	Partly n(%)
1. Literary presentation:	265(81.8)	4(1.2)	55(17)
1.1 The booklet's language is explanatory	36(100)	-	-
1.2 The material promotes and encourages the prevention of overweight	32(88.9)	-	4(11.1)
1.3 The vocabulary employed is mostly composed of simple and common words	28(77.8)	-	8(22.2)
1.4 The language is suitable	30(83.3)	2(5.6)	4(11.1)
1.5 Ideas are expressed clearly and objectively	34(94.4)	1(2.8)	1(2.8)
1.6 The text allows interaction with guidelines between professionals and adolescents	22(61.1)	-	14(38.9)
1.7 The material is nice to read	28(77.8)	1(2.8)	7(19.4)
1.8 The material has suitable size, that is, it is neither extensive nor tiring	28(77.8)	-	8(22.2)
1.9 The booklet, in general, is simple and attractive	27(75.0)	-	9(25.0)
2. Illustrations:	120(83.3)	2(1.4)	22(15.3)
2.1 They are simple, appropriate and easy to understand	35(97.2)	1(2.8)	-
2.2 They are familiar to readers	29(80.6)	-	7(19.4)
2.3 They are related and integrated to text	29(80.9)	-	7(19.4)
2.4 They are self-explanatory	27(75.0)	1(2.8)	8(22.2)
3. Specificity and Comprehension:	88(81.5)	2(3.5)	18(15.0)
3.1 The material provides benefits for prevention of overweight	34(94.4)	-	2(5.6)
3.2 There is no use of double meaning in the text	31(86.1)	-	5(13.9)
3.3 The written content values the adolescent as center of actions	23(63.9)	2(5.6)	11(30.6)
4. Readability and Printing Features:	160(88.9)	11(6.1)	9(5.0)
4.1 The cover is attractive	31(86.1)	5(13.9)	-
4.2 The size and style of the letters is suitable	35(97.2)	-	1(2.8)
4.3 The text organization is suitable	31(86.1)	1(2.8)	4(11.1)
4.4 The booklet structure is organized	32(88.9)	2(5.6)	2(5.6)
4.5 There is good contrast between print and paper	31(86.1)	3(8.3)	2(5.6)
5. Information Quality:	110(76.5)	5(3.5)	23(16.0)
5.1 The booklet is embedded in its culture	24(66.7)	4(11.1)	8(22.2)
5.2 The material helps you get the most benefit out of	29(80.6)	1(2.8)	6(16.7)
5.3 The booklet use is important	30(83.3)	-	6(16.7)
5.4 The booklet suggested that you act or think differently about being overweight	27(75.0)	-	3(8.3)



Figure 1. Final version of the booklet

In order to guarantee the booklet interactivity with adolescents, among the topics covered in the final material, there are games: a word-puzzle, to remind/memorize some consequences of being overweight and a spot the difference game related to food. There is also a space for BMI calculation and analysis through graphs that can be used by health professionals.

Discussion

The material elaborated differs from the others by presenting a light, clear format with illustrations referring to the play aspect, arousing the interest of adolescents in the subject, making it more appropriate to the public; with objective content that conveys information in a complete but non-exhaus-

tive way, in which simple and familiar words were used, sentences that were not very extensive, clear and easy to understand. Furthermore, it has been validated in content and appearance by expert judges in the field, and can be used by other researchers and contribute to the planning of health education actions that are in keeping with the public's learning needs in question.

Validation involves a multidisciplinary group and presents credibility and favorable aspect, since it gathers several specialized knowledge in the subject matter covered by the material, being a parameter observed in other validation study.⁽¹⁸⁻²⁰⁾ By involving the target audience still in the process of constructing the booklet, their active contribution is allowed in content indication and in observation of their own demands.^(13,21,22)

It was necessary to recognize that there could be limitations in the knowledge established in the material initially, and to admit that the inclusion of other knowledge is fundamental for the construction of educational strategies that meet the real needs of health education.^(23,24)

In content validation, it was identified that the judges' profile possessed at least master's degree, most of them being doctors with professional experience in the area of adolescent health and in the development of materials, contributing to assessment credibility. In view of all the assessment items (objectives, structure and presentation, relevance), the booklet was successfully validated by content judges, presenting an overall CVI of 0.88.

Corroborating with these data, other methodological studies on the development of educational technologies also validated their materials with satisfactory statistical indexes, like an investigation that validated a primer to prevent vertical transmission of HIV with overall CVI of 0.87 by the judges.⁽²²⁾ A booklet for healthy eating during pregnancy was validated with agreement level between the judges varying between 0.818 and 0.954 among the assessed items.⁽²¹⁾

Validation by experts in design also achieved excellent rates. Observing each domain of analysis, the CVI ranged from 0.87 to 1.0 and the overall CVI of 0.96. Similarly, a study carried out for validation

of an educational booklet on metabolic syndrome for adolescents was validated by design judges, with the majority of CVI scores equal to 1.0.⁽¹⁸⁾ Another methodological study carried out in Belém (Pará State), which validated an educational technology on postpartum care, obtained an overall CVI of 0.81, slightly lower than that found in this study.⁽²⁵⁾

Even the booklet with good validation indexes, the judges left suggestions for material improvement. The main suggestions of the content judges were related to the appropriateness of terms, such as the use of "physical exercise" instead of "physical activity"; careful use of BMI as a standard for determining overweight, but only as one of the forms; suitability of the BMI verification chart in girls; information regarding blood pressure and abdominal circumference in the parameter monitoring table, since they were not mentioned in the booklet. Images that portray social inclusion and rewritten texts have been added to make them leaner, with no repetition of information and clearer.

Regarding the design judges' suggestions, color changes were made on the cover and terms and technical expressions that were not explained in the booklet were removed. Adapting the educational material to the judges' suggestions makes technology more efficient and suitable, according to the suggestions also verified by the scientific method, conferring an essential stage for material conclusion and for its use during health education activities.⁽²²⁾

Educational material adaptation is also cited by other authors as the essential step of validation. In a similar way to this study, other authors performed adjustments and exclusion of information, substitution of terms, besides illustrations reformulation.^(8,18)

After adjustments, the target audience assessed positively the educational book, considering it interesting, interactive, explanatory and motivating. This assessment showed that the material can be used among adolescents. It was possible to observe agreement level of positive responses equal to 82%.

It is important to draw attention to the "Information Quality" domain, which presented a lower proportion of positive responses (76.5%). This fact is due to the amount of information presented in the booklet, which can be minimized through

the booklet use in an appropriate way, associated with health education actions, not just with reading it. Regarding the suggestions given by adolescents, a set of seven errors with food that should be avoided was added to the final material.

It is worth noting that the booklet can be used as a strategy to cope with overweight in different settings, not only in health services. It is necessary that schools, families and community be prepared to provide the routine of healthy eating and physical exercise.⁽²⁶⁾

One of the privileged spaces for the application of this primer is the school itself. Besides presenting the formal function of socializing the knowledge produced by man, it is responsible for humanization of individuals through the creation of conditions for appropriation of the presented knowledge.⁽²⁷⁾ Furthermore, the booklet can be a resource in the conduct of discussions on the subject, allowing the adolescent to be able to appropriate the information presented, bringing health knowledge closer to their daily lives through youth protagonism.

Although knowledge is not enough to produce a change in behavior in relation to the problem situation, when it is shared in a concrete and contextualized way, it can cause a change in the way of thinking and acting. Thus, it is essential that adolescents be agents of their own change, as part of the actions implemented for their integral development and ensuring effectiveness of self-care for the promotion of their health.⁽²⁸⁾

As a limitation, it is possible to mention the clinical validation's non-accomplishment of the technology, but this will be done in a later study.

Conclusion

After undergoing a rigorous process through assessment by expert judges and representatives of the target audience, the built-in primer was successfully validated, satisfying the breadth of content regarding the prevention of overweight in an accessible and simple language. Taking into account the observations and suggestions from validation, some illustrations and texts underwent modifications in

order to make them more attractive and effective, even with CVI and degree of agreement showing enough values to declare it valid and apt to its application with adolescents. Furthermore, it is expected that this booklet will be used as a resource to promote knowledge and empowerment for adolescents against overweight, allowing reflection on their current lifestyle and adoption of measures indicated in the material, aiming to make them change agents and care protagonists of their body.

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Collaborations

Moura JRA, Silva KCB, Rocha AESH, Santos SD, Amorim TRS and Silva ARV declare that they contributed to project design, data analysis and interpretation, article writing, critical review of the intellectual content and final approval of the version to be published.

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