

Development of an educational booklet for adults with asthma: an experience report

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Abstract

Aim: to report the experience of developing an educational booklet for adult patients with asthma. Methods: Experience report on the development of an educational booklet, from March to July 2019, considering four main steps: i) survey of topics necessary for an adequate management of asthma, ii) literature review, iii) elaboration of the educational booklet in dialogue format and iv) review and printing of the material. Results: The educational booklet entitled "Tenho asma, e agora? (I have asthma, what now?)" contains 32 pages and 11 topics that address the concept of the disease, triggering factors, use of medications and inhaler devices, symptoms and action plan in case of an exacerbation. The development of this educational technology required the team to review the literature based on scientific evidence, interdisciplinary articulation, creativity and active listening until reaching the final product. Conclusion and implications for practice: The construction of educational booklets should value clinical practice, users' doubts and identifiable language among users. Educational booklets contribute to better health outcomes.

Keywords: asthma; educational technology; validation studies; Health education

1. Introduction

Asthma is a chronic respiratory disease with a major impact on global health, affecting approximately

339 million people worldwide¹. In Brazil, asthma affects about 20 million people, with an average of five deaths per day. Asthma is also a relevant cause of hospitalizations and emergency care, thus generating high costs for the health system²⁻³. These numbers are unacceptable since it is a treatable and controllable disease.

Asthma treatment is pharmacological and associated with non-pharmacological treatments. Proper pharmacological management ensures disease control, and early diagnosis and individualized treatment are relevant⁴⁻⁵. In addition to medications, non-pharmacological actions such as health education are essential in controlling the disease. It is essential that the person with asthma has guidelines for self-care and thus avoid bad outcomes.

In this scenario, health education actions supported by the use of educational technologies that address the concept of the disease, triggering factors, use of medicines and inhalation devices, signs and symptoms, as well as the identification and action in case of an exacerbation⁶ are relevant for self-management. These educational technologies can be an effective alternative to support the dissemination of knowledge and autonomy of the person with asthma⁷⁻⁸.

Technologies, when used for health education purposes by professionals, can be considered "educational technologies" and aim to facilitate the exchange of knowledge in an accessible way⁹. Educational booklets appear in the category of light technology⁹⁻¹⁰ and emerge as a resource that, in addition to informing, strengthens the professional-patient relationship through the exchange of knowledge and an attractive, plural, and accessible construction¹¹⁻¹². In addition, they have an impact and potential for acquiring new habits regarding self-care, management of chronic diseases such as asthma, and the achievement of adequate knowledge essential for prevention, promotion, and health care¹³.

The present study aims to report the experience of developing an educational booklet for adults with mild to moderate asthma.

2. Methods

Experience report, with a descriptive approach, on the construction of an educational booklet, developed for adults with mild/moderate asthma living in a peripheral region of the city of Salvador, with a profile mostly of low income/education and absence or ignorance of the previous diagnosis of asthma. This report is part of a clinical study entitled "Asthma attacks: a causality and prevention study in Brazil (Attack Study)", submitted to the Ethics and Research Committee and approved under registry number 3,111,889.

The nursing team that carried out the research created the educational material. That team has extensive experience in developing educational actions for people with asthma. The educational booklet in question was prepared as an instrument for health education actions.

The development of this educational booklet occurs between March and July 2019. During this period, joint debates were held among the health team professionals to share the experience as well as the identification of aspects that should be highlighted in the material based on what had been observed in the practical experience at the health unit. From this, it was possible to delimit the search in the literature to ensure scientific support for the booklet. We sought to ensure that the educational booklet was easily accessible, with language

and images that would support the health team's educational practice and a way of facilitating the understanding and approach of people with asthma to their diagnosis.

The experience occurred in a reference center dedicated to the multidisciplinary care of patients with asthma in the city of Salvador, Bahia, where consultations, medication dispensing, and health education actions are carried out periodically with the assisted patients.

3. Results

The educational booklet entitled “I have asthma, now what?” was built containing 32 pages and 11 topics. This material is intended to: i) assist in the educational actions of the nursing team during the research interventions to which it is linked; ii) disseminate knowledge about asthma to people diagnosed with the disease and their support network; iii) serve as a health booklet for people with asthma, using existing materials as a reference¹⁴, such as the booklet for pregnant women, the elderly, and children. The booklet provides the opportunity to record consultation dates, signs and symptoms, and self-monitoring.

The booklet was developed following the steps described below:

First step: a survey of topics necessary for adequate asthma management

This survey was carried out based on the team's experience with people with asthma, supported by guides from the Global Initiative for Asthma – GINA⁴, and with demands and frequent doubts of patients that arise in the follow-up routine. From this selection, 11 topics were listed in the form of questions to make the reading close to the reader's reality and doubts. The order of topics was designed to motivate the construction of knowledge as the reader reads each topic (FIGURE 1).

The image shows the Table of Contents of the educational booklet. At the top right, it says 'TENHO ASMA. E AGORA? | 05'. The title 'SUMÁRIO' is centered. The table lists the following items and their page numbers:

OBJETIVOS DA CARTILHA	06
CONTEÚDO INICIAL	07
TÓPICO 1 - O QUE É ASMA?	08
TÓPICO 2 - QUAIS SÃO OS SINTOMAS MAIS COMUNS?	11
TÓPICO 3 - O QUE É UMA CRISE DE ASMA?	12
TÓPICO 4 - COMO É O TRATAMENTO?	14
TÓPICO 5 - O QUE SÃO DISPOSITIVOS INALATÓRIOS E ESPAÇADORES?	17
TÓPICO 6 - COMO DEVO USAR O REMÉDIO PARA A ASMA?	19
TÓPICO 7 - SE A PESSOA NÃO TOMAR O REMÉDIO, O QUE PODE ACONTECER?	21
TÓPICO 8 - ONDE POSSO ENCONTRAR O REMÉDIO GRATUITAMENTE?	22
TÓPICO 9 - SE A PESSOA SE SENTIR MAL COM O REMÉDIO, O QUE DEVE FAZER?	23
TÓPICO 10 - O QUE PODE PIORAR A ASMA?	24
TÓPICO 11 - QUAIS CUIDADOS DEVO TER COM O AMBIENTE?	28
ANEXOS DA CARTILHA	
ANEXO 1 - DIÁRIO DE SINAIS E SINTOMAS DA ASMA	31
ANEXO 2 - AGENDA DE CONSULTAS	32
CONTATOS DO PROAR	33

FIGURE 1 - Summary of the educational booklet “I have asthma, what now?”. Salvador, Bahia, Brazil, 2022

Second step: Literature Review

In addition to the team's clinical experience, it was necessary to search the literature for updated references to build the theoretical content. A narrative review was carried out in the BVS (Virtual Health Library) and Pubmed (National Library of Medicine and the National Institutes of Health) databases using the descriptors: asthma, health education, health promotion, and the Boolean key “AND”. Studies whose titles or abstracts addressed information relevant to asthma, its pathophysiology, and health education were selected.

Third step: the transformation of the scientific text into a language of dialogue

The objective at this stage was to develop a story in dialogue with the reader but without losing the quality of the content. The characters of the story were idealized, and they needed to approach the reality of the people accompanied at the center.

Three characters were developed: Ana, a health professional that mediates the dialogue with the reader. To make an interdisciplinary material, Ana's profession is not defined in the booklet, as she is representative of all health professionals who mediate the educational process in care. The second character, João, is a man who has just discovered his asthma diagnosis. The third character, Maria, is a woman that is already being treated for asthma and shares with João her experiences with the disease. The narrative takes the reader to dive into this exchange of information, being part of the conversation and, many times, sharing the same yearnings presented there by the characters.

The construction of this material using the dialogue format sought to bring people with asthma closer to their disease since a large part of the population participating in the study had little or no contact with the diagnosis, despite reports of symptoms and crises. Although people with asthma have experience with the symptoms of the disease, the underdiagnosis of asthma also implies the low knowledge of the population about it.

A professional specialized in design was responsible for making the layout and images of the material created in the Illustrator® program. The ideas for the illustrations were discussed with the design professional to ensure that the images were representative for people accompanied at the center. After some revisions, the final illustration was reached (FIGURE 2 and FIGURE 3).



FIGURE 2 - Cover of the educational booklet “I have asthma, what now?”. Salvador, Bahia, Brazil, 2022



FIGURE 3 - Characters from the educational booklet “I have asthma, what now?”. Salvador, Bahia, Brazil, 2022

Fourth step: review and printing of the educational booklet

Collaborators from the reference centre evaluated the educational material, being those medical professionals and nurses specialists in the field of pulmonology, in a preliminary way. Relevant changes were made based on the suggestions sent on the adequacy of the images and some elements of the text, and then the material was sent for printing. During the execution of the research, the material was used as a complement to the health guidelines made by the nursing team and from this experience, two more revisions were carried out to adjust the text. The preliminary version is available for access on the Fundação ProAR website (<https://www.fundacaoproar.org.br/>).

To attest to the scientific rigour and quality of the material, the educational booklet will go through the validation process of the content judges (specialists in asthma and/or health education) and the judges of the target audience (people with asthma, participants in the clinical study) and, after evaluating these, final adjustments will be made. Validation is represented by the Content Validity Index, which concerns how representative the material is of a given content and has been widely used in the evaluation of educational technologies¹⁷. A validated material gives greater credibility to the community and becomes reproducible¹⁸. The validation study has already been approved by the Research Ethics Committee in Brazil and is in the initial data collection phase.

The construction of the educational booklet allowed the executing team to experience a complementary, innovative way of providing care since it resulted in the creation of a unique material, adapted to the reality of adults with asthma. The creation of this educational technology required from the team interdisciplinary articulation, creativity and active listening to reach the final product.

4. Discussion

The construction of an educational booklet evokes different challenges and potentialities. The main challenge was to adapt it to an accessible and attractive language for our target reader. At the same time, the potential of its application to improve knowledge, empowerment, prevention and health care is recognized. The material emerges as an important health education tool, due to the playful and dialogic way in which the information is presented, which can help in the performance of care by both professionals and family members, in different contexts, from health services to intrafamily spaces. And, above all, the construction of educational materials favours the empowerment of these people, who can access safe and evidence-based information at any time, improving the management of their self-care and consequently obtaining better results in the control of their disease¹⁹⁻²⁰.

The use of educational materials, such as educational booklets, reflects the deepening of knowledge and this can impact a change of attitude, with a better result of adherence to treatment and self-care. A study carried out with pregnant women who used an educational booklet as a mediator resulted in better outcomes regarding knowledge, attitude and practice in the use of regional foods¹⁶. Interventions with the use of educational technologies emerge as a way to reduce risk behaviours, but active participation and exchange between those involved must occur to be effective in the acquisition of knowledge¹².

The experience of nurses, in practice with people with asthma, was differential, since this care routine allows professionals to know, from listening to users, the main points of difficulties. During the follow-up carried out by the clinical study for which this material was produced, it is already possible to observe from the patients' reports the importance of the booklet in disseminating knowledge about asthma in an accessible way, which is listed as a highlight in the care offered by the service, as well as this material appears among the educational technologies used in educational actions that demonstrate, in a preliminary way, good results in controlling the disease.

The construction of characters that had characteristics similar to the people involved in the research, simple language, and colourful layout, were the strategies used to make the booklet attractive and facilitate the identification and consequent desire of the reader to enjoy the material^{11,7}. These artifices cause the reader to have an affinity and in this way, he can project himself in this reality, acquire new habits and from this dialogic construction, improvements in his knowledge and self-care¹¹.

Lack of knowledge about a chronic disease, such as asthma, implies treatment failure and, consequently, adherence to the recommended therapy⁵. The lack of adherence appears as an important factor in the failure of the treatment, being a challenge for the health teams. The acquisition of adequate knowledge can ensure better adherence and, consequently, better health outcomes¹⁵.

A limitation found in this material refers to accessibility for illiterate people or people with some type of disability, which ends up not being fully covered in this material. However, efforts were made to achieve diversity in this material and this limitation is already being reassessed in the validation process, thus respecting one of the basic principles of the Unified Health System in Brazil, comprehensiveness.

Through this report, it was verified that the construction of a material that facilitates the understanding of a disease of great impact in terms of morbidity and mortality is feasible and with the potential to reflect on

an improvement in the health condition of this population with asthma, as well as of other people with asthma. the same grievance, expanding its scope.

5. Conclusions and implications for practice

The construction of educational materials requires the professional to go deeper into the subject, in addition to sensitivity to make it accessible to the target population. The elaboration of the educational booklet provided this health team with the practical experience of creating a playful, interactive, easy-to-use educational technology that brings professionals, people with asthma and their community together in the engagement of health care. For its construction, it is essential to carry out steps that value clinical practice, users' doubts and a careful survey of the scientific literature, as well as the search for an accessible and identifiable language among users.

The limitation of this study is the lack of description of the educational technology validation process. However, the validation study by content judges and the target audience is in progress and the data analysis phase is for later publication. The experience reported in this manuscript demonstrates that the development of educational materials can be powerful in the execution of health care, contributing that educational booklets can to better health outcomes, acting to strengthen the prevention and control of chronic diseases such as asthma. Additionally, it is expected that this educational technology can effectively contribute to improving adherence to treatment and self-care practices, as well as care, impacting adequate asthma control, reductions in hospitalizations and improvement in the quality of life of patients and their families.

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