CONSTRUCTION AND VALIDATION OF AN EDUCATIONAL BOOKLET ON SEXUAL AND REPRODUCTIVE HEALTH FOR SERODISCORDANT COUPLES

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ABSTRACT
Objective: to describe the process of construction and validation of an educational booklet on sexual and reproductive health of serodiscordant couples. Method: methodological study, developed in three stages: construction of the booklet, content validation and appearance evaluation, conducted in Recife-PE, Brazil in 2018. The content was validated by 22 judges and the appearance by six serodiscordant couples. The relevance of the items was proven in the Item-Level Content Validity Index value and the cut-off point equal or higher than 0.80 was considered for agreement and pertinence of the booklet, according to purpose, structure, presentation, and relevance. Results: all items obtained a percentage of agreement above 80%, as well as an overall average (91%). In content analysis, a significance value (p>0.05) was verified in all items, and the evaluation of appearance obtained 100% agreement. Conclusion: the use of technologies as an educational resource promotes individual empowerment and directs self-care.

DESCRIPTORS: Health Education; Sexual and Reproductive Health; HIV Infections; Nursing; Sexual Behavior.

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With unstable behavior and different forms of occurrence, HIV still represents a continuous and growing worldwide phenomenon. It is estimated that approximately 70 million people are living with HIV, affecting the most variable groups of individuals and diversity in the epidemiological pattern. With the advances in science regarding the reduction of transmission risk, associated with the regular use of antiretroviral therapy (ART), HIV/AIDS came to be considered a chronic disease and, with this change, promoted improvement in quality and life expectancy of people living with HIV.

These advances enabled the reconstruction of life projects of the person living with HIV/AIDS (PLWHA), especially in the affective-love sphere. Thus, seropositivity allows new conjugality formations, including with people who do not carry the virus, forming serodiscordant couples.

Measures for prevention of sexual transmission of HIV in serodiscordant couples, such as the use of ART combined with regular use of female or male condom, in addition to the hierarchy of risks, increases the effectiveness of prevention and promotes greater safety in sexual and reproductive life of PLWHA and their partner. But these practices, which aim to expand strategies for the couple with different serology, require changes and adaptations in the relationship.

The use of these means by the health professional, such as counseling, aims to inform about transmission risks, associated with forms of negotiation of the couple, seeking a safe relationship facing sexual and reproductive health. The use of educational technologies, built to improve knowledge and adherence to care by the user to whom it is intended, can contribute to professional counseling.

The efficiency and effectiveness of educational interventions are influenced by several factors, including the availability of printed materials used as a didactic resource to reinforce the orientations verbalized by the health professional. The nurse, a professional who promotes health education in his daily practice, should make use of these educational materials to promote user autonomy and achieve the educational objective.

In this context, the vulnerability of serodiscordant couples in risky sexual and reproductive practices motivated the construction of this educational technology, aiming to promote safe guidance on sexual and reproductive health. Considering that these guidelines should be built based on scientific evidence, ensuring appropriate content to the target audience, this study aimed to describe the process of construction and validation of an educational booklet on sexual and reproductive health of serodiscordant couples.

**METHOD**

Methodological study, conducted in Recife-PE, Brazil in the year 2018, with the construction of an educational booklet, with subsequent content validation, by expert judges, and appearance evaluation, by serodiscordant couples.

The educational technology was built in the period from May to June 2018 and its validation occurred from July to September of the same year. It was based on the specific methodology proposed by Moreira, which refers aspects in the construction of a well-planned and understandable educational material, to reach the target audience: language, layout, and illustration.

The content of the educational technology emerged from the integrative review.
in the period from February to May 2018, entitled “Factors predisposing to risky sexual behavior of people living with HIV: integrative review”. Moreover, the main situations of individual vulnerability existing in serodiscordant relationships were contextualized, identified in the dissertation: “The being-with-the-other in the serodiscordant condition: a phenomenological approach to individual vulnerability to HIV/AIDS”, of the Graduate Program in Nursing of the Health Sciences Center of the Federal University of Pernambuco[12].

In the validation stage, to determine the number of judges, the following criteria were used: Za (confidence level)= 95%, P (proportion of agreement of judges)= 85%, and (accepted difference from what is expected)= 15%, which resulted in 22 judges[13]. For the identification and selection of judges, it was necessary to use criteria that showed the expertise of specific knowledge in health about the study, namely: having at least two years of experience in HIV care; having publications in HIV; having a doctorate or master’s degree in health; having previous experience in the development/validation of educational technologies; and having publications in educational technologies[14].

The educational technology was assessed with a self-applied form, adapted from the Nursing Diagnostic Content Validation model proposed by Fehring[14]. This form was composed of assertions proposed on a Likert scale[15-17], which analyzed the technology in varying degrees of intensity between two extremes of “I agree” to “I totally disagree”. The booklet was analyzed for its objective - purposes and goals to be achieved with the use of the educational technology; structure and presentation - general organization, structure, presentation strategy, coherence, and formatting (the general way of presenting the guidelines); and relevance - degree of significance of the proposed educational technology[16]. In the form there was space for suggestions, in which observations were requested about the evaluated items, the registration of some identified error or the request for addition of some content deemed pertinent to the theme.

The data obtained were analyzed in the Statistical Package for the Social Science (SPSS) version 20.0, being grouped, and organized in absolute and relative values, supporting the interpretation and quantitative descriptive analysis of the results. The characterization of the judges was performed by means of descriptive statistical analysis, with absolute and relative values.

The Content Validity Index (CVI) was used to verify the evaluation of the subject matter experts’ agreement as to the representativeness of the measure in relation to the content. The CVI cut-off point was considered equal to 70% (0.70)[18]. The items that obtained a mean lower than the established CVI were modified. The CVI followed three approaches: 1) I-CVI (Item-Level Content Validity Index): for each item, it was analyzed by the number of judges who evaluated the item positively (I agree and I fully agree); 2) S-CVI/Ave (Scale-level Content Validity Index, Average calculation method): performed by the average of I-CVIs of all scale items; and 3) S-CVI/UA (Scale-level Content Validity index): proportion of items positively evaluated as I agree and I fully agree by all judges.

The binomial test was calculated and applied to each item of the instrument, which verified the proportion of judges and target population that considered the instrument adequate, with an index equal to or greater than 80% for adequacy and a significance level (α) of 5%[19]. Another method used to analyze the agreement of the expert judges’ responses was the binomial proportion test of agreement for dichotomous responses, with agreement level considered 5% (p>0.05). The levels of agreement (p*) were analyzed individually.

After the end of this stage, with analysis and adaptation suggested by the specialists, the educational technology went through appearance evaluation by the target audience. The intentional non-probabilistic sampling was used to characterize the sample, whose purpose is not to use random forms of choice, meeting the defined inclusion criteria: HIV-positive individuals in a stable relationship with an HIV-negative individual, as well as their partner, over 18 years of age, treated at Correia Picanço Hospital, located in the city of Recife-PE, a reference institution in the care of HIV-positive individuals. The study excluded
illiterate individuals who were unable to answer the questionnaire, HIV-positive individuals and/or partners who had any mental disorder, such as dementia, autism or schizophrenia, or cognition deficits that compromised participation in the research.

A self-administered questionnaire was delivered along with the technology, divided into two parts: characterization of the participants and evaluation of the difficulty and convenience of the educational material\(^{20}\). The instrument had objective questions, answered with yes or no, plus the justification for each question, with the reason for the evaluation. Data were analyzed using the Statistical Package for the Social Sciences (SPSS), version 20.0, and treated based on descriptive statistical analysis, with absolute and relative values. Finally, the results found were presented in the form of tables and charts and contributed to possible modifications and adjustments of the material, resulting in the final version of the technology developed.

The research was approved by the Research Ethics Committee of the Federal University of Pernambuco, under opinion no.2796107.

RESULTS

The professionals who participated in the validation of the booklet were graduates in Nursing, with a predominance of females, 14 (63.4%). The judges’ ages ranged from 27 to 53 years old (Mean=38 years, SD=8.09). The mean length of education was 14 years old (SD=7.49) and the mean length of time working in the research area was 9.1 years (SD=7.49). Six (27.3%) of the judges belonged to assisting; eight (36.4%) to teaching, and eight (36.4%) to teaching/assisting. Of the 22 participants, 20 (90.9%) have experience in sexual and reproductive health; 16 (72.7%) with emphasis on HIV/AIDS; and 18 (81.8%) have experience with construction/evaluation of educational technologies; from different regions of the country, the southeast eight (36.4%) and northeast eight (36.4%) being the most representative.

Of the items evaluated, relevance was proven with an I-CVI higher than 0.80 in 82.3% of the items addressed, except for the items referring to language to meet the different educational levels (1.5) and illustrations, regarding their coherence (2.6) and quantity (2.7). These items underwent changes, as suggested by the judges. The average I-CVI for the educational booklet was 0.89. The agreement of the expert judges’ answers, performed by means of the binomial proportion test of agreement for dichotomous answers, obtained values higher than 5% (p>0.05) in all items, expressing a statistically significant association.

The distribution of the absolute frequency of scores obtained by the judgment of the expert judges, according to the aspects evaluated and the analysis of the agreement of the adequacy of the content validation items, is described in Table 1.

Table 1 - Content Validity Index of the educational booklet, according to the judgment of the expert-judges regarding the purpose, structure, and presentation. Recife, Pernambuco, Brazil, 2019 (continues)
### Scientifically correct information

1.2.18 4 0 0 0 1 1 1

### Information instigates changes in behavior and attitude

1.3.11 9 2 0 0 0,9 0,91 0,86

### It meets the information needs of serodiscordant couples.

1.4.18 2 1 1 0 0,9 0,81 0,86

### It caters to the different socio-cultural levels.

1.5.11 6 2 2 1 0,77 0,45 0,22

Percent agreement (S-CVI/Ave) 90,90% (0,90)

### STRUCTURE AND PRESENTATION

2.1.17 3 2 0 0 0,9 0,91 0,86

2.2.17 3 1 1 0 0,9 0,81 0,86

2.3.18 3 1 0 0 0,95 0,95 0,97

2.4.15 3 2 2 0 0,81 0,72 0,42

2.5.14 5 2 1 0 0,86 0,87 0,66

2.6.13 3 2 3 1 0,72 0,64 0,09

2.7.11 6 1 2 2 0,77 0,77 0,22

2.8.16 4 2 0 0 0,9 0,9 0,86

2.9.20 2 0 0 0 1 1 1

Percent agreement (S-CVI/Ave) 87,37% (0,87)

### RELEVANCE

3.1.18 2 2 0 0 0,9 0,9 0,86

3.2.18 4 0 0 0 1 1 1

3.3.18 2 1 1 0 0,9 0,81 0,86

Percent agreement (S-CVI/Ave) 93,93% (0,93)

Note: CT = strongly agree; C = agree; NCND = Neither agree nor disagree; D = disagree; DT = strongly disagree; ** † Binomial test; * p-value; I-CVI = Item-Level Content Validity Index; S-CVI/UA global=0.91; SCVI/AVE global=0.89. Source: Authors (2019).

In the evaluation by category, the validity of general agreement (S-CVI/Ave) was verified regarding the objective, structure and presentation, and relevance, obtaining a percentage of 90%, 87.37%, and 93.93%, respectively. The modified items, with a concordance index below 0.70, were related to the language of the educational booklet (item 1.5), with a significant discordance index (I-CVI 0.77), and to the illustrations, regarding their coherence with the content and quantity, with a discordance index (I-CVI) of 0.72 and 0.77, respectively.

Thus, it was changed to a more accessible language that better suits the different socioeconomic levels, exchanging difficult-to-understand words for a more accessible language. The illustrations were also changed, replacing them with less childish and better understood pictures. Other changes were made, based on the comments/suggestions of the expert judges, as described in Chart 1.
In the appearance evaluation, six serodiscordant couples were interviewed, with minimum age of 22 and maximum of 45 years, with a mean of 33.7 years (SD=7.49), with predominance of males (n=eight, 66.6%). The level of education ranged from low schooling (n=two, 16.7%) to higher education (n=two, 16.7%), with stricto-sensu specialization (n=one, 8.3%). Regarding marital status, three couples (50%), homosexuals, considered themselves single, two couples (33.3%), heterosexuals, married, and only one couple (16.7%), homosexuals, reported stable union.
The mean time of stable relationship between couples was 6.3 years, with a minimum of one year and a maximum of 15 years. The six HIV-positive partners reported regular use of antiretroviral therapy (ART) since they started regular monitoring in the institution, but only one (16.7%) reported regular condom use. As for sexual and reproductive health orientations for serodiscordant couples, only two couples (33.3%) reported having received them.

The serodiscordant couples, according to the difficulty and convenience evaluation form, considered the booklet 100% adequate in aspects of organization, writing style, appearance, and motivation.

The content of the booklet, consisting of 32 pages, with cover, back cover, fact sheet, title page, summary, and presentation page, was organized from the definition of serodiscordance, followed by combined prevention and reproductive health guidelines for the couple (Fig. 1). At the end, there is a space for notes to allow the couple to make notes they feel are important.

Figure 1 - Cover, layout, and presentation of the booklet. Recife, Pernambuco, Brazil, 2019. Source: Authors (2019).

DISCUSSION

The construction process of the educational booklet entitled “Guidelines for sexual and reproductive health of serodiscordant couples” followed a specific methodological rigor. Its use in health education actions aims to sensitize the target audience to change and improve behavior. Its validation constitutes an essential step, making the technology more complete and attesting to its methodological rigor and effectiveness(21).
The term validation refers to something that is attributed value, makes it valid for some purpose. The process of content validation provides scientific recognition, based on the judgment of experts. Professionals with expertise in educational technology knowledge allow for product reliability, and experience in validating other materials contributes to a more reliable evaluation of the material.

The CVI to check the agreement of the items has been used in other validation studies of printed material. With satisfactory CVI (S-CVI/UA global=0.91), this booklet was considered valid for use among serodiscordant couples, with adequate guidance on sexual and reproductive health.

The relevance of the booklet’s content and its applicability to serodiscordant couples obtained agreement among all the judges. Even so, the booklet underwent changes through the suggestions described by the evaluators, to promote improvements to the printed material.

The language was improved, changing some terms that were difficult to read or that could cause communication failure between the health professional and the user. The figures were improved and aligned with the text for better understanding. The fact that this material was evaluated in a digital format may have caused some difficulty in analyzing the presentation of the figures and their layout. To promote the inclusion of gender and sexuality, as well as to add all sexual orientations, the formation of a bisexual couple was added, avoiding stereotyping conjugal relationships, and thus promoting reading comprehension.

Educational technologies, constructed and validated, facilitate the health care process in a reliable, coherent, and quality manner, with viable use in clinical practice. When validated, the technology starts to have a purpose of facilitating and assisting communication in health, favoring teaching-learning and, consequently, behavior change.

Working on HIV, with emphasis on sexual and reproductive health, not only of the HIV-positive partner but also in conjugality, encourages health professionals to promote the couple’s autonomy in making healthy decisions. Considered a challenge by professionals, working on serodiscordance causes changes in the assistance process.

The use of condoms is still sometimes the only guidance given by health professionals to PLWHA and their partner. Other measures, already available in health services, are little disclosed to this public, such as combined prevention, prophylaxis before and after sexual exposure (PEP and PrEP), and aspects related to reproduction, with control of vertical transmission.

According to the Ministry of Health, the municipal and state governments should inform and train health services for the existing recommendations on safe sexual and reproductive practices for serodiscordant couples. The World Health Organization has also affirmed the need for new measures aimed at disseminating information, based on scientific basis, for this audience, such as the construction of educational technologies.

The technologies have specificities and must be understood as a fundamental component in the educational process. The use of the educational booklet, a printed material, can promote expressive results for the participants of educational activities. Moreover, it allows the user to carry an information guide, in case of further doubts and reinforcement of verbal orientations.

This model of care, through the implementation of new technologies, enhances the effectiveness of prevention strategies as a care device and allows the health professional to be close to the user. It makes the discussion space unique, decentralizes the assistance and aims to solve the difficulties of adherence, facilitate assistance, and promote reliable guidelines. Therefore, the multidisciplinary team’s guidance to serodiscordant couples, through an educational booklet, can enhance communication between professional and
user, as well as promote comprehensive care.

Evaluating the applicability of the educational booklet to the different contexts in which it may be used, even if the material is understandable and valid, is fundamental to adapt it to the needs of the target audience. In the evaluation of this audience, the booklet was considered adequate by 100% of the participants for organization, writing style, appearance, and motivation. Considering the Global CVI reached by the expert judges (S-CVI/AVE Global=0.91) and the total agreement of the target audience (100%), the booklet was validated regarding content and appearance as a reliable health technology, capable of promoting orientation for serodiscordant couples in sexual and reproductive health care.

Printed material is commonly used in health communication, although, like other technologies, its applicability and comprehensiveness to different sociocultural levels are subject to limitations of understanding. Moreover, clinical validation of this printed material is necessary, for clinical proof, to prove its efficacy and potential to the public.

FINAL CONSIDERATIONS

This study validated the educational booklet entitled “Guidelines for sexual and reproductive health of serodiscordant couples”, to guide safe sexual and reproductive practices for PLWHA and their partners. The participation of the target audience in the choice of the educational technology provided autonomy and insertion in the educational process, which may favor behavior change.

In nursing, the development of educational technologies assists the professional in the field of educational performance and stimulates professional training by encouraging research and teaching. The use of educational resources, built based on the user’s needs, promotes the empowerment of the client, directing self-care and emancipating the user in the construction of the therapeutic plan.

The development of new technologies facilitates health interventions, through the dissemination of knowledge about health in the popular environment. These health education strategies are motivating, facilitate interventions, have an accessible and dynamic language, and are effective in their use.

It is recommended, in this sense, that new clinical validation studies be conducted with this educational booklet, such as clinical trials, to prove the effectiveness of the booklet and its potential in changing the behavior of serodiscordant couples, allowing a healthy sexual and reproductive life.

REFERENCES


*Article extracted from the master's dissertation “Construction and validation of an educational booklet about sexual and reproductive health for serodiscordant couples”. Universidade Federal de Pernambuco, 2019.

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Role of Authors:
Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work - Frazão LRSB; Drafting the work or revising it critically for important intellectual content - Gusmão TLA de; Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved - Frazão LRSB. All authors approved the final version of the text.

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