

Validation of the educational technology “abuse no more” for young people with intellectual disabilities

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Abstract *The implementation of educational actions, including sexual violence prevention, aimed to promoting the sexual rights of young individuals with intellectual disabilities, can be characterized as a huge challenge in the services that assist this population. This article aims to validate, with expert judges, educational technology aimed at sexual abuse prevention among young individuals with ID. This is a content and display validation study, performed with 25 judges. The information was collected through a questionnaire, considering the domains: objective, relevance, structure and presentation. The quantitative data were analyzed using the Content Validation Index (CVI) and a cutoff point of 0,80 was adopted, while qualitative data were submitted to thematic content analysis. An educational technology “Abuse no more: learning to protect yourself”, was subsidized by Vigotsky’s theoretical framework and consists of a set of materials, including a storybook and support resources (dolls, booklet and explanatory video). This technology was validated by the judges, with a total CVI of 0,99, obtaining a CVI >0,95 in all items and domains. The judges highlighted the relevant and innovative nature of the technology, offering suggestions for its improvement.*

Key words *Intellectual disability, Sex education, Young people, Educational technology, Sexual violence*

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Introduction

In Brazil, 45,606,048 million people (24%) have declared having some type of disability. Of these, 6,610,266 (14%) are young individuals between the ages of 15 and 29, of which 566,840 (9%) have an intellectual disability (ID), the focus of analysis in this study¹.

Currently, a disability is seen from the interaction between the individual and its context, that is, from the perspective of functionality and participation in their environment. This perspective broadens the view on disability, previously reduced to a disease condition to assume a more social and political characteristic, defocusing the disabilities and limitations².

Among the different challenges faced by young individuals with an ID, the experience of one's sexuality in a healthy and safe manner stands out³⁻⁵. People with disabilities have the right to express and live their sexuality, as well as to receive assistance in specialized services, access to information and sex education. The Convention on the Rights of Persons with Disabilities argues that young women with disabilities should have protection and freedom to decide about their sexuality, according to their age and level of maturity. For this purpose, the state government needs to adopt measures to guarantee these rights on an equal basis, seeking to empower these young women, promoting their full and healthy development, free from discrimination, impositions, and violence⁵. It is noteworthy that one's sexuality, when well conducted and guided, favors the affective development, facilitates the ability to establish relationships, improves one's self-esteem and contributes to social inclusion⁶⁻⁸.

However, people with disabilities are often not socially perceived as sexualized individuals, as if they could not understand or need sex education. As a consequence, there is an attitude of omission or even punishment, in an attempt to hide and silence their expressions of sexuality^{6,7}.

This process of silencing the sexuality of people with disabilities in general, and their consequent vulnerability, is intensified when considering the specificities of the ID. Although young people with ID go through the same transformations and pubertal phenomena as the typical adolescents, the social stereotypes associated with them, characterized by the infantilized and dependence perception, contribute to the offer of few possibilities of experiences, especially in the field of sexuality^{6,8}. Social taboos, stigmas and discrimination hinder the full exercise of

one's right to express their sexuality, influencing self-perception and empowerment, as well as having a negative impact on the appropriation of one's own body, the construction of identity, including sexual and gender identity⁹.

In this context, several young people, especially girls, end up not receiving basic information about their development, including body changes and care for their own bodies, making them feel insecure and often not knowing how to deal with aspects related to their sexuality^{3,4,9}.

This scenario takes on specific outlines when considering the intersectionality between being young, with a disability, and female. Studies indicate that the female gender receives less information and is more exposed to risk factors such as Sexually Transmitted Infections (STIs) and violence, including sexual abuse^{4,7,10}. This type of violence can lead to psychological, physiological, behavioral, social and sexual consequences throughout life. The victims are prone to, among other aspects, depression, anxiety, encopresis, self-mutilation, social isolation, problems with sexuality, fear of being alone, and suicidal ideation¹¹.

Coping with situations of sexual violence involves adopting strategies to expand and strengthen the young women's advocacy mechanisms. Among these, the importance of comprehensive education in sexuality stands out, in which the student is a protagonist in the educational process, which allows the acquisition of knowledge, development of positive attitudes and the construction of skills for the experience of a free and safe sexuality¹².

Considering the specificities of being young with an ID, which implies the experience of different levels of learning difficulty and social participation, in addition to the scarcity of Educational Technologies (ET) on the subject in focus, we highlight the importance of the development and evaluation of educational materials appropriate to this population's needs and skills¹³. This study aimed to validate, with expert judges, an educational technology aimed at the prevention of sexual violence against young women with an ID.

Method

This article presents the 3rd stage of the research "Educational assistive technology for the sexual education of female adolescents with intellectual disabilities" (*"Tecnologia assistiva educativa para*

a educação sexual de adolescentes do sexo feminino com deficiência intelectual”), approved by the Research Ethics Committee of the Health Sciences Center of Universidade Federal de Pernambuco.

The Educational Technology entitled “Abuse no more: learning to protect yourself” (“*Abuso não vai rolar: aprendendo a se proteger*”) was developed from a methodological study of development and validation, with a quantitative and qualitative approach, carried out in three stages: 1st Diagnosis; 2nd Construction of the ET; 3rd ET Validation (focus of this article).

In the 1st Stage – diagnosis (qualitative), interviews and focal groups were carried out with 19 young women with ID (15 to 18 years old), 17 mothers/caregivers and 22 professionals, aiming to understand the concepts of sexuality and sexual education, in addition to identify the topics and resources that would constitute the ET. It was acknowledged that the focus of the ET would be the prevention of sexual abuse. In the 2nd stage, the ET was developed, based on some phases of the Orientation Guide for Project Development (OGPD) (GODP, *Guia de Orientação para Desenvolvimento de Projetos*)¹⁴. The ET was based on Vygostky’s socio-historical theory¹⁵, considering the assumptions: social interaction, active participation, language, mediation, compensation, motivation, level of potential and actual development.

The ET, illustrated in figure 1, is intended to be used by professionals and caregivers/parents of adolescents and aims to facilitate the teaching-learning process for the prevention of sexual abuse of young women with ID, aged between 15 and 19 years. The ET consists of an illustrated book and two sexed dolls (male and female), in addition to supporting material in booklet and explanatory video formats (Figure 1).

The book tells the stories of Leca, an adolescent with ID, who experiences aspects related to sexuality in a safe and healthy way, with the adolescent boy Edu. She faces situations of risk for sexual abuse. During the stories, interactivity resources are offered (questions, illustrations to be discovered, spaces for drawings, etc.) that will allow the mediator to both assess the adolescents’ understanding and learning and build possible protection strategies, with emphasis on seeking a trusted adult individual.

The third stage, the focus of this text, constitutes a validation survey of the appearance and content carried out with expert judges (professionals, teachers and researchers), who reached a minimum score of 5 points, according to crite-

ria adapted from the Fehring Model¹⁷: academic titles, scientific production, and professional experience with the topic under discussion. The participants were identified through their representativeness in the area, the curriculum at *Plataforma Lattes* (CNPq - www.cnpq.br) and by the “snowball” sampling technique, which consists of the selection of subjects through the indication and recommendation by previous subjects¹⁶.

Initially, the expert judges had the opportunity to handle, observe, read and analyze the ET. After that, they answered a questionnaire in which they evaluated the content and appearance of the entire kit that comprises the ET (book, support booklet, dolls and explanatory video). The adopted evaluation domains were based on the validation criteria for educational materials, described as: objectives, relevance, structure and presentation¹⁸. The items were analyzed using a Likert-type scale: agree (A), partially agree (PA), partially disagree (PD), disagree (D) and I cannot evaluate (CE). The degree of agreement between the judges was assessed by the Content Validity Index (CVI), considering the minimum agreement of 0.80 for validation¹⁹. The CVI was used to analyze each domain and the technology as a whole.

The judges were asked to make written observations about the evaluated items, as well as suggestions for adapting and improving the material. These data were submitted to the thematic content analysis²⁰, considering the validation domains.

Results

The study included 25 expert judges with expertise in different fields (teaching, assistance, management and public policies) and academic degrees in several areas (Chart 1).

Most of the judges had experience in the creation and/or evaluation of didactic/educational materials, including those in the form of videos and documentaries, about people with disabilities and/or sexuality and/or violence. It is noteworthy that some individuals were the authors of reference materials in the area, consultants from the Ministry of Health, with award-winning works, and also nationally renowned educators in the area of sexuality and violence.

The data from the questionnaires pointed out that the ET “Abuse no more” was considered valid, obtaining a total CVI of 0.99. Specifically regarding the book, it can be observed in Table



Figure 1. Presentation of the educational technology “Abuse no more: learning to protect yourself”.

Source: Personal archive.

1, that all the evaluated items obtained an agreement > 0.95 .

The objective dimension, which refers to the purposes, goals or aims that are to be achieved with the use of the ET, obtained an agreement of 100%. Some judges highlighted the innovative characteristic of the ET and its potential to favor the teaching-learning of young women with ID, aiming at the prevention of sexual abuse and for the development of self-protection strategies.

Undoubtedly, the material is innovative and excellent, to fully deal with abuse in a concrete way, or better protect people with intellectual disabilities from sexual abuse. (J4).

Other judges stressed that the ET can be used by professionals from different fields, and also not only with adolescents with ID, since it contributes to the identification and prevention of situations of abuse and the construction of dialogue with the victims.

I suggest that this material be disseminated and manufactured for use as pedagogical content, both

for people with intellectual disabilities, as well as for any child, young person and even adult individuals (PWD - person with disability). (J9)

Excellent material that can be used by health professionals (...) psychologists, NASF (Family Health Support Center, FHSC) teams and can also be used in schools, social workers, CREAS (Specialized Reference Centers of Social Assistance), as a facilitator for the first approach. I suggest that it also be used in the GPCA (Child and Adolescent Police Management Office) after adequate training. (J21)

Considering the intention of future use of the ET by parents, 2 judges considered the adequacy of the language and the need to carry out the validation with this population.

Congratulations for the initiative! It is advisable to listen to parents in order to assess the language and understanding. (J22)

In addition to being understood as an ET that achieves its purpose, it was considered relevant and significant, obtaining a CVI = 1. The

Chart 1. Characterization of the judges regarding their experiences, current occupation and experience with the creation and evaluation of educational materials in the research area.

J	Time of experience	Experience in the area	Current occupation	Development/ evaluation of
J1	material	Guardian Council and CAPSi, Reference Center for Children and Adolescents Victims of Violence	Psychologist	-
J2	18	Teacher of criminal law. Legal perspective on the topic	Teacher of Law	Booklet on sexual crimes and Domestic violence against women
J3	18	Assistance to children and adolescents with disabilities; AT development.	Teacher of Occupational Therapy	Evaluation and development of AT products for children and adolescents.
J4	6	Occupational Therapy Assistance and Research	Occupational Therapist	-
J5	10	Educational inclusion of individuals with disabilities	Teacher in the Department of Psychology and Educational Guidance	Development of literacy games for children with ASD
J6	7	Clinical listening of children and adolescents victims of violence and mental disorders.	Teacher of Medicine and Psychologist	-
J7	4	Head Judge of Law in a court of domestic and family violence against women	Judge of Law	-
J8	17	Specialized Educational Service Professor	Pedagogue	Develops educational resources for children and adolescents with disabilities
J9	25	SES Teacher Inclusive professional and technological education	Pedagogue	Adequacy of textbooks aimed at people with intellectual disabilities.
J10	10	Assistance to adolescents in psychological distress and intellectual disability at CAPS	Teacher of Nursing	Development of educational material
J11	5	Internship supervisor at APAE Volunteer at the institution	Teacher of Physical Therapy	-
J12	10	Development of educational materials and therapeutic resources	Developer of educational and therapeutic products	Video production for parents and professionals; textual content in a virtual environment
J13	25	APAЕ, Sheltered Workshop, IMG	Service and assistance manager to families and people with disabilities	Educational booklets

it continues

judges highlighted the magnitude of the covered topics and the possibilities for sharing and learning. Moreover, they anticipated that the material

could be a reference in the area to be used by parents and professionals in the prevention of sexual abuse.

Chart 1. Characterization of the judges regarding their experiences, current occupation and experience with the creation and evaluation of educational materials in the research area.

J	Time of experience	Experience in the area	Current occupation	Development/ evaluation of
J14	19	Sex education and assistance to adolescents with intellectual disabilities	Psychologist	Documentary and educational booklet on sexuality of young people with ID
J15	8	Training in Sexual Education. Extensive experience in the field of television journalism and audiovisual communication.	Sex Educator: training and intervention with adolescents	Book on prevention of sexual violence for adolescents
J16	4	Development and evaluation of products for people with disabilities.	Teacher of a Design Course	Development and evaluation of tools for AT projects
J17	23	Health care for children and adolescents with disabilities and genetic syndromes	Geneticist	-
J18	4	Assistance in health promotion, body care, body image and social inclusion for adolescents with ID	Nutritionist Teacher of Nutrition	Development of educational materials on health promotion and body care
J19	3	Health education. Development of educational materials	Teacher of Nursing	Validation of educational protocols and materials; Development of educational technologies, educational videos
J20	5	Project aimed at prevention and coping with violence in the school context	Teacher of the Department of Education and PGP in Education, Cultures and Identities	Booklet on the prevention of sexual abuse; Stimulation Guide for Children with Disabilities
J21	33	Assistance to children and adolescents victims of violence	Clinical doctor and coroner Public Health professional	Educational materials on violence
J22	24	Health systems management focused on child and adolescent care	Public Health professional, management and researcher	Educational materials on child and adolescent health
J23	15	Advisor for the ID area; Content developer on ID	Chancellery Officer of the Ministry of Foreign Affairs	Development of educational materials and production of textual content for people with ID and caregivers
J24	6	Sex education and sexual violence	Special Olympics' Partnership Manager for Inclusive Health in Latin America	-
J25	23	<i>Special Olympics Doctor</i>	<i>Special Olympics' Director of the Inclusive Health Program</i>	-

Notes: TA – Tecnologia assistiva/AT – Assistive Technology; TEA – Transtorno do Espectro Autista/ASD – Autism spectrum disorder; AEE – Atendimento Educacional Especializado/SES – Specialized Educational Service; CAPS – Centros de Atenção Psicossocial CAPS – Psychosocial Care Centers; APAE – Associação de Pais e Amigos dos Excepcionais/Association of Parents and Friends of People with Special Needs; PPG – Programa de Pós-Graduação/PGP – Post-Graduate Program; IMG - Instituto Mara Gabrielli.

Source: Author's elaboration.

Table 1. Validity index for the domains: objective, relevance, structure and presentation.

Items	A	PA	PD	D	CE	CVI
Objective						
1.1 It aims to prevent sexual abuse of adolescents with intellectual disabilities	24	1	-	-	-	1
1.2 It favors the teaching-learning of adolescents with intellectual disabilities	25	0	-	-	-	1
1.3. It stimulates the recognition of the body, the identification of risk situations for sexual abuse and the development of protection strategies based on problem situations	25	0	-	-	-	1
1.4 It contributes with parents and professionals regarding sex education focused on preventing the sexual abuse of adolescents with intellectual disabilities	23	2	-	-	-	1
Total CVI						1
Structure and presentation						
2.1 The educational technology is appropriate in its structure and form of presentation	24	1	-	-	-	1
2.2 The information is presented in a clear and objective manner	21	4	-	-	-	1
2.3 The content of the presented information is scientifically correct	24	1	-	-	-	1
2.4 The material is appropriate to the socio-cultural level of the proposed target audience	20	5	-	-	-	1
2.5 There is a logical sequence of the proposed content	24	1	-	-	-	1
2.6 Auxiliary resources contribute to compensate for difficulties and allow access to different levels of understanding	22	3	-	-	-	1
2.7 The presented content corresponds to the level of knowledge of the target audience	19	6	-	-	-	1
2.8 It stimulates interaction, active participation and communication	24	1	-	-	-	1
2.9 The formatting, colors, grammage, images are adequate for the target audience	21	3	1	-	-	0.96
2.10 The illustrations, symbols and signs, are representative and sufficiently expressive.	21	3	1	-	-	0.96
2.11 The material used is appropriate, and facilitates exploration and interaction	25	0	-	-	-	1
2.12 The amount of information is sufficient	23	2	-	-	-	1
Total CVI						0.99
Relevance						
3.1 It allows sharing of knowledge and learning generalizations in other contexts	21	4	-	-	-	1
3.2 It favors the development of preventive attitudes in the face of risk situations	23	2	-	-	-	1
3.3 It addresses topics relevant to the prevention of sexual abuse of adolescents with intellectual disabilities	25	0	-	-	-	1
3.4 It values knowledge that has been already acquired and stimulates new knowledge	24	1	-	-	-	1
3.5 It can be used as a reference in the scientific field and by institutions that work with adolescents with intellectual disabilities	22	3	-	-	-	1
Total CVI						1

Source: Author's elaboration.

I believe it will be of great importance for professionals working with this topic, as well as for the family, being a great resource to be used with these adolescents. (J13)

Even if a necessary index was attained for its validation, the partial agreement of 4 judges regarding the scope of the ET and the possibility of generalizing the learning to other contexts stand

out. In this sense, Judge 22 mentioned some limitations regarding the potential for representativeness of the material considering human diversity, including that of young people with ID, in addition to different contexts, socio-historical and economic aspects and the amplitude of risk situations. However, this judge understands that a single material could not account for the totality of these aspects and that there is, therefore, the need to make cuts and choices.

The criticism related to the abuse situation with images and scenes that are more common and frequent promotes "generalizations" that are not suitable for all cases. On the other hand, options other than the proposed ones generate more criticism than the current format. (J22)

Regarding the structure and presentation of the book, that is, the way it demonstrates the guidance, its overall organization, disposition, coherence and formatting, the CVI was 0.99. The judges highlighted the possibilities for diversification and grading of the knowledge, interactivity, accessibility and the quality of the material.

In addition to the social relevance, it is perceived the care with which the evaluated educational material was conceived and created, with an appropriate approach strategy, presenting the information in a clear and objective way, following a logical sequence according to the covered subjects, respecting the acquired knowledge and stimulating new knowledge, as well as facilitating access to a population with different levels of understanding. (J7)

Consistent with what was pointed out in relation to the ET scope, considering the diversity of the population, it was observed that 5 judges partially agreed on the items related to socio-cultural appropriation, considering the possible difficulties of understanding and managing the mediators.

I do not know if we have elements to affirm that the material is appropriate at the socio-cultural level without its application in groups with different socioeconomic levels. (J5)

[...] I partially agree, because there are delicate questions that I think the support material could bring greater support content, when the parents constitute the mediator, for instance, who may have a lower level of schooling/understanding. (J16)

Other six judges also pointed out a partial agreement regarding the adequacy of the adolescents' level of knowledge, reflecting on the variations in the young women's levels of ID and understanding.

I believe so, but I doubt whether it will allow access to different levels of understanding if it has not been applied yet to this population. (J5)

I suggest you define the degree of intellectual disability to suit the language. (J6)

Some experts submitted proposals for the inclusion of topics such as contraceptive methods and STI prevention, and the inclusion of health services as a reference in the care network and assistance spaces. Judges 15 and 21 brought up the importance of reflections on the aspects related to consent in intellectual disability, the non-blaming of the abuse victim, the possibility of pleasure within the abuse situation and the importance of self-knowledge.

Touches that are allowed, self-knowledge, present sexuality and touches that are not allowed for the adolescent to also perform on the other. The touch of the boyfriend, Edu, can be a bad touch if not allowed. (J21)

There were also proposals for improvements, without compromising the obtained validation, in the illustrations of the material aiming to improve the design, the interactivity and focus, in order to improve the assimilation of the visual message.

Regarding item 2.9, I partially agree with it, because there are text boxes that I think show low contrast, as on pages 17 and 20. (J16)

All support materials were also evaluated for their specificities and objectives and had a concordant Content Validity Index, booklet (CVI 1), puppets (CVI 1) and video (CVI 0.99), as shown in Table 2.

The judges emphasized the importance of support materials for the ET to meet its purpose, highlighting the improvement of reach with the use of two communication channels (booklet and video). Only one judge disagreed, who considered the video unnecessary.

It is very good to have two support materials, they are very complementary. The printed content has more information and reasoning, since the video is more interactive, and reaches a larger audience. (J3)

Regarding the booklet, suggestions were made for a simpler and more objective language, aiming at reaching mediators with different levels of schooling.

I consider it appropriate for professionals. For parents/family members, it may need adjustments, considering the amplitude of profiles and levels of schooling. (J22)

Finally, the judges emphasized the contributions of the dolls to the educational action, espe-

cially regarding the introduction of greater playfulness and encouraging participation.

The presence of the dolls favors contextualized information with the use of the concrete object, which can help the understanding and the expression. (J5)

Discussion

The results indicate that the ET, "Abuse no more", was validated with a high general agreement index, since all the assessed items and domains (objectives, structure and appearance, relevance) obtained a CVI > 0.95. This agreement was supported by the qualitative data presented in this study.

The technologies are intended to facilitate the formal and informal educational processes, combining theory and practice, understanding and knowledge. They can be artifacts, resources, processes used in educational actions, which go through well-founded and systematized construction and validation procedures²¹.

Validation is one of the mechanisms for the development of effective materials, as it assesses whether they have achieved their objectives and goals, whether they are accessible and appropriate to the target audience, how significant they are for the area of intervention and its applicability¹⁸. The diversity of views at the moment of validation, as observed in the present study, is relevant and favorable for the construction of a more complete and effective material^{21,22}. In this sense, it was observed that even though the version shown to the judges was considered valid, they made constructive criticisms for the improvement of the ET, which will be discussed here and considered in the final version.

Regarding the objective and relevance domains, the judges consensually highlighted that technology achieves its purposes, as it has the potential to contribute to the educational process for the identification of risk situations and the search for self-protection behaviors.

Considering that young women with ID are more vulnerable to sexual abuse and the potential negative consequences of this violence, educa-

Table 2. Validity index of the support booklet, dolls and explanatory video.

Items	A	PA	PD	D	CE	CVI
Booklet						
It satisfactorily guides the use of educational technology	23	2	-	-	-	1
The language is appropriate	23	2	-	-	-	1
It contains the necessary information	22	3	-	-	-	1
It is a relevant material in the creation of educational technology	25	-	-	-	-	1
Total CVI						1
Dolls						
They facilitate the teaching-learning process for the prevention of sexual abuse	23	-	-	-	2	1
The design and presentation of the dolls contributes to teaching-learning and exploration	23	-	-	-	2	1
They stimulate interest and motivation	23	-	-	-	2	1
They are relevant resources in the creation of educational technology	23	-	-	-	2	1
Total CVI						1
Video						
It satisfactorily guides the use of educational technology	23	-	-	-	2	1
The language is appropriate	22	1	-	-	2	1
It contains the necessary information	23	-	-	-	2	1
It is a relevant material in the creation of educational technology	22	-	-	1	2	0,96
Total CVI						0,99

Legend: A = I agree; PA = I partially agree; PD = I partially disagree; D = I disagree; CE = I cannot evaluate.

Source: Author's elaboration.

tional proposals that work with the development of self-protection attitudes and the identification of risk and violence situations are relevant and necessary^{7,23,24}.

It was identified that some countries have specific programs and resources for the sexual education of people with ID²⁵. However, the literature indicates the need to adapt these materials, to raise society's awareness of the sexuality of people with ID, to include and improve sex education programs in school curricula and to train professionals and family members^{8,23}. In Brazil, the sexual education of young people with ID is still very incipient. There is a lack of resources, trained professionals and family support, in addition to the social taboos that still persist and hinder this practice.

The knowledge about the scarcity of educational materials that are adequate for young people with ID made the participants emphasize the innovative characteristics of the ET and its relevance to the field. However, in agreement with some judges, it is understood that it is necessary to make exceptions regarding the possibilities of comprehensiveness and generalization of the knowledge constructed with the use of ET, considering not only human diversity, including the different cognitive levels, but also the situations experienced in different contexts of life.

It is demonstrated that the understanding of young women with ID on the issues of sexuality is not only related to cognitive difficulties, but to social, cultural, and historical influences, related to how this adolescent is perceived by the family and in their social environment^{26,27}. Therefore, the right to receive sex education is for everyone, and it is important to develop strategies that reach the diversity of this group.

In this sense, one of the strategies used in the ET was its indication to be used in groups, considering the possibilities of social interaction and learning. As emphasized by Vygostky²⁸, humankind must be understood through the relationships they establish in society, being the subject of transformation of oneself and of the world. The author valued the abilities of the person with disabilities, because he believed that they constitute the basis for learning and development. Therefore, it is believed that cognitive difficulties can be "compensated" by the rich experiences of social interaction. For the author, "[...] what is impossible in the individual's development plan, becomes possible in the social development plan" [...]. *lo que es imposible en el plano del desarrollo individual, se torna posible en el plano del desar-*

rollo social (p.247). Thus, young individuals with more skills can collaborate to those with more difficulty to learn, and this process will be beneficial for both.

Moreover, considering the diversity of the levels of impairment caused by the ID and the different social profiles associated with this condition, the ET was designed to allow the mediator to grade the information regarding its complexity, handling the educational action, offering the appropriate stimuli and maximizing the skills. As highlighted by Dey et al.²⁹ from the prior knowledge brought by the student on the subject, the mediation process must build new knowledge, as if it were a platform, providing a foundation for the person with ID to reach other levels of learning.

As a final point in relation to the objectives and relevance of the ET, some expert judges suggested, and that will be accepted in the continuation of this research, to perform the validation with the target audience: parents, professionals who work with adolescents and the adolescents with ID themselves. However, it is pertinent to emphasize that the technology in focus was created (1st phase – diagnosis) after listening to this population, which significantly amplifies the possibility that it will also be validated by them, corroborating the evaluation of judges with extensive experience in the field being discussed.

Regarding the structure and presentation domain, suggestions and reflections were made for the improvement related to the illustrations and development of the thematic content of the book. As for the illustrations, suggestions were identified to enhance learning, the congruence of these illustrations with the text content and the identification of the adolescents with the proposed stories.

It is believed that images contribute to learning, since the target audience is more interested and motivated by the information. During the creation of the material, the presentation of images that were representative and meaningful for young people with ID was sought after. However, it is important to note that visual information is implicated in conventions related to culture, and it is necessary to evaluate the process of meaning that each adolescent will give to the illustrations in the book in order to enhance the educational process³⁰.

Regarding the content suggestions in the ET, it is said that there are several topics that should be addressed with young women with ID in sexual education. In view of the complexity of infor-

mation that involves each subject, it is necessary to target the educational material so that it is not extensive, impairing its usability. This direction was guided by the data obtained during the steps preceding the validation that generated this ET.

However, it is considered that some thematic additions or adjustments, suggested by the judges, need to be discussed and incorporated into the ET. One of them refers to the need to address the issue of consent, relevant to all populations, in the field of sexuality.

The capacity of people with ID to consent to an affective or sexual relationship can be exercised through sex education, with the acquisition of knowledge and skills for self-protection and the making of conscious choices. The important thing is not to disallow, but to enable decision making in a supported manner.

The Convention on the Rights of Persons with Disabilities³¹ states that *The right of all persons with disabilities who are of marriageable age to get married and to have a family, based on the free and full consent of the intended individuals must be recognized*. However, the materialization of this new paradigm remains a challenge. Disability continues to be associated with incapacity and dependence. Therefore, there must also be a change in the way they are seen, that is, as people, with rights and responsibilities, who need to be respected and empowered to appropriate their decision-making and self-management potential³².

Therefore, it was observed the importance of making this question more explicit in the book, through adjustments in the illustrations and in the content, which highlight that the boyfriend's touch could also not be pleasant, and that the adolescent has autonomy to not consent. Also regarding the touch, we agree with the need to address the processes of self-knowledge and masturbation in the technology under discussion.

Another point highlighted by some judges that will result in changes in the material refers to adjustments that make it possible to reinforce the chance of sexual abuse by someone that the adolescents know.

It is understood that young women with disabilities are more exposed to violence, including sexual abuse^{10,11,26}. Some of them are out of school and people around them can take the opportunity to sexually abuse them. Moreover, young women may have difficulty understanding and communicating what happened, as well as being afraid of abandonment and loss of home. Many do not even know that they have the right to deny

abusive behavior because they do not receive sex education and because of the stigma of disability, they are discredited when confronted, leading to the abuse recurrence. Moreover, they are women, and there is an intersection of vulnerabilities, in which the female gender suffers historical discrimination and disadvantages, which, when overlapped, increase the risks of sexual abuse²⁵.

Another consideration brought by the judges refers to the importance of not restricting the understanding of abuse as situations to which physical pain is associated. The meaning of sexual abuse is different for each person, depending on their experiences. The social tendency is to view abusers as "monsters" (with a negative image), but the victim may not perceive them in that way³³.

In addition, the relationship that involves dependency of care for people with disabilities gives them the idea that their bodies can be handled by the caregivers, including those who are institutionalized, making them more vulnerable to situations of sexual violence. The victims create an ideation of the caregiver as someone who provides them with care and protection, generating a misunderstanding of feelings between care, affection and abuse, which make it difficult to identify and disclose the violence³⁴.

Therefore, the need for accessible sex education is perceived, so that young people with ID can have access to information, develop communication skills and learn protection strategies for a safe and full life¹². For that purpose, sex education practices need to expand their intervention proposals, being not only informative, but also formative, aiming to strengthen these adolescents as people.

Considering these aspects, adjustments will be made to the technology to broaden the understanding that not all sexual abuse causes physical harm or pain. It is reiterated that the proposed ET addresses the possibilities of seduction, such as the offer of car rides and sweets, as risk situations for sexual abuse.

It corroborates the concern of some judges regarding the importance of deconstructing, during the educational process, the victim's blaming for the abuse. In this sense, an excerpt from an ambiguous passage will be adjusted to emphasize that the adolescent is not to be blamed. Guilt is one of the barriers to reporting sexual abuse cases. Faced with a misogynistic, patriarchal and discriminatory society, women victims of sexual abuse are often blamed and/or feel guilty³⁵. Therefore, it must be emphasized that

the victim in no way should be seen as guilty and the responsibility should be vehemently placed on the aggressor.

A final suggestion would be the idea of highlighting and expanding the support network for cases in which situations of abuse are identified during the use of the material. Considering the care based on the intrasectoral and intersectoral articulation of the different systems (health, social assistance, education, protection and defense)³⁶, more references will be added in the support materials to enhance access to this protection network.

Regarding the support material, there was agreement concerning the need, importance, and relevance of this material, both in video and printed formats, for a better appropriation of the topic and for the conduction of the educational process with the technology.

Considering the unpreparedness and the need for more information from the mediators, parents or even professionals, the use of support materials can contribute to the knowledge and provide subsidies to the educational process. The existence of two support materials came precisely from the need to cover different ways of interacting with mediators, with the booklet being denser and more grounded, while the video offers a more informal and practical language. The idea of making the video available, consistent with other studies that discuss this educational tool³⁷, is to present the ET in a faster, more objective and accessible way, especially for mediators with reading difficulties.

The sexed dolls were also considered by the judges to be relevant and suitable for the sexual education of young women with ID. This perception is corroborated by studies that defend that the ET should allow more realistic and concrete experiences, with a diversity of resources and multisensory stimuli, representative and self-expressive models, essays, and problematization,

which have shown to be effective in the teaching-learning process of people with ID^{23,24}.

Final considerations

The ET “Abuse no more”, was validated by the expert judges regarding its objectives, relevance, structure and presentation. The participants evaluated that the proposed ET will collaborate with parents and professionals in the sexual education of young people with ID. They stated that the material has the potential to be a technical-scientific reference in the area of sexuality and violence for young people with ID and can be used in care and educational services.

We emphasize the importance of the mediator’s involvement (parents and professionals) in the educational process. Awareness and motivation are required to use the ET based on what is suggested in the support materials, adapting them to the adolescents’ reality and demands, who are also active participants in the process.

Despite the fundamental participation of the target audience and their collaborations in the first phase (diagnosis) of the research, the need to validate the ET developed with the adolescents, parents and professionals is recognized, constituting, therefore, a limitation of the present study. However, this process is in progress, and the results will be presented in a future publication.

It is expected that this study can inspire other professionals to develop educational technologies and their validation, contribute to the emancipation of people with disabilities and promote their rights, stimulate sex education and prevent sexual abuse, alert about the higher occurrence of this violence among vulnerable individuals, especially young women with intellectual disabilities, in addition to expanding the scientific knowledge and dissemination on the topic of sexuality.

Collaborations

KBG Nóbrega as responsible for the conception, planning, collection, analysis and writing of the manuscript. RB Belian and MWLC Marinus contributed to the study design and critical review of the manuscript. DT Gontijo supervised the research process, writing and review of the manuscript.

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