CONTENT VALIDATION OF A CARE-EDUCATIONAL TECHNOLOGY FOR WOMEN PSYCHOACTIVE CONSUMERS*

HIGHLIGHTS
1. Care-Educational Technology for women who consume psychoactive substances.
2. Technology has the potential to help care for women.
3. Technology that can help professionals produce more assertive interventions.

ABSTRACT
Objective: To build and validate the content of a Care-Educational Technology for women who consume psychoactive substances. Method: Methodological research conducted in the municipality of São Paulo, December 2022 to March 2023 by mapping the literature, drawing up the generating themes, choosing the base tool with dynamics of use, and validating the content in terms of aspects: reflection, relevance, understanding, and suitability in two rounds. Fifteen experts took part, with an agreement rate of 80%. Results: 48 letters were submitted for validation. In the first round, seven cards failed to reach the minimum index. At the end of the second round, 47 cards in all their categories had more agreement than the established level. Conclusion: The experts pointed out the relevance and pertinence of the topics and their potential to help professionals intervene more assertively in the face of the target audience’s needs.

KEYWORDS: Women; Psychotropic Drugs; Health Education; Biomedical Technology; Educational Technology.

HOW TO REFERENCE THIS ARTICLE:

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INTRODUCTION

Throughout history and even today, the consumption of psychoactive substances (PAS) occurs predominantly in men. However, with the greater inclusion of women in social spaces, the difference in global consumption rates between the sexes has decreased significantly.1

It is estimated that 46 million women globally have alcohol use disorders. Domestically, data from the 2019 National Health Program show that 17% of adult women interviewed consumed alcohol one or more times a week.2 They also have a higher prevalence in the consumption of any non-prescribed medication and, together, in the consumption of alcohol and at least one non-prescribed medication.3

In addition, worldwide research shows that there was no statistically significant difference between the sexes in the prevalence of addiction to any substance (except alcohol and tobacco).3 Recent data shows that alcohol abuse is only increasing among women, as are hospitalizations attributable to alcohol consumption.4

Although female users of PAS have particular implications, such as high levels of sexual violence, domestic violence, prostitution, child abuse, depression, anxiety, and post-traumatic stress disorder, differences resulting from social and cultural influences affect the form of consumption, with the result that services and interventions often continue without realizing the presence of women and their specific needs.5

On the other hand, health professionals have also failed to pay attention and put up barriers to starting and continuing treatment, reproducing prejudices, stigmas, and a lack of acceptance of gender demands.5 These aspects lead to a worldwide reality where, although one in three users of PAS are women, only one in six users in treatment are female.6

The needs of these women transcend the biological dimension and demand an understanding of the health-disease process from a gender perspective, which broadens the view to its psychological, social, and cultural aspects. For this reason, the care offered to them must be rethought to become truly comprehensive, welcoming, and effective.

The development of new forms of technology, be they material resources, structured knowledge, or interpersonal relationships, can provide more appropriate health care. Although the concept is still under development, Care-Educational Technologies’ (TEC) characteristics are creativity, which goes beyond the limits of instrumental practices, the union of scientific and philosophical aspects based on the praxis of health professionals and the centrality of social aspects.7

For a health action not to an end in itself but to be aware of what constitutes and justifies it, a process of acting-reflecting-acting is necessary, something that TECs based on praxis provide when they unite caring and educating to empower the individual in their care.7

Content validation is one of the essential steps in developing an RCT, assessing a topic’s representativeness and analyzing the absence of necessary elements.8 This study presents part of the process of producing a TEC to improve the care provided by health professionals to women who consume PAS.

As an expected result, the aim is for TEC to be a form of intervention that helps and empowers women on their path to transformation and self-empowerment. The aim was to build and validate the content of a Care-Educational Technology for women who consume psychoactive substances.
METHOD

Study design

The methodological study is based on three processes: construction, validation, and application. The first is based on literature or information acquired from the target audience. In this study, we worked with the first two phases, developed in four stages: 1st - mapping the literature; 2nd - drawing up the generating themes; 3rd - choosing the basic TEC tool and the dynamics of its use, and 4th - evaluating the content: 1st - scoping according to the JBI methodology, on 16 sources of information on the circumstances and contexts of psychoactive substance consumption by women (article submitted - under analysis); 2nd - elaboration of the generating themes, based on the analysis and categorization of the findings of the scoping; 3rd - formulation of the basic tool of the game and the dynamics of use based on usability heuristics; 4th - content validation with specialists in the field of gender, mental health and psychoactive substance use.

Population, Selection Criteria, and Sample

To determine the number of experts, we used the calculation developed by Lopes et al., which considers the confidence level, proportion of adequacy, and sampling error. To define the proportion of adequacy, the recommendation of at least 70% or 80% was considered. To further refine the validated content, we worked with an 80% proportion, 95% confidence level, and 25% sampling error, which in the calculation corresponds to the result of 10 experts.

The study's initial sample consisted of 28 experts. The search on the Lattes Platform took into account what is recommended in the literature of at least two of the following criteria: clinical and care experience with the target audience for at least three years; having published work in journals and events on the subject and on the construction and validation of educational technology in the subject area; specialist (lato and stricto sensu) in the subject; being a member of a Scientific Society in the subject area. The nominated experts had their Lattes checked and, when they met the criteria, received an invitation via e-mail.

Data collection

The validation was carried out from December 2022 to March 2023. Invitations, a consent form, and a link to the form were sent to the experts. As a criterion for selecting the basic tool (letters with affirmations), it was considered that this modality could provide discussion and reflection, individually and collectively, among women and facilitate the process of care-education and care-education.

The form contained a section for each statement and its corresponding justification in the instruction booklet. For each section, four evaluation categories were stipulated: 1-Provides reflection on the topic: to assess whether the discussion presented around the topic can generate reflection in the women taking part; 2-Relevant topic: to assess the importance of the topic about the reality of the women taking part; 3-Understandable information: to assess whether the way the information was presented was able to be understood by the participants; and 4-Appropriate sentence in the letter: to assess whether the affirmative sentence in each letter is appropriate to the reflective objective of each topic.

A Likert-type scale was adopted, which allowed the experts to delve deeper into
the topic (letter sentences with affirmatives) to give their opinion on the evaluation categories, guaranteeing graded degrees of opinion that made a difference in improving the sentences. It was proposed on five levels: 1-totally disagree; 2-disagree; 3-no opinion; 4-agree; 5-totally agree. So that the respondents didn’t feel pressured or forced about the negative or positive sides of the scale, a neutral midpoint, “no opinion” and the odd rating were kept. Fields have been added for comments and suggestions. The statement was considered adequate when items 4 or 5 were selected.

Data Analysis and Treatment

The agreement was calculated by adding the items marked “agree” or “totally agree” in each section and dividing by the total number of responses. With 80% agreement established, the minimum value for validation of each item was 0.8. The content that was not validated underwent analysis and improvement based on the experts' suggestions and went on to the next round.

About the steps taken: 1-mapping of the literature (phase 1 - March/2022, update - June/2023); 2-elaboration of the generating themes (2nd semester/2021); 3-choice of the basic TEC tool and dynamics of use (2022); and 4-validation of content (1st semester/2023).

Ethical aspects

The study was approved by the Research Ethics Committee of a Public University (opinion 5.056.053) and by the Research Ethics Committee of the Health Department of the municipality where it was carried out (opinion 5.138.204).

RESULTS

Of the initial sample (n=28), eight did not respond to the invitation, giving a response rate of 71%. Of those (n= 20) who accepted, 16 participated in round I, with only one loss in round II. In terms of characterization, they are all female: nurses (10), psychologists (four), and psychiatrists (one), with a maximum of post-doctorate (seven), doctorate (five), latus-sensu specialization (two), and master's (one) degrees. Concerning the time they worked, five worked for more than 20 years, five for more than ten years, and five for less than ten years, demonstrating a track record and consequent practical expertise with the study's target audience.

The sample is made up of specialists in chemical dependency (eleven), mental health (five), public health (two), sexuality (one), eating disorders (one), psychoanalysis (one), and neuropsychology (one), which gives a wide range of views and opinions in terms of clinical practice. The average time it took the experts to respond to the two rounds of forms was 18.2 days, within the timeframe stipulated in the invitation, a speed that demonstrates interest and commitment to the study.

Four stages of the methodological journey in the construction of TEC:
Stage 1 - Mapping the Literature

Based on the scoping review, the analysis showed that women who use PAS often have low education and income, unemployment, sex work, homelessness, high crime rates, risky sexual behavior, sexually transmitted infections; biomedical issues (cognitive deficit, malnutrition, physical degradation) reports of abuse (sexual, physical or emotional in adulthood and childhood); psychiatric disorders (depression, anxiety, post-traumatic stress disorder, eating disorders); feelings of guilt and shame; violent behavior; reports of abortion; and use in pregnancy, are single mothers and separated from their children.

Stage 2 - Drawing up the generating themes

With the findings of the scoping review in hand, we proceeded to construct the generating themes based on the social, cultural, economic, psychological, and biological contexts relating to the consumption of psychoactive substances by women.

Step 3 - Choosing the basic TEC tool and the dynamics of use

Considering how all the themes can be debated and no time limit is imposed on the discussions, prioritizing the heuristics of playability and usability throughout the creation process, cards were decided to be used as the basic tool. To achieve both reflection and education and information, the cards were formulated in two types: reflective (formulated with affirmative sentences, where the players can debate whether they agree or not) and educational (containing questions for the players to say how much they know about the subject and can receive useful information).

To help with the discussion of the cards, it was decided that each one should contain an answer that would serve as a reference for the game’s moderator. An instruction booklet was created with a section for justifications and comments on each sentence. Each reflective card was given a short text to support the game without requiring judgment on right or wrong answers, as these are the players’ experiences and perceptions. Because they deal with more complex topics, educational letters have been given longer texts that allow for correct guidance and solutions to doubts. It was decided that the answers in the notebook are not obligatory for the moderator and do not need to be read by the players. The texts were also formulated from stage 1. Initially, TEC was created with 48 cards (43 reflective and five educational).

There was agreement on most of the content of the letters. In seven (14.5%), there was less than 80% total agreement in the average of the four categories used (reflects the topic, relevant topic, understandable information, appropriate phrasing of the letter). In the individual analysis of each category, there was less than 80% agreement in some of the letters: 18 letters (37.5%) in the “appropriate letter phrase” category; seven letters (14.5%) in the “understandable information” category; two letters (4.1%) in the “reflects the topic” category and one letter (2%) in the “relevant topic” category (Table 1).

All the letters received suggestions from the experts, but only those with items with less than 80% agreement had to be modified. Among the most important are: 1- inclusion of same-sex relationships; 2- removal of terms such as “never” or “always” (leaving the discussion more open); 3- written data without the use of tables and graphs; 4- mentioning the possibility of a direct relationship between some facts; and, 5- justification of the epidemiological data. Letters with items over 80% received minor changes around word changes. Two letters that received less agreement were excluded. The letter “Pregnant and breastfeeding women can use alcohol or other drugs” was added to the material, considering the role of alcohol in harming the fetus and the risk during pregnancy.
Round II

Replies were received from 15 experts. In all 47 letters and all their categories, there was more than 80% agreement, with the total average being six letters (12.5%) below 90%, 24 letters (50%) between 90% and 100%, and 17 letters (35.4%) with 100% agreement (Table 1). There were no suggestions for adjustments, only notes such as “The most relevant topics were covered sufficiently, they are very important” and “That the game be a tool for use in health services and other spaces where women are cared for”.

Table 1 - Degree of agreement between round I (n=16) and round II (n=15). São Paulo, SP, Brazil, 2023

<table>
<thead>
<tr>
<th>Letter</th>
<th>I</th>
<th>II</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Women who use alcohol or other drugs are more at risk of acquiring STIs.</td>
<td>89.1%</td>
<td>96.6%</td>
</tr>
<tr>
<td>2. Women who use alcohol or other drugs have a higher risk of unwanted pregnancy.</td>
<td>90.6%</td>
<td>98.3%</td>
</tr>
<tr>
<td>3. Experiences of physical, psychological, and sexual violence in childhood and adolescence lead to mental suffering that lasts into adulthood.</td>
<td>89.1%</td>
<td>93.3%</td>
</tr>
<tr>
<td>4. Intimate/love partnerships cause much of the violence suffered by women.</td>
<td>89.1%</td>
<td>95%</td>
</tr>
<tr>
<td>5. The partner can have sex with their partner even if they don’t want to</td>
<td>87.5%</td>
<td>95%</td>
</tr>
<tr>
<td>6. Homeless women suffer more violence.</td>
<td>87.5%</td>
<td>91.6%</td>
</tr>
<tr>
<td>7. Women need a man to feel safe</td>
<td>81.3%</td>
<td>86.6%</td>
</tr>
<tr>
<td>8. Women only feel loved when they are in a loving relationship.</td>
<td>78.1%</td>
<td>86.6%</td>
</tr>
<tr>
<td>9. Men don’t want to look like women. For them, being a woman is a bad thing.</td>
<td>67.2%</td>
<td>86.6%</td>
</tr>
<tr>
<td>10. Women who have been victims of violence find it more difficult to get treatment for alcohol or other drug use.</td>
<td>85.9%</td>
<td>93.3%</td>
</tr>
<tr>
<td>11. The use of alcohol or other drugs can lead to fights and arguments between the couple, whether on the part of men or women.</td>
<td>89.1%</td>
<td>98.3%</td>
</tr>
<tr>
<td>12. Women can explore their sexuality, having the right to pleasure with or without a partner.</td>
<td>93.8%</td>
<td>95%</td>
</tr>
<tr>
<td>13. The majority of women who use alcohol or other drugs are single mothers (they raised their children without the father present).</td>
<td>85.9%</td>
<td>100%</td>
</tr>
<tr>
<td>14. Due to the lack of good experiences with their mothers, women often feel they are failing at motherhood.</td>
<td>82.8%</td>
<td>100%</td>
</tr>
<tr>
<td>15. Our mothers and grandmothers also experienced violence, suffering, and trauma.</td>
<td>81.3%</td>
<td>88.3%</td>
</tr>
<tr>
<td>16. The lack of help in caring for the home and children can lead to mental suffering for women.</td>
<td>81.3%</td>
<td>100%</td>
</tr>
<tr>
<td>17. Women who use alcohol or other drugs have the well-being of their children as their main motivator for treatment.</td>
<td>89.1%</td>
<td>93.3%</td>
</tr>
<tr>
<td>18. Women who use alcohol or other drugs are more likely to lose custody of their children.</td>
<td>95.3%</td>
<td>96.6%</td>
</tr>
<tr>
<td>19. Women are obliged to bear and raise children even if they don’t want to.</td>
<td>79.7%</td>
<td>88.3%</td>
</tr>
<tr>
<td>20. For some women, motherhood is a bad thing.</td>
<td>90.6%</td>
<td>96.6%</td>
</tr>
<tr>
<td>21. Women must take care of others but are hardly taken care of in return.</td>
<td>92.2%</td>
<td>93.3%</td>
</tr>
</tbody>
</table>
22. Women who use alcohol or other drugs have little support from friends and family in their treatment. 95.3% 96.6%
23. Alcohol/drugs can be introduced to women in childhood and adolescence by family and friends. 81.3% 100%
24. Treatment services for users of alcohol or other drugs are not usually suitable for women. 93.8% 100%
25. Many women who use alcohol or other drugs had fathers who were also users. 81.3% 100%
26. Women have less financial income and fewer jobs than men. 87.5% 100%
27. Women who use alcohol or other drugs often use sex to get money and substances. 87.5% 98.3%
28. Black women have lower financial income and employment than white women and black men. 85.9% 100%
29. Black women are stronger and feel less pain than white women. 81.3% 93.3%
30. Poor women are exposed to more violence and suffering. 89.1% 98.3%
31. Women have more depressive and anxiety symptoms than men. 92.2% 100%
32. The suffering in women’s lives leads to a relapse into the use of alcohol or other drugs. 89.1% 91.6%
33. Women find it hard to like their bodies. 79.7% 93.3%
34. Women who have suffered violence have more mental suffering. 89.1% 91.6%
35. Women who use alcohol or other drugs have more mental suffering than women who don’t. 76.6% 91.6%
36. Women feel guilty for not being the woman society expects them to be. 89.1% 91.6%
37. Women who use alcohol or other drugs are unable to look after their children. 82.8% 86.6%
38. Women who use alcohol or other drugs are judged more by society. 92.2% 100%
39. Women who use alcohol or other drugs often feel judged and neglected by health services in general. 89.1% 100%
40. Women support other women in their treatment for alcohol or other drug use. 81.3% 93.3%
41. Love relationships influence the use of alcohol or other drugs. 87.5% 100%
42. Pregnant and breastfeeding women can use alcohol or other drugs. - 95%
43. What is the Maria da Penha Law? 96.9% 100%
44. What is a Sorority? 92.2% 100%
45. What is family planning? 98.4% 100%
46. What are STIs? 96.9% 100%
47. What is Racism? 90.6% 100%

Source: The authors (2023).

**DISCUSSION**

Using a five-level, two-dimensional measurement scale allowed for a wider range of agreement or disagreement with each item. By adopting a value of 80% for the minimum
level of agreement, the requirements for the constitution of a TEC capable of showing the panorama of “being a woman who consumes PAS” were increased, both for the professionals and the women themselves. The percentage chosen met the parameter most used by the literature reference for Studies on Care and Educational Technologies adopted in this study\(^{10}\).

Based on the choice of experts on the subject of gender and PAS abuse, a multidisciplinary profile was created. It is considered that the perspective of different areas of knowledge and the search for agreement between areas has favored the provision of content that meets the needs of multi-professional teams in conducting care, especially in mental health, which predominantly works from the intersection of different fields of knowledge.

The phenomenon of addiction and women is a complex subject and, from this perspective, requires the interweaving of specialists with different backgrounds and degrees since the subject encompasses variables about how they deal with PAS, in motivational terms for: starting and maintaining consumption, seeking treatment; the process of becoming ill and the consequences (physical and psychological); experiences of suffering (typifications of violence); sociocultural (stigmas, stereotypes and devaluation); legal (power to gestate, motherhood and decisions about their bodies); treatment needs; vulnerabilities (social and economic); worldview (domestic and public); fragility in family relationships and the health team.

The stages of reviewing the literature and forming and generating themes effectively presented the great density and complexity of the subject, considering that most of the suggestions revolved around writing only, with only two letters being asked to be excluded and positive comments on the selection of themes.

It is noteworthy that, despite being questioned on the collection form, there was no criticism from the experts about the game’s dynamics. As for the content, it’s worth adding that one of the main criticisms was the lack of sexual diversity in the letters and response texts, which placed heterosexuality as the norm and made other sexualities invisible, which was promptly taken into account. The literature points out that, when dealing with people, sexual diversity must be taken into account since compulsory heterosexuality not only covers the sexual field but also the political, social, and mobilizing field of collective change\(^{19}\). Normalizing it means that women are inevitably restricted to male control.

As a result, many of the letters created are in line with the theme of sexual diversity because, in general, controls over women appear several times, such as in the expressions of denial of female sexual desire, sexual violence, use of the female body as a bargaining chip, neonatal control, labor exploitation, and low pay\(^{19}\). Therefore, assuming that women are always heterosexual leads to an obstacle not only in the feminist field but also in the potential for reflection on care. Suggestions for changing words, removing tables, and justifying epidemiological data were based on the premise that good interpretation of the cards and good learning of the response texts would improve the product’s usability, one of the criteria considered in creating games\(^{20}\).

When analyzing the experts’ suggestions and comments, using academic language in the texts is an important point that deserves attention in TEC construction. Based on the criticism of how the content of the letters is expressed, some of which use more technical language, the aim is to ensure that they are appropriate during the semantic validation with the target audience. For learning to be meaningful, the knowledge passed on must mean something to the learner, with the message being understood. Based on meanings, transformation and knowledge of the world takes place\(^{21}\).

Despite the quantity and diversity of content to turn into letters, the topic of PAS use during pregnancy was not presented in the first round of evaluation. However, it came up frequently in the suggestions field on the form. It was promptly incorporated since PAS
(licit and illicit) can affect the development of the fetus, cause miscarriage, and impair breastfeeding\textsuperscript{22}, and received high levels of agreement. Even with the harmful effects, women face difficulties in maintaining abstinence during these phases of their lives, as well as decreasing their search for treatment due to stigma from health professionals and other women\textsuperscript{22-23}.

Finally, it should be noted that a considerable part of the content of the letters is more subjective. Although the biological aspects are more prominent, there are a variety of theories and approaches from philosophy, social sciences, and psychology, among others, which led the experts to have different perceptions on the same topic and influenced the total agreement of the contents evaluated\textsuperscript{24}.

One limitation of this study is that the content was created solely based on the literature review, i.e., without the participation of the target audience.

CONCLUSION

The construction and validation of the TEC content was considered valid and suitable for the next stage of the study, the prototyping of the game. The experts pointed out that the topics are relevant and have the potential and sensitivity to help professionals intervene more assertively in the face of women’s needs.

This study is important as it will support technology for caring for women who consume psychoactive substances to avoid health actions carried out without awareness and questioning of what constitutes them, considering psychological, social, cultural, and biological aspects.

It is hoped that the content that will underpin the TEC will provide women with the possibility of receiving more targeted care as an alternative to standard treatment, which generally tends not to address marginalized issues due to abstinence/reduction in consumption, as well as provoking reflection and the development of critical thinking, highlighting them as protagonists of their existential and social process.

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