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Prevention of suicidal behavior in the institutionalized elderly population: development and validation of a simulation script

Prevenção do comportamento suicida na população idosa institucionalizada: construção e validação de roteiro para simulação

Prevención del comportamiento suicida en la población anciana institucionalizada: construcción y validación de un script para la enseñanza simulada

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ABSTRACT

Objective: To develop and validate the content of a simulation-based teaching script for the prevention of suicidal behavior in institutionalized elderly individuals, aimed at healthcare professionals and students.

Method: Methodological study developed in two stages: the construction of a structured simulation script, supported by best practices in simulation and evidence on suicide prevention among the elderly; and validation, conducted virtually by specialists in 2023, using a sociodemographic questionnaire and assessment of item adequacy within the script. Reliability analysis was carried out using the content validity index and Gwet´s First-order Agreement Coefficient.

Results: The content contributes to critical reflection, decision-making, and the development of a care plan for suicide prevention among institutionalized elderly individuals. Twelve

Brazilian specialists, primarily from the Southeast, with doctoral degrees and nursing backgrounds, participated in the validation. All items in the script achieved high agreement (> 0.80) and reliability, ranging from satisfactory to good (0.743) in the general group and excellent (0.969) in the grouped analysis.
Conclusion: The script demonstrated high agreement and reliability for training healthcare professionals and students. Its integration into teaching simulations helps improve mental health knowledge, fostering preventive actions targeted at suicide among institutionalized elderly individuals.
Descriptors: Suicide prevention; Health of the elderly; Health of institutionalized elderly; High fidelity simulation training; Patient simulation; Nursing.

RESUMO

Objetivo: Construir e validar o conteúdo de um roteiro de ensino baseado em simulação para a prevenção do comportamento suicida em idosos institucionalizados, destinado a profissionais e estudantes da saúde.
Método: Estudo metodológico desenvolvido em duas etapas: construção de um roteiro estruturado para simulação, apoiado em boas práticas de simulação e evidências sobre prevenção do comportamento suicida em idosos, e validação, realizada virtualmente por especialistas em 2023, utilizando questionário sociodemográfico e avaliação de adequação dos itens do roteiro. Na análise, foram empregados: índice de validade de conteúdo e coeficiente de concordância de primeira ordem de Gwet.
Resultados: O conteúdo favorece a reflexão crítica, tomada de decisão e construção de um plano de cuidados para prevenção do comportamento suicida em idosos institucionalizados. Participaram da validação 12 especialistas brasileiros, principalmente da Região Sudeste, com doutorado e formação em Enfermagem. Todos os itens do roteiro atingiram alta concordância (> 0,80) e confiabilidade satisfatória a boa (0,743) (grupo geral) e excelente (0,969) (agrupado).
Conclusão: O roteiro apresentou alta concordância e confiabilidade para a formação de profissionais e estudantes da saúde. Sua integração ao ensino simulado auxilia o aprimoramento do conhecimento em saúde mental, favorecendo ações preventivas voltadas ao suicídio em idosos institucionalizados.
Descritores: Prevenção ao suicídio; Saúde do idoso; Saúde do idoso institucionalizado; Treinamento com simulação de alta fidelidade; Simulação de paciente; Enfermagem.

RESUMEN

Objetivo: Construir y validar el contenido de un guion de enseñanza basado en simulación para la prevención del comportamiento suicida en personas mayores institucionalizadas, destinado a profesionales y estudiantes de la salud.
Método: Estudio metodológico desarrollado en dos etapas: construcción de un guion estructurado para simulación, basado en buenas prácticas de simulación y evidencias sobre la prevención del comportamiento suicida en personas mayores, y validación, realizada virtualmente por especialistas en 2023, utilizando un cuestionario sociodemográfico y evaluación de la adecuación de los ítems del guion. El análisis de confiabilidad se realizó utilizando el índice de validez de contenido y el coeficiente de concordancia de primer orden de Gwet.
Resultados: El contenido favorece la reflexión crítica, la toma de decisiones y la construcción de un plan de cuidados para la prevención del comportamiento suicida en personas mayores institucionalizadas. Participaron en la validación 12 especialistas brasileños, principalmente de

la región Sudeste, con doctorado y formación en Enfermería. Todos los ítems del guion alcanzaron una alta concordancia (> 0,80) y una confiabilidad de satisfactoria a buena (0.743) (grupo general) y excelente (0.969) (agrupado).
Conclusión: El guion presentó alta concordancia y confiabilidad para la formación de profesionales y estudiantes de la salud. Su integración en la enseñanza simulada contribuye al perfeccionamiento del conocimiento en salud mental, favoreciendo acciones preventivas dirigidas al suicidio en personas mayores institucionalizadas.
Descriptores: Prevención del suicidio; Salud del anciano; Salud del anciano institucionalizado; Enseñanza mediante simulación de alta fidelidad; Simulación de paciente; Enfermería.

INTRODUCTION

In Brazil, since the National Policy for the Elderly was established by Federal Law No. 8.842/1994, people with a chronological age equal to or greater than 60 years are considered elderly[1]. Worldwide, there has been an increase in life expectancy and in the elderly population. Estimates indicate that, in 2030, one in every six people will be 60 or older; in 2050, this number will reach one in five[2]. The growth of the elderly population in the next years is a reality. Nonetheless, the care, assistance, and support provided to this population have not been growing at the same rate[3].

Aging is a natural process, marked by significant physical and social changes[4] that limit one's possibilities by reducing their social roles and values, facilitating the emergence of mental health risk factors[5]. As it happens in the different stages of development, this population has its own particularities related to suicidal behavior, which must be considered in the planning of care by health workers and different social segments[6].

Suicidal behavior is a continuum that goes from thoughts, to attempts, to death by suicide. Regardless of their lethality, these behaviors aim to provoke one's own death. It is a global, multifactorial phenomenon, and a serious public health issue[7-8]. The relationship between aging and suicidal behavior is justified in numbers. In Brazil, epidemiological data shows an increasing number of elders above 70 years old who attempted or died by suicide, a total of 8.9 deaths per 100,00 people[8-9]. These results are higher than the number of deaths in the general population, which is only 5.5 deaths per 100,000 people[8-9].

Data also shows that one in four suicide attempts among the elderly result in death, a higher lethality rate than in the general population[6]. This phenomenon has multifactorial characteristics that affect the lives of the elderly, such as the presence of previous mental disorders; painful, incurable, and disabling physical diseases; diminution or loss of autonomy; trouble adapting to change and stressful situations; multiple, accumulated losses; unsatisfactory and contentious family relationships and support networks; changing social roles; solitude; social isolation; feelings of not belonging; financial issues; and psychoactive substance

abuse[3,6].

The institutionalization process is has also been pointed out in literature as a risk factor for suicidal behavior[10]. Long Term Care Facilities (LTCF), quite common in the care for the elderly population, are residential organizations that provide housing to groups of people aged 60 years old or older, whether or not they have family support, and ensuring their freedom, dignity, and citizenship[11]. After institutionalization, the elderly must adapt to a new routine. They must share available space with people they do not know, be far from their support networks, in addition to other factors that help increase their emotional vulnerability[12].

The results of a review about suicidal behavior in elders from LTCFs found scarce evidence, which encourages investigating the risk of suicide in this public[13]. This shortcoming shows the challenges in achieving a better understanding of the field, be it by recognizing social determinants of health that influence aging and public policies for this population, or due to barriers associated to the care to the elder population, especially from an integral point of view, one that involves the development and improvement of technical, theoretical, and socio-emotional skills from health professionals[9,14].

The use of innovative and interactive educational resources allows the student to assume the main role and be active in their educational process, developing theoretical-practical and emotional abilities[15]. Simulation based teaching (SBE) has met positive results in the theoretical-practical reality of care, starting from a safe and ethical learning environment[16] and showing itself to be an important tool to train professionals for suicide prevention[17-18]. It can help in the development of competences, such as effective communication with patients, early identification and addressing of risk factors common the elderly, and the appropriate transposition of knowledge in situations of crisis[17-18].

Studies have shown that participants of educational activities improved their self-efficacy, constructed knowledge, and showed satisfaction with training sessions that used SBE, in addition to perceiving better learning and lower anxiety levels throughout this teaching strategy. Research and education about suicide prevention in the elderly population must advance. This requires investments for the implementation of new care practices and the improvement of processes that already exist, by training health workers to understand suicidal behavior in the elderly.

The development and use of innovative strategies to train health workers may improve health and education in an ethical, integral, and responsible form with suicidal behavior. Considering the potential of this teaching strategy, the hypothesis of the present study is that the contents of an SBE script about preventing suicidal behavior in the elderly will be

considered adequate or regular by at least 80% of the specialists consulted. Therefore, this research aimed to elaborate and validate the content of an SBE script for the prevention of suicidal behavior in institutionalized elderly, to be used in the training of health workers and students.

METHOD

Design of the study

This is a methodological study, developed in two stages. The first step consisted in the development of a structured script for a simulation, based on good practices of simulation and evidence about prevention against suicidal behavior in the elderly; the second involved validating the material elaborated to train professionals and students in the field of health.

The results of this study were described according with the directives proposed by the methodological study network Enhancing the QUAlity and Transparency Of health Research (EQUATOR). To do so, we used the MethodologIcal STudy reportIng Checklist (MISTIC)[19]. Although the MISTIC is still in the construction stage, the study that developed the protocol already provides guidance to standardize and increase the rigor of the methods used, allowing us to apply its structure to a methodological study[19].

This study was developed as part of a scientific project, titled "Training in health to prevent suicide in the elderly population: construction and validation of a high-fidelity simulated scenario". It received funds from the Program for Scientific Initiation Scholarships (PIBIC) of the National Council for Scientific and Technological Development (CNPq) (Project Code: 2022-966).

Script elaboration

The elaboration of the contents of the script was carried out from November 2022 to February 2023, using a model built and validated earlier by researchers associated with the research group Laboratory for the Study and Research in Suicide Prevention and Postvention (LEPS)[15-16], from the nursing school of Ribeirão Preto, from the University of São Paulo (Brazil). Five researchers took part in the elaboration stage. One of them was a nursing graduation student; one had complete post-doctoral studies in Sciences; and one was a post-doctoral student in Sciences; one was a doctorate student in Sciences; and one was a Professor from the Psychiatric Nursing Department of the same institution.

This stage was based on scientific references and guidance about good practices in clinical simulation, in addition to other studies to elaborate and validate SBE scripts [15,17-18].

Every fifteen days, the research team held a meeting on the Google Meet platform, carrying out internal assessments and improving the product, until all concerns were addressed. Only then was the script sent to specialists.

The SBE is organized to meet pre-established objectives, being divided into three parts: prebriefing, briefing, and debriefing[16]. According to this model, certain predefined criteria must be met, such as conducting consultations with specialists regarding the content to be developed; determining goals that are possible to reach, according to the previous knowledge of the target population and the time the simulation will take to unfold; developing a setting that values reliability in order to promote realistic experiences; planning strategies that facilitate work and value the active participation of the target audience; prebriefing with quality materials, to train participants; briefing; simulation setting; debriefing; and articulated and well-planned feedback[16].

To elaborate the contents of the script, a non-systematic survey of current scientific literature was conducted by the research team using national and international guidelines and considering aspects related to the specificities of suicidal behavior and its prevention in the elderly population. Its construction was based on current scientific literature about the prevention of suicidal behavior in the elderly[3-5,9-10,12-13]. The first version of the structured script was reviewed internally by the research group, before it was sent to the specialists selected.

The script was created considering the title of the simulated scenario; the learning goal the participants needed to achieve; the target audience; the number of people needed to perform the simulation; the physical and material resources needed to ensure reliability; the complementary materials for the participants and observers to study beforehand; and the suggested length. Other relevant elements include a prebriefing providing information on ethical and emotional contracts during the simulation; a briefing in which basic guidance about the simulated setting are presented by the facilitator; instructions that prepare the simulated patient to act in the setting; actions expected from the participants; debriefing; and complementary references.

The pre-final version of the script, sent for specialist validation, was named "Prevention of suicidal behavior in institutionalized elderly". Its goal was developing a plan of care activities targeted at preventing suicide and promoting mental health, according to the needs presented. The target audience of the simulated script included professionals and graduation students from the field of health, as long as they had attended disciplines related to mental health and/or psychiatry.

Face validation and script contents

A validation is a method to evaluate whether the material produced corresponds to its objective, including a thorough analysis of all items in the script by specialists in the topics involved[20]. A non-probabilistic sample was defined according to the expertise related to suicidal behavior and/or SBE.

Specialists were selected using the Lattes Platform, according to priorities previously determined by the research team. To be selected, they had to fit at least one of the following criteria: experience as a professor in the field of interest; experience as advisors in academic works about the topic; being an MS or PhD with production on the topic; authorship of scientific articles on the topic in journals classified by the Coordination for the Improvement of Higher Education Personnel (CAPES); having been invited to a national or international scientific event on the topic.

66 specialists were invited; 44 of them were excluded, as they did not respond within the time frame selected for data collection. 22 forms were filled in by specialists. Seven were excluded as they were incomplete, and three were excluded because the same person had answered more than once. In case of duplicates, the first form received was kept. The final sample included 12 specialists.

Data collection: Validation stage

Validation took place from March to May 2023. An invitation was sent via e-mail, with a link to access the virtual tool Research Electronic Data Capture (REDCap), which contained the consent form, a survey to characterize the evaluator (age, educational level, geographic location, area, and time working in the profession), and the structured script.

To evaluate the script, each item was analyzed and classified as "adequate", "regular", or "inadequate". There was also a field where specialists could add suggestions. The invitation indicated that the evaluators had up to 15 days to give feedback, validating the materials. Specialists were sent a reminder before the deadline was reached, and when feedback was not given within the time frame selected, they were excluded from the study.

Data analysis

Data found was organized in a spreadsheet using Microsoft Excel version 16.57 and later processed and analyzed using the Statistical Software for Data Science (STATA). Characterization data was analyzed using simple descriptive statistics. Face validation included

an analysis of conceptual and semantic elements of the items in the script, which were adjusted according to the suggestions from the specialists.

Items whose content validity index (CVI)[21] was 0.8 (80%) or above were considered to be satisfactory. To calculate the CVI, we added the responses of specialists that were considered "adequate" and "regular", according to recent studies about the creation of scripts for SBE, which also used a three-point Likert scale for content validation[15,17-18].

Gwet's first-order agreement coefficient (AC1) was used to analyze the reliability of the agreement between answers in specialist evaluations[22]. Regarding the AC1 analysis, the results varied from 0 to 1, where <0.40 indicated poor agreement reliability; 0.41 to 0.75, satisfactory reliability; and 0.75 to 1.00, excellent reliability[23].

Ethical aspects

This study was approved by the Research Ethics Committee (CEP) of the nursing school of Ribeirão Preto, in the Universidade de São Paluo (EERP/USP), under opinion no. 5.472.836/2022 and CAAE no. 58808422.0.0000.5393. It respected all precepts from Resolution No. 466/2012 of the National Health Council (CNS), as well as the guidelines from Circular Letter No. 2/2021, from the National Research Ethics Commission (Conep).

RESULTS

Elaboration of a structured script for simulation-based teaching

The script was built for health workers and students who have attended disciplines on mental health. Its goal was planning, together with institutionalized elders, actions of care to prevent suicide and promote mental health. The materials used were related to risk factors to which elders are exposed, and to the experience of living in a LTCF, including distancing from one's support network, loss of autonomy, prejudiced mobility, hopelessness, multiple losses throughout one's life, and others[10,13].

Detailed orientation was given for participants to prepare a simulated patient, a 78-year-old man who had lived in an LTCF for two years. The person simulating the patient was given instructions to present clues about topics that should be addressed during simulation. These included: impaired mobility; feelings of uselessness and low self-esteem; non-adherence to therapeutic activities available at the LTCF; loss of autonomy; isolation, loneliness, and multiple losses; hopelessness, thoughts of death, and lack of meaning; openness and willingness to learn something new. All of these accompanied lines that exemplified how the one doing the simulation could express their feelings.

An educational material was developed for the theoretical study of SBE participants, discussing suicidal behavior in the elderly and a care plan for its prevention. Later, an educational folder was elaborated, called "Suicide prevention in the elderly population: general tips for mental health promotion", to be distributed in health services. The folder was developed in order to disseminate information about the topic. It was based on scientific data and using a language that was accessible and close to its target audience. The educational materials created can be accessed for free through the hyperlink provided in the “Supplementary Material” section.

The actions expected by the participants were defined and developed by the research team, so the objective proposed in the script could be reached, and a plan of care actions could be established by the participants. Aspects considered included the life history of the elder and their participation in their own health care, so factors protective to suicide behavior were addressed. Potential answers (yes, regular, and no) are not focused on evaluating how well the participants learned. Their goal is to orient the facilitators during the debriefing. To do so, a model known as "The Diamond[24] was used, as it promotes systematized discussions and reflections about the SBE experience.

The model is divided into three main stages: descriptive, analytical, and application. In the first stage, different reflections and views made possible by the experience with the simulation were carried out, with facilitators emphasizing non-judgments about the actions of participants. The second stage aims to emphasize non-technical skills, such as feelings and emotions, that are used by participants during the experience, in addition to aspects considered to be positive for the provision of health care. The last stage seeks to enable a discussion about how participants could replicate the knowledge they acquired with the SBE in their work environment.

Considering the relevance of the topic, we also made attempts of scientific popularization using the social networks (Instagram) of the research group (@ceps_eerp_usp and @inspiracaoleps). Scientific popularization, using a clear and accessible language to the community, favors democratization of access to scientific knowledge and allows using the information uncovered in social daily life. You can access the scientific popularization initiatives using the link (https://www.instagram.com/ceps_eerp_usp?igsh=dHVxZWFkanhreHI0*).*

The final version of the SBE script is available in full and can be used freely for the formation and professional training of professionals and students in the field of health, in order to prevent suicidal behavior in institutionalized elderly people (Table 1).

Table 1 – Simulation-based teaching script. Ribeirão Preto, São Paulo, Brazil, 2023

Title of the scenario	
Prevention of suicidal behavior in institutionalized elderly	
Authors	
Maria Isabella Alves Paterna, Camila Côrrea Matias Pereira, Aline Conceição Silva, Laysa Fernanda Silva Pedrollo e Kelly Graziani Giacchero Vedana. Contact: mahpaterna@usp.br.	
General objective of the scenario *(to be achieved by participants)*	
Planning, together with institutionalized elders, actions of care to prevent suicide and promote mental health, according to the needs they present.	
Target audience of the scenario *(participants)*	
Health professionals and undergraduate students (who have attended courses related to mental health/psychiatry).	
Number of people needed to enact the scenario	
1) A simulation facilitator (person responsible for conducting the simulation) - professor or professional with expertise on suicidal behavior and high-fidelity simulations; 2) Two participants (target audience), who will take part in the simulated activity; 3) One simulated patient (who will simulate the person receiving care in the scenario); 4) Observers (other people, who exceed the expected number of participants for the scenario).	
Physical and material resources *(basic items necessary to carry out the simulation)*	
Teaching lab or classroom simulating the environment of a reception/consultation room of a long-term care facility for elders (LTCF).	One table, three chairs, office supplies (pens, papers - can be adapted according to the context of each region)
Previous study for the participants and observers of the simulation	
The following materials will be made available to the participants by the facilitators, so they can read/visualize them: ● PATERNA, M.I.A; PEREIRA, C. C. M.; SILVA, A.C; PEDROLLO, L. F. S.; VEDANA, K.G.G. **Comportamento suicida na população idosa: a importância do estabelecimento de um plano de cuidados para a sua prevenção.** Posted by a Especialist, 2023. Available from: https://drive.google.com/file/d/1tUhDipUPN9IXTkvrELgqek6uU9I6nmCf/view?usp=sharing ● PEREIRA, C. C. M.; ARAÚJO, L. M. C.; MENDONÇA, L. M. M.; PATERNA, M. I. A.; RODRIGUES, S. B.; VOLPE, V. A. **Estratégias de prevenção universal do comportamento suicida e promoção da saúde mental (capítulo 3)**. In: MARTIN, I.S.; SILVA, A.C; PEDROLLO, L. F. S.; LEOCÁDIO, M.A.; VEDANA, K.G.G. (Org.). Prevenção do risco de suicídio: um guia para profissionais da saúde. 1ed. Ponta Grossa: Atena, 2022, v. 1, p. 37-55. Available from: https://www.livrosabertos.abcd.usp.br/portaldelivrosUSP/catalog/book/1460	
Length *(estimated duration of each stage in the scenario)*	
1. Prebriefing (15 minutes); 2. Simulation (20 minutes); 3. Debriefing (40 minutes).	
Prebriefing (information about contracts and conducting the simulation)	
1. Present the environment of the reception room of LTCF for the participants before the activity starts;	

2. Discuss contracts related to emotional safety with participants: secrecy, anonymity, respect, and the importance of participating in the discussion after the simulation.

Briefing (presentation of the basic guidelines of the simulated case by the facilitator – they can be read out and no information can be omitted)

This will be a simulation with a simulated patient.

You are health workers from a Family Health Strategy (FHS).

Recently, you were asked to visit an LTCF called "Grandpa's Corner", in the area of the FHS.

The LTCF asked a home visit to Humberto, a 78-year-old male resident, with impaired movements, who has lived in the LTCF for two years.

He is isolated, introspective, and does not adhere to the activities promoted by the LTCF. He is also hopeless, sad, expresses thoughts of death, and does not see meaning in life. Humberto complains that he is becoming a burden to his son and regrets not receiving visitors often.

You will have approximately 20 minutes to perform an initial assessment of Mr. Huberto and carry out any needed actions. You must consider his demands and plan his care together with him. including actions to prevent suicide and promote mental health, as there will be no time enough to implement all necessary care.

No one who is external to the activity will intervene in the simulation lab. The simulation coordinators will finish the simulation when at least one person from the health team takes their leave from the user, or the maximum time is reached (20 minutes).

Question for participants and observers: Do you have any doubts about these orientations?

Instructions for the simulated patient *(preparing them to act; this should be done in the days before the simulation)*

You will play Humberto, a 78-year-old man.

Clues that must be demonstrated:

1-Impaired mobility, feelings of uselessness, and reduced self-esteem: Since his fall, one year ago, he needs a walking frame to walk. He can slowly perform daily activities (body hygiene, dressing up, and rising from bed). Therefore, these activities have been performed by LTCF workers. He feels worthless because he does not have the physical skills he used to have.

"Since I fell, it seems I can't do anything by myself, it's difficult and frightening to do simple stuff, such as bathing and getting up from bed. I used to be important, I worked a lot. Now I'm just a lot of work."

2- Non-adherence to therapeutic activities in the LTCF: He did not take part in any promotion and care activities for mental health available in the LTCF (individual and group care and leisure activities promoted by an interdisciplinary team).

"I heard about the things they provide here, but I didn't go there to see it when I got in and they don't even invite me to them anymore."

3- Loss of autonomy after getting into the LTCF: Misses his life before entering the LTCF and would like to be heard more and participate in the decisions (about his care, for example).

"I wish I could choose more. There are so many rules, a time for everything. I can't even choose the clothes I wear. They treat me like a child."

4- Isolation, loneliness, and multiple losses (grieving): He entered the LTCF after becoming a widower. He has a son, Carlos, who is married and lives in a nearby town. His wife, Laura, died from breast cancer two years ago, after a 50-year marriage. Humberto reports feeling sad and alone. He has been suffering with the realization that many people important to him have died in recent years.

"I feel that so many people I lived with are dying and I don't talk to anyone about that." "Without Laura, everything lost its color and meaning."

5- Hopelessness, thoughts of death, and lack of meaning. Suicidal ideation (currently and in previous occasions): He has no suicide plans, reports feeling bored and that life has no

meaning. Has thoughts of death and feels that *"life has no meaning for me anymore. After retiring, I feel that days are all the same and take too long to pass"*. Most of the time, he has no positive expectations regarding the future.

He reports having "*the diseases old age brings with it"*, and that "*it's about time God took me away". "If I died soon, it would be better, so no one would have to worry about me."*

6- Openness and willingness to learn something new:

Reports wanting to learn new things such as "*using the cellphone"* that he got from his son, to read, watch videos and talk to his son in video calls, but "*sometimes I think it's too late to learn new things"*.

Note: In order to give clues according to what the simulated setting is expected to, the simulated patient must know and understand the actions expected from the participants (in the item below) before playing his role.

Actions expected from the participants of the scenario: Items to be considered in the evaluation of the performance of the participants of the scenario, according to the objective(s) of the simulation. For each item below, check whether the action carried out was performed adequately or not. The possible answers are YES, PARTIALLY, and NO.

Evaluated items	Evaluation
Establish an empathetic and therapeutic relationship (communication and listening) with the patient, allowing them to express their feelings comfortably, safely, and with no judgment.	Yes ( ) Partially ( ) No ( )
Embrace, with no judgment, the feelings expressed by the patient (isolation, uselessness, and feeling worthless).	Yes ( ) Partially ( ) No ( )
Question the patient carefully about their suicidal ideation, his plans, and his access to lethal materials.	Yes ( ) Partially ( ) No ( )
Encourage the elder to keep contact with their social network (son, caregivers, and LTCF colleagues), and avoid isolation.	Yes ( ) Partially ( ) No ( )
Encourage the elder to express their needs and how they want to be supported.	Yes ( ) Partially ( ) No ( )
Help the patient discover how he can participate in the activities and choices related to self-care.	Yes ( ) Partially ( ) No ( )
Encourage the patient to get to know the therapeutic activities promoted by the LTCF.	Yes ( ) Partially ( ) No ( )
Reiterate the elder's flexibility and openness to new experiences and learning.	Yes ( ) Partially ( ) No ( )

Debriefing **based on the model *"The Diamond"*[24]:**

Stage developed after the setting, in three consecutive stages (described below).

At this point, all members (participants and observers) will be invited to reflect and talk about the simulation and the experiences, knowledge, feelings, and learning involved in the simulated practice, highlighting aspects listed and evaluated in the items actions expected from the participants of the setting".

Descriptive stage (call attention to what took place in the case, without judging the performance of participants during the simulation):

- What happened during the first assessment of Mr. Humberto? (Question for participants and observers.)

Analytical stage (call attention to non-technical skills involved in the simulation that were important for the participants):

- How did you feel during the first assessment of Mr. Humberto? Discuss. (Question for participants and observers.)
- How did they conduct the first assessment of Mr. Humberto? (Question for observers)
- How do you evaluate your performance in the group work during the first assessment of Mr. Humberto? (Question for the participants of the scenario.)
- Which positive actions were carried out in the initial assessment of Mr. Humberto? (Question for participants and observers.)

Application stage (call attention to how the participants may be able to apply the knowledge acquired in their clinical practice):

- What would you do differently during your first assessment of a patient with suicidal behavior in the future? (Question for the participants of the scenario.)
- What can you apprehend from your experience in the simulation about initial assessments to elders with suicidal behavior, to use in your professional practice? (Question for participants and observers.)

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Source: The authors, 2023.

Face validation of the contents of the script

Twelve specialists participated in the validation of the script for the SBE, with a mean age of 49.45±12.78 years (minimum = 34; Maximum = 65), nine were from the Southeast (75%), two from the Midwest (16.7%), and one from the Northeast (8.3%). Eight specialists had an academic background in nursing (66.7%), two in medicine (16.7%), one in psychology, and one in biomedicine (8.3%).

Nine specialists were PhDs (75%) and three had concluded post-doctoral studies (25%). Additionally, 11 specialists were professors (91.7%), 7 worked with scientific research (58.3%), and 4 in health care (33.3%). Nine participants were experts in the topic of suicidal ideation (75%), while eight were experts in SBE (66.7%). The median work experience of the specialists was 18 years (11.5-37.7), varying from a minimum of 5 to a maximum of 42 years, respectively.

The agreement about the script was higher than the level established (CVI>0.80) in all items (Table 1), meaning that more than 80% of specialists gave it a positive evaluation. Most items were evaluated as adequate or regular by all participants, with a reliability varying from good to satisfactory (AC1 = 0.743; EP AC1 = 0.041; internal reliability = 0.657-0.828; p-value ≤ 0.001) in the general group (specialists who answered all available options - adequate, regular, and inadequate). In the grouped group (those who answered each item with only adequate or regular), the agreement was found to be excellent (AC1 = 0.969; EP AC1 = 0.015; internal reliability = 0.938-1.000; p-value ≤ 0.001).

Table 1 - Results of the agreement analysis and content validity index of items in the script about suicidal behavior prevention in institutionalized elderly people, during the validation stage (n=12) (Ribeirão Preto, São Paulo, Brazil, 2023)

Script items	Agreement			CVI*
	Adequate n (%)	Regular n (%)	Inadequate n (%)	Total
Title	10 (83.3)	2 (16.7)	-	1.000
General objective	9 (75.0)	2 (16.7)	1 (8.3)	0.917
Target audience	11 (91.7)	1 (8.3)	-	1.000
Number of people necessary	11 (91.7)	1 (8.3)	-	1.000
Material resources	11 (91.7)	1 (8.3)	-	1.000
Materials for previous study	8 (66.7)	4 (33.3)	-	1.000
Duration of the simulated scenario	11(91.7)	1 (8.3)	-	0.917
Prebriefing	12 (100)	-	-	1.000
Briefing	10 (83.4)	1 (8.3)	1 (8.3)	0.917
Instruction to the simulated patient	11 (91.7)	1 (8.3)	-	1.000
Actions expected			-	
1 - Establishing a therapeutic relationship	11 (91.7)	1 (8.3)	-	1.000
2 - Acknowledging the feelings expressed by the patient	10 (83.3)	2 (16.7)	-	1.000
3 - Question the patient carefully about ideation, plans, and access to lethal means	10 (83.3)	2 (16.7)	-	1.000
4 - Encourage the elder to express themselves as to how they want to receive support	8 (66.7)	4 (33.3)	-	1.000
5 - Encourage them to stay in touch with their social networks	10 (83.3)	2 (16.7)	-	1.000
6- Help them identify choices related to self-care	12 (100)	-	-	1.000
7- Encourage them to get to know	10 (83.4)	1 (8.3)	1 (8.3)	0.917

Script items	Agreement			CVI*
	Adequate n (%)	Regular n (%)	Inadequate n (%)	Total
the therapeutic activities in the LTCF				
8 - Support the flexibility/ openness of the elder to new learning experiences	9 (75.0)	3 (25.0)	-	1.000
Debriefing:				
Descriptive stage	12 (100)	-	-	1.000
Analytical stage	11 (100)	-	-	1.000
Application stage	11 (91.7)	1 (8.3)	-	1.000
References	10 (90.9)	1 (9.1)	-	1.000

Source: The authors, 2023.
Captions: ***CVI -** Content Validity Index, Numerical data different from zero, not resulting from rounding.

To enable a clearer and more appropriate understanding, while minimizing conflicts involving terminologies and techniques, two terms were changed: the term Objective and Structures Clinical Exam (OSCE) was replaced with "actions expected from the simulated patient"; "player" was also replaced with "simulated patient". The other questions and suggestions from specialists in the online form, despite being indications of potential changes to the script, were reconsidered in the discussion with the ongoing research group, which decided that it was not necessary to make the other changes indicated, since all items in the script reached an agreement level of CVI>0.80, in addition to the fact that the changes suggested would not affect the understanding of the materials developed.

DISCUSSION

The relationship between suicidal behavior and the experience of the elderly population in the context of institutionalization shows gaps that go beyond the chosen scientific approach, raising multifactorial questions that go beyond the process of change in care, with an impact on formation, training, and health work. Proposing interventions to improve care starts with a dialog between theory and reality, developing accessible proposals to conduct more humane and real health care practices[13].

The script is based on scientific literature about preventing suicidal behavior in the institutionalized elderly population, which has been continuously growing in Brazil and around

the world[2] Its construction was based on SBE principles[16] and on recommendations about suicide prevention in the elderly [3-5,9-10,12-13].

Methodological studies in the field of health generate products capable of improving educational practices, especially when it comes to proposals to construct and validate SBE scripts. As a result, the SBE has been used with good outcomes, not only in nursing practice, but also to train other professionals and students in the field of health[25].

In mental health, three recent Brazilian studies about the elaboration and validation of scripts to train professionals about topics related to self-inflicted violence emphasized the need to further address approaches to suicide through the use of simulation[15,18,26]. It is possible to expand its use in the training about suicidal behavior. Results of an intervention with 261 Brazilian health workers showed that the development of training processes about suicidal behavior led to improvements with regard to the feelings and perceptions about the topic[27].

The SBE allows its participants to develop and improve their knowledge, abilities, and attitudes in a realistic environment that is ethical and safe for learning[16]. A study with 25 Spanish nursing students about SBE in the care for the elderly found high levels of satisfaction in learning, in addition to recognizing that the educational practices used were effective[28].

The elaboration and validation of scripts can have several different theoretical bases, especially in regard to recommendations about good practices in simulation[17]. Despite any differences, the SBE must address aspects that reflect the reality of care. This is the priority of scripts built to discuss factors associated with suicidal behavior in the elderly.

To better represent reality, we addressed issues related to social changes in the social role of the elder: feelings of uselessness, hopelessness, degenerative and disabling conditions, loss of autonomy, grief and loneliness due to the loss of important people, meaninglessness in life, and even thoughts of death[3,9]. The professional must ascertain whether the patient has intentions and causes for these thoughts, as these can be risk factors for suicide in the elderly[4-5].

The script addressed issues that emerge during the institutionalization process, such as distancing from support networks and its impact on an individual's integral health. A Brazilian study which analyzed the experiences of 16 institutionalized elders revealed that the main risk factors for death by suicide were related to the loss affective ties and bonds with important people, to chronic, disabling, and painful diseases, and to hopelessness[10].

The representation of the male gender was based on epidemiological elements. Rates of death by suicide stand out among men, especially as they choose more lethal methods and tend to search for emotional care in health services less often[6,29]. Preventive strategies are more

effective among women, highlighting the importance of training health workers to plan and provide care considering these subjectivities[29].

A LTCF was chosen as the scenario for several reasons. Firstly, these institutions are mainly focused on the elderly. The fragilities in these places show the need to further explore aspects of care[10], such as suicidal behavior and its repercussions. A systematic review of ten articles about the depression rate in institutionalized elderly people showed that institutionalization increased their susceptibility to social, economic, and psychological vulnerabilities, leading to feelings of sadness, pessimism, uselessness, failure, and restricting contacts [13]. Depressive symptoms were also more common among older individuals, those who were not independent, or those dissatisfied with the LTCF[13].

Understanding risk factors related to suicidal behavior is essential to develop prevention strategies, especially regarding specificities found in specific groups. Fostering conversations about the topic can favor reducing social stigma and searching for emotional care among the elderly.

The conversations proposed in the SBE are educational, facilitating and reiterating the learning of certain aspects, especially during the debriefing. The choice for a systematized model in three stages was in accordance with the proposals developed. The debriefing is considered to be an essential stage of SBE, favoring reflections and discussions about experiencing a simulation, keeping in mind the expected results[16]. Several debriefing models are available and must chosen according to how they relate to learning, which is the effective part of this simulation[30].

Validating the SBE script improves the robustness and quality of the product developed, starting with the analyses carried out by the specialists on the topics addressed[16]. There is no consensus in scientific literature regarding the appropriate number of specialists for this stage, with most findings suggesting that from 5 to 12 specialists is necessary[17]. This criterion was adopted in this study, and it is worth noting that we counted on the participation of professionals who work in teaching and research for more than 20 years.

Regarding CVI, all items reached a value from 0.917 to 1.000, with a cutoff point of 0.80 being adopted. Earlier studies focused on mental health also found similar general results, with values above 0.80[15,18,26]. Considering our methodological criteria, no changes would be necessary. However, changes were made according to some specialist suggestions. The terminologies used in the simulation can differ between approaches, with regard to the structure and words used in the scripts[15,17-18,26]. These changes were carried out to increase the clarity

and accessibility of the script regarding the simulated patient in the case, who represented the experience of Mr. Humberto.

Gwet's first-order coefficient of agreement (AC1) was proposed to assess how close the scores given by the specialists were and, thus, how strong their agreement[22]. The base of the AC1 is similar to some Kappa tests for unweighted coefficients, which can also be used in these types of analysis. The results of this study were positive, especially the general value defined using the analysis of all possible responses from specialists (adequate, regular, and inadequate), which led to a reliability classified from satisfactory to good (AC1 = 0,743; valor de $p \leq 0,001$).

The results of the construction and validation of the script favor the development of a more robust product for the SBE. Although the script is systematized, the facilitators that use it will be able to adjust and adapt it, considering the cultural and social aspect of the place where it will be implemented, in addition to the needs of the participants. The product thus generated can support and guide the planning of the simulation and can be adapted to the reality where this simulation is to take place.

The results described support the use and dissemination of this script, which can contribute to the process of education and professional formation in health. It can be used in several spaces of health, seeking to provide health training in order to prevent suicide, valuing and promoting mental health in the elderly. It is worth emphasizing the need to implement and evaluate the product with the target-audience, especially those who care for elderly with suicidal behavior.

This study is not without limitations. The contents of the script were based on scientific literature, analyzed using a non-systematic survey. The search for specialists was carried out on a single platform, and it was difficult to find professionals that studied the phenomenon of suicide in the elderly. For the validation, the authors chose a three-point Likert Scale (adequate, regular, and inadequate). It is important to periodically update the contents of the script, considering the context in which it is going to be replicated and advancements in national and internationals scientific literature.

CONCLUSION

This study produced an original SBE script, validated by specialists, focusing on the prevention of suicidal behavior in institutionalized elderly. Its target audience includes professionals and students in the field of health. Its language was considered accessible to the target audience and the materials used were found to be innovative, based on scientific knowledge and apt to be introduced in professional health training. The results of the specialist

validation reiterated the robustness of the script, with agreements above the required level for all items evaluated (CVI>0.80). The reliability varied from satisfactory to good according to the tests evaluated, highlighting its applicability in health formation. By integrating this practical, evidence-based structure into professional practice, this study contributes to advance mental health literacy and promotes care actions to prevent suicide in institutionalized elderly.

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SUPPLEMENTARY MATERIAL

The educational resources developed by the LEPS research group, referenced throughout the manuscript, are freely available and can be accessed via the following hyperlink: https://drive.google.com/drive/folders/1n226B6BYczR55e8YKOZFEw9abadddC3Q?usp=sharing

DATA AND MATERIALS AVAILABILITY

The dataset may be accessed upon request to the corresponding author.

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