

Scenario validation for clinical simulation: group health education with women in the first trimester of pregnancy

Fernanda Coêlho do Nascimento¹ 
Ester Cristine Gomes Brandão² 
Francieli Chaves Moura² 
Alecassandra de Fátima Silva Viduedo² 
Casandra Genoveva Rosales Martins Ponce de Leon² 
Juliana Machado Schardosim² 

¹Secretaria de Saúde do Distrito Federal (SESDF),
Brasília, Distrito Federal, Brazil.

²Universidade de Brasília (UnB), Faculdade de
Ceilândia, Brasília, Distrito Federal, Brazil.

Corresponding author:

Juliana Machado Schardosim
E-mail: julianamachado@unb.br

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ABSTRACT

Objectives: to develop and validate a scenario for clinical simulation of an educational activity performed by nurses with a group of women in the first trimester of pregnancy. **Methods:** this methodological study was conducted in five stages (overview, scenario, scenario design progression, debriefing, and assessment) with 18 volunteers (13 actors and five experts) selected by convenience. The five experts completed a Likert-type scale with three response options and 18 evaluated features. The minimum Content Validity Index (CVI) was established at 0.75. **Results:** the low-complexity, high-fidelity scenario developed for clinical simulation reproduces a health educational activity with a group of women in the first trimester of pregnancy, along with their companions, achieving a CVI of 0.78. **Conclusion:** the scenario and its debriefing checklist were validated, meeting the standards required for use as a nursing education tool in the context of pregnant women's care.

Descriptors: Prenatal Care; Health Education; Simulation Training; Nursing; Primary Health Care.

INTRODUCTION

Prenatal care during pregnancy is essential and significantly reduces maternal and perinatal morbidity and mortality⁽¹⁾. It seeks to ensure the development of a healthy pregnancy through preventive actions, enabling the prevention of health problems for the mother-child binomial and the birth of a healthy baby⁽²⁾.

Pregnancy changes the woman's body and causes physiological and psychological changes, generating anxiety, expectations, fears, and doubts⁽²⁾. Therefore, prenatal care is an opportune moment for the implementation of educational actions by health professionals, aiming to increase understanding about the gestational process⁽³⁾.

As recommended by the Brazilian Ministry of Health in the Low-Risk Prenatal Care Manual⁽⁴⁾, group activities stand out among educational activities. They encourage the reflection on attitudes and the exchange of experiences, strengthen the potential of each member and the bond between professionals and pregnant women, and provide opportunities for the dissemination of knowledge^(5,6).

Group activities during pregnancy can reduce fears and anxiety, complement the guidance provided during prenatal appointments, and improve adherence to healthy habits. In this sense, as members of the Primary Health Care (PHC) team, nurses play an essential role in the development of health education activities, acting as facilitators of the learning process⁽⁶⁾. To this end, nurses must be trained beyond their routine duties in order to also act as health educators⁽⁶⁾.

The World Health Organization recommends the use of clinical simulation as an educational strategy in teaching/learning in nursing⁽⁷⁾. The purpose of clinical simulations is to recreate peculiarities of common situations in care practice, thereby allowing learners to acquire skills and abilities in a protected environment. It is an effective strategy for the development of reflective and critical thinking, in addition to increasing the learner's capacity for clinical assessment and decision-making⁽⁸⁾.

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Thus, the objective of this study was to develop and validate a scenario for clinical simulation of an educational activity performed by nurses with a group of women in the first trimester of pregnancy.

METHODS

This is a methodological study to develop and validate a scenario for clinical simulation in nursing teaching/learning. The method was based on the five stages proposed by Guilbert and Adamson⁽⁹⁾ based on recommendations from the International Nursing Association for Clinical Simulation and Learning (INACSL)⁽¹⁰⁾. The path followed is described below:

- a. First stage (overview) – reflection on issues that supported the creation of the scenario based on extensive reading of the theoretical framework to obtain updated scientific evidence. The organizational demands, learners learning demands, and educator activities required by the scenario were listed in this stage.
- b. Second stage (scenario) – development of the scenario containing the relevant clinical case, an environment similar to reality and a solid theoretical basis according to the definitions of the previous stage.
- c. Third stage (scenario design progression) – development of the event plan at the scenario based on the clinical case defined in stage 2. In this stage, the number of actors, roles, script and, when applicable, manikin/simulator and its configuration were defined. At the end, all steps were reviewed to check if they were appropriate for the objectives and level of learning proposed in stage 1.
- d. Fourth stage (debriefing) – development of a checklist to standardize the Educator's assessment of the performance of the students included in the scenario and guide the discussion among them in the debriefing.
- e. Fifth stage (assessment) – experts' on-site assessment of all documents produced in the previous stages, as well as observation of the simulation of the scenario created. The application of the scenario as a teaching tool was simulated with all stages (pre-briefing, briefing and debriefing).

The project was developed from January to December 2019. The assessment stage took place on July 2, 2019, at the Care Skills and Simulation Laboratory (Portuguese acronym: LHSC) of a Public University in the Federal District, Brazil.

Eighteen participants, selected by convenience (13 actors and five experts), were needed to validate the scenario. The actors were nursing students from the university where the study was conducted; 10 of them played different roles in the scenario and three underwent clinical simulation as students inserted in the scenario. The experts were nurses with expertise in the area of women's health and previous experience in the theme of the proposed scenario.

The inclusion criterion considered for the students was having passed the undergraduate discipline that addresses content related to women's and children's health in the nursing course of the

aforementioned university. Regarding experts, those residing in the Federal District and who obtained 4 points or more in the Scoring System adapted from Góes et al.⁽¹¹⁾ were included. This system considers aspects related to qualifications, professional experience and scientific publications, which were assessed in the experts' resumes available on the Lattes® Platform. Regarding the topic "Qualification" of the expert evaluation form, 1 point was given for each item, and it was possible to score in more than one item if the person had different qualifications. For the other topics on the form (Professional/care experience; Teaching; Research development/supervision; Publications), 2 points were given for each item in each topic, and it was possible to score in more than one item. The sum of the points allowed us to classify the degree of expertise of the evaluator; the highest score was considered the most qualified.

No exclusion criteria were established for students. For the experts, professionals who had been away from clinical practice for a period of time equal to or greater than two uninterrupted years prior to the date of data collection were excluded. The rationale under the exclusion is that professionals who have been distant from professional clinical practice for long period of time may be out of date with scientific evidence, and this could impair their assessment of the simulated scenario.

To organize the reproduction of the scenarios to the experts, an instrument documenting each step of the method was made available to them in advance. It contained the complete script and a debriefing instrument, facilitating a detailed analysis of the scenario development and checklist. Two situations were applied to the students. For those who played the roles of pregnant women and companions in the scenario (10 participants), the script describing the individual role of each participant was made available. The confidentiality of the material was guaranteed by signing the informed consent form. For those who played the role of students involved in the simulation (three participants), the scenario was presented only at the time of the simulation, as occurs when this teaching method is used.

The didactic support provided to these students (three participants) consisted of providing references related to three possible contents that could be addressed in the simulation (prenatal care, postpartum care, and abortion) without access to the scenario script. It was decided to keep them blind to the script to increase the realism of the activity when presenting the scenario to the experts. The entire validation process was audio and video recorded to avoid loss of information.

After observing the scenario and analyzing the documentation of the development stages, the experts completed an assessment instrument with 18 items containing a Likert-type scale with three response alternatives: inadequate, partially adequate and adequate. Data were tabulated and analyzed in a Microsoft Excel® spreadsheet (version 2016, Microsoft Corporation, United States) in which the Content Validity Index (CVI) was calculated. This index quantifies the proportion of agreement among the experts regarding the adequacy of items of the analyzed instruments. To

calculate the CVI, only the items in which the 'adequate' response was marked were considered, and a minimum score of 0.75 was established to consider the scenario validated⁽¹²⁾.

The study complied with the standards of resolution number 466/12⁽¹³⁾ of the Brazilian National Health Council, which provides for research involving human beings, and was approved by the Research Ethics Committee (CAAE) under number 03107418.5.0000.8093. All participants involved in the study signed two copies of the Informed Consent Form and the Authorization for Use of Image and Sound.

RESULTS

Based on the first three stages, a low-complexity, high-fidelity clinical practice simulation scenario was developed for nursing teaching and learning. It replicated a health education activity with a group of women in the first trimester of pregnancy, along with their companions.

During the simulation, the actors playing the roles of pregnant women and their companions presented health issues to the students involved in the scenario, encouraging them to seek their prior knowledge to manage unexpected situations. The students were encouraged to develop creative techniques for developing educational activities. The expected behaviors of the students were based on the Brazilian Ministry of Health's Low-Risk Prenatal Care Manual⁽⁴⁾ and the Brazilian National Iron Supplementation Program Manual – General Practice Manual⁽¹⁴⁾. It is important

to emphasize that the experts did not evaluate the students' performance, but rather the scenario and checklist developed.

As the target audience of the educational activity was in the first trimester of pregnancy, the established objectives regarding student learning comprised:

- safely conducting the educational activity addressing the following topics: common psychological issues during this period; nutrition and hydration during pregnancy; prenatal care and laboratory testing routines; physical activity; sexual activity; fetal/embryonic development; and the baby's vulnerability to exposure to alcohol, tobacco, other drugs, and radiation;
- establishing communication with the audience, showing high appreciation for the dialogue among the activity's participants.

Figure 1 below contains the final version of the validated scenario.

With the scenario finalized, a checklist to assess the teaching and learning of students involved in the scenario was developed in the fourth stage. The checklist was structured into two topics: Attitude and Conduct. The assessment topics included aspects related to user embracement, communication, and safety during care, as well as the students' technical skills and clinical reasoning. Furthermore, guiding questions were introduced for the debriefing to assist the educator conducting a dialogue with students about their experience in the scenario. Figure 2 presents the debriefing instrument.

The scenario validation stage, the fifth stage of the study, involved the participation of five experts, who achieved scores

Figure 1 - Design of the scenario applied in the clinical simulation entitled: "Educational activity conducted by a nurse with a group of pregnant women in the first trimester of pregnancy"

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Stage 1 - Overview	Topic covered: Educational activity conducted by a nurse with a group of pregnant women in the first trimester of pregnancy.
	Complexity: (X) Low () Medium () High
	Fidelity: () Low () Medium (X) High
	Scenario duration: up to 30 minutes
	Suggested number of students included in the scenario: 2-3 students
	Organizational requirements: For a realistic scenario, it is important to have a location where a structure compatible with a meeting room or group activity room at a primary care unit (UBS, Portuguese acronym). To achieve this, elements such as compatible furniture, equipment commonly used in the UBS, and posters commonly displayed on UBS premises are essential. For the successful development of the educational activity, actors in the roles of pregnant women and their companions are also required.
	Educator requirements: The educator should cover: the theoretical content on prenatal care and the immunization schedule for pregnant women, based on the Low-Risk Prenatal Care Manual, Primary Care Handbook No. 32, the Primary Care Protocol on Women's Health, the Partner's Prenatal Guide for Health Professionals, and other materials by the Brazilian Ministry of Health that foresee group educational activities. The iron supplementation protocol during pregnancy is available in the Brazilian National Iron Supplementation Program Manual – General Practice Manual; content on the physiology of pregnancy, childbirth, and the postpartum period, as well as the main pathologies that affect pregnant women (urinary tract infections, anemia, toxoplasmosis, among others) available in obstetrics textbooks; techniques for developing educational activities/health education and creative ways to conduct these activities with pregnant women and their families.
	Student learning needs: Skills/competencies to be developed in the simulation: - Teamwork and interpersonal skills; - Communication skills with pregnant women; - Leadership and decision-making skills in the case described; - Self-confidence and confidence to deal with real-life situations; - Strengthening the theoretical-practical relationship; - Decision-making for interventions when potential complaints or problems are identified; - Carrying out the educational activity in a humanized manner, valuing the users' opinions.

Figure 1 - Design of the scenario applied in the clinical simulation entitled: “Educational activity conducted by a nurse with a group of pregnant women in the first trimester of pregnancy”

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Stage 2 - Scenario	Evidence-based clinical case description: - Brief description presented to students before beginning the scenario: You represent a group of students interning at a primary care unit, and the unit nurse asks you to cover for her in conducting the educational activity with pregnant women. Five pregnant women arrived at the UBS, and they are waiting in the unit's meeting room. - Complete scenario description: You represent a group of students interning at a primary care unit, and the unit nurse asks you to cover for her in conducting the educational activity with pregnant women in their first trimester of pregnancy. The educational activity was previously scheduled during an individual nursing consultation. Five pregnant women have arrived at the UBS, and they are waiting in the unit's meeting room. Pregnant woman #1: A.F.G., 30 years old, P1DOM0, 8 weeks pregnant, accompanied by her wife. Pregnant woman #2: G.S.P., 25 years old, P2D1M0, 5 weeks and 2 days pregnant, accompanied by her husband. (Experiencing bleeding) Pregnant woman #3: F.K.R., 16 years old, P1DOM0, 9 weeks pregnant, accompanied by her boyfriend and mother. Pregnant woman #4: L.R.F., 33 years old, P3D1M1, 10 weeks and 3 days pregnant, unaccompanied. Pregnant woman #5: P.O.T., 29 years old, P1DOM0, 11 weeks pregnant, accompanied by her husband. Note: The facilitator should present the scenario and materials available to the students before beginning the simulation. Note: P=number of pregnancies; D=number of deliveries; M=number of miscarriages.
Stage 3 - Scenario Design Progression	Scenario event plan: Actors and their roles: 1. Actress A: Pregnant woman 1 2. Actress B: Wife of Pregnant woman 1 3. Actress C: Pregnant woman 2 4. Actor D: Husband of Pregnant woman 2 5. Actress E: Pregnant woman 3 6. Actor F: Boyfriend of Pregnant woman 3 7. Actress G: Mother of Pregnant woman 3 8. Actress H: Pregnant woman 4 9. Actress I: Pregnant woman 5 10. Actor J: Husband of Pregnant woman 5 • Scripts or actions and lines for each actor/role: When the students are introduced to the scenario, the five pregnant women and their companions will be waiting in the room designated for educational activities. The scenario will include a table with teaching materials to assist students in their conversations with the pregnant women about the physiology of pregnancy. They should welcome the participants politely, introduce themselves, and ask everyone to introduce themselves (since this information will not be provided in the case description). To learn about the profile of pregnant women participating in the activity, students should ask their name, age, number of children, and gestational age. Based on these mothers' responses, students are expected to understand this is a discussion group for pregnant women in the first trimester of pregnancy. • Scripts for group participants during the introduction: Pregnant woman 1: Hello, I'm Alice, I'm 30 years old, I'm 8 weeks pregnant, and this is my first pregnancy. I confess I'm very anxious. Companion of Pregnant woman 1: Hi, I'm Beatriz, I'm 33 years old, I'm Alice's wife, and this is my first child. I've been quite worried lately. Pregnant woman 2: Good morning, I'm Graziela, I'm 25 years old, I'm 5 weeks and 2 days pregnant, and this is my second pregnancy. I'm actually feeling calm, thank God. Companion of Pregnant woman 2: Hi, I'm Marcos, Grazi's husband. I'm 27 years old, and as she said, this is our second child, and I'm doing well. Pregnant woman 3: Hi everyone, I'm Fabi, I'm 16 years old, and I'm almost 10 weeks. This is my first child. My boyfriend and I were careless once and I fell pregnant, but now I'm happy with the baby's arrival. Boyfriend of Pregnant woman 3: Hi, I'm Paulo, Fabi's boyfriend, I'm 17 years old. I'm doing well, and as she said, we're happy now, but when we found out, it was a shock. Mother of Pregnant woman 3: Hi, I'm Maria, Fabi's mother, and I confess I'm worried about these kids' future, but I want to help them in any way I can. Pregnant woman 4: Hi, my name is Larissa, I'm 33 years old, I'm 10 weeks and 3 days pregnant. This is my third pregnancy, and I'm feeling lonely and tired. Pregnant woman 5: Hi, I'm Patricia, I'm 29 years old, I'm 11 weeks pregnant, and this is my first child. I'm very excited. Husband of Pregnant woman 5: Hi, I'm Paulo, Patricia's husband. I'm 30 years old. We're expecting our first baby, and I confess I'm scared; I don't know if I'm ready. Note: Actors should behave according to their role description regarding their emotional state and impressions about the pregnancy. Throughout the scenario, actors can initiate side conversations or show signs of inattention to what the students are saying, so they can develop the ability to hold the audience's attention. After each pregnant woman's presentation, students are expected to ask questions or make comments, encouraging pregnant women to share their doubts, concerns and even experiences from previous pregnancies. Educational activities become more engaging for participants when the topics originate from them and there is dialogue and exchange of experiences, rather than just the transfer of knowledge from the professional to participants. Some expected lines from the students at this point: - In your opinion, why is prenatal care important? - We've seen that everyone is in the first trimester of pregnancy. Who would like to start by talking about how they're feeling at this point in pregnancy? - How are you? Are you feeling very sleepy, nauseous, have cramps, or bleeding? Who would like to speak? Some lines can be planned for each actor. This will encourage students to develop the scenario in case they are unable to initiate dialogue with the group after the participant introductions, as in the following examples: Companion of pregnant woman #2: "I could notice my wife very stressed these days". At this point, other companions express nonverbal reactions (looking at the pregnant woman they're accompanying, nodding in agreement with the comment made, etc.) as a way of acknowledging the emotional instability common to most pregnant women. Pregnant woman #4: "This is my third pregnancy, and during prenatal care, they always tell me to eat plenty of foods with iron' cause we can have anemia, but they never explained to me why pregnant women have so much anemia. Could you explain?" • Responses from pregnant women to students' questions as a way to open up a space for dialogue so they can explain the importance of prenatal care, appointment schedules, exams, and educational activities: Pregnant woman 4: I believe prenatal care is important to know how the baby is doing and if the baby is healthy. Pregnant woman 1: During prenatal care, we also do many exams to know if we have any diseases that the baby might catch. • Responses from pregnant women/companions about how they are feeling during this trimester of pregnancy: Companion of Pregnant woman 2: I noticed my wife has been very stressed these days. At this time, other companions express nonverbal reactions (looking at the pregnant woman they are accompanying, nodding in agreement with the comment made, etc.) as a way of acknowledging the emotional instability common to most pregnant women. Wife of Pregnant woman 1: My wife is extremely weepy. I don't know what to do to make her feel better. Pregnant woman 4: I haven't felt much of a difference emotionally. But during this pregnancy, I've been feeling severe nausea, which is making my life hard, since I'm the one who cooks at home. Pregnant woman 3: I've been feeling very sleepy. In the mornings, I don't feel like getting out of bed, and I'm almost always late for class. In class, I can't pay attention because I'm so sleepy. • Lines from pregnant women/companions about dietary issues: Pregnant woman 3: I think we should eat fruits, vegetables, greens, that kind of thing, right? But I confess I don't do any of that. I love eating sweets; they make me feel so good. I'm afraid I'll gain about 20 kg (laughs). Pregnant woman 4: This is my third pregnancy and during prenatal care, they always tell me to eat lots of foods with iron because we can get anemia, but they never explained to me why pregnant women get so much anemia. Could you explain? Pregnant woman 1: In the appointments, they always say we should carry a bottle of water so we don't forget to drink water because of the risk of urinary tract infections. Why does this happen so often during pregnancy?

Figure 1 - Design of the scenario applied in the clinical simulation entitled: “Educational activity conducted by a nurse with a group of pregnant women in the first trimester of pregnancy”

Conclusion.

Stage 3 – Scenario Design Progression	• Lines from pregnant women/companions about laboratory tests: Mother of Pregnant woman 3: My daughter, for example, she's B-negative. Could this be harmful to the baby? Pregnant woman 5: I have a kitten at home and I know it can transmit toxoplasmosis to me. What precautions should I take to avoid catching it, and how is it transmitted? What are the risks to the baby if I do catch it? • Lines from pregnant women/companions about physical activity: Pregnant woman 2: So, I've always swam, should I stop because of the pregnancy? Companion of Pregnant woman 1: Can someone who has never practiced physical activity before start doing it during pregnancy? What would be the stage of pregnancy and the most recommended activity? • Lines from pregnant women/companions about sexual activity: Husband of Pregnant woman 5: Is it true that sex during pregnancy is prohibited because it can harm the baby and even cause a miscarriage? Pregnant woman 2: Is it normal to have bleeding after sex and even a little cramping? I've been experiencing this for the past few weeks. Sometimes I even bleed without having sex, and the cramps are getting stronger. • Lines from pregnant women/companions about fetal/embryonic development: Pregnant woman 1: I haven't had my first ultrasound yet. I'm 8 weeks pregnant. Is my baby's heart already beating? Will it be heard during the exam? Pregnant woman 3: I'm dying to feel the baby move, but my mom said it will take a while. How long will it take for me to feel it and for my belly to grow? Pregnant woman 4: I've been having headaches and sometimes I take medicine at home. Could you explain why we should always talk to a doctor or nurse when we need to take medicine? The pharmacist at the pharmacy near my house told me this. Note: Depending on how the students handle the situation, the lines can be adapted while maintaining the content.
Stage 3 – Scenario Design Progression	Simulated scenario environment: () Home (X) Basic Health Unit () Hospital, unit: _____ () Public place, which one? _____ () Others, _____ Materials needed to set up the environment and person in charge: Furniture/decoration: 1 table Chairs for students and actors Banners/Posters with information about pregnancy and healthcare commonly displayed in primary care unit. 1 trash can Medical/hospital materials/Medical records and other documents containing relevant clinical information: 1 pregnancy handbook available to students Posters on embryonic/fetal growth progress Note: in case you want to show the information presented in the handbook regarding pregnancy and the rights of pregnant women. Manikins: 1 manikin with placenta 1 female pelvis 1 set of teaching breasts Note: in case you want to explain about fetal development, placental function, or breastfeeding. Actors' costumes: Regular clothing appropriate for the characters' ages. There is no need to depict a pregnant belly, as all are in the first trimester of pregnancy. Makeup: No special makeup is required. Each actor is free to choose what to wear. Others: Person in charge: Professor and educational institution Person in charge: Professor and educational institution Person in charge: Professor and educational institution Person in charge: Actors Person in charge: Actors Person in charge:

Note: UBS, Unidade Básica de Saúde.

ranging from 7 to 18 on the judges' scoring chart, with scores > 10 predominating. Regarding the experts' profile, their average age was 35.8 years (standard deviation $\pm$ 15.15 years), median professional experience of six years (Q1=4.0–Q3=15.0), three had scientific publications in the area of women's care, and two in the area of clinical simulation in nursing teaching/learning. All were nurses, held graduate degrees (doctorate, master's degree, or specialization) and had professional experience in primary care,

women's health, and/or pediatrics. Only one of the experts also had experience in the hospital setting in these same areas. Most of them had experience in both nursing care and teaching.

The 18 items evaluated by the experts during the clinical simulation achieved CVIs between 0.40 and 1.0 (Table 1), with an average CVI of 0.78.

Items that obtained a CVI below 0.75 were readjusted based on the experts' suggestions. In the item “Adherence to Available

Figure 2 - Instrument developed in the fourth stage and validated by experts for the validated scenario debriefing process

Learners evaluated: _____				
Brief description of the clinical case: you represent a group of students interning at a primary health unit (UBS, Portuguese acronymous). The unit's nurse requests that you substitute for her in conducting an educational activity with pregnant women in their first trimester. Five pregnant women have arrived at the UBS and are waiting in the unit's meeting room.				
Learning objective for students: to conduct the nursing educational activity, confidently following the guidelines provided; to develop communication skills with the public, valuing dialogue among participants in the discussion group.				
Scenario duration: up to 30 minutes				
Checklist of skills and knowledge expected from students in the scenario	NC	I	PA	A
Attitude				
They introduced themselves and respectfully welcomed to pregnant women and their accompanying.				
They demonstrated effective communication and good interpersonal skills.				
They began the conversation circle by introducing pregnant women and their companions.				
They valued the information and questions from pregnant women during the activity.				
They sought to involve the companions in the activity, encouraging them to share their knowledge and questions with the group.				
They answered any questions that arose during the conversation circle.				
They were creative and managed to maintain the group's attention throughout the scenario.				
They used the available teaching resources during the scenario.				
Conducts				
They collected and recorded identification data, such as name, age, gestational age, and parity.				
They addressed general and specific aspects of prenatal care and presented the pregnancy card, encouraging the active participation of pregnant women and their companions in this process.				
They demonstrated knowledge about the length of the first trimester (up to 13 weeks).				
They discussed common bodily and emotional changes during the first trimester of pregnancy.				
They addressed natural ways to minimize morning sickness.				
They addressed the importance of a healthy diet during pregnancy and throughout life.				
They addressed iron supplementation (ferrous sulfate 40mg/day and folic acid 400 µg/day) and susceptibility to anemia during pregnancy.				
They addressed the importance of hygiene when eating raw foods to prevent toxoplasmosis, focusing on disease transmission, and its impact on fetuses.				
They addressed water intake and susceptibility to urinary tract infections (UTIs) and their risks to pregnancy.				
They asked about the medications pregnant women were taking and discussed the risks of using medications and legal and illegal drugs during pregnancy.				
They explained about the specific exams of the first trimester of pregnancy.				
They addressed the importance of updating the immunization schedule.				
They addressed lifestyle and physical activity during pregnancy.				
They addressed sex during pregnancy, as well as condom use.				
They addressed warning signs of miscarriage and what the pregnant woman should do if it occurs.				
They emphasized the importance of prenatal care for the partner.				
Legend: NC = not completed; I = inadequate; PA = partially adequate; A = adequate				
Guiding questions: - How did you feel in the scenario? - What positive aspects of your behavior deserve to be highlighted and what needs improvement? - How did the actors feel?				
Positive aspects to be highlighted: _____				
Aspects to be improved or inappropriate behavior: _____				
Evaluating educators: _____				

Note: UBS, Unidade Básica de Saúde.

Table 1 - Expert evaluation of the Clinical Case "Educational activity performed by nurses with a group of women in the first trimester of pregnancy"

Items evaluated	Inadequate		Partially adequate		Adequate		CVI*
	n**	%	n'	%	n'	%	
Plausibility of the clinical case	-	-	-	-	5	100	1.00
Realism	-	-	-	-	5	100	1.00
Adherence to available scientific evidence	1	50	-	-	1	50	0.50
Complexity in relation to the student's level of knowledge and skills	-	-	1	25	3	75	0.75
Case description	-	-	1	20	4	80	0.80
Simulation objectives provided to the student	-	-	-	-	5	100	1.00
Information provided to the student before the simulation	-	-	3	60	2	40	0.40
Data provided to the student during the simulation	1	20	1	20	3	60	0.60
Support provided to the student during the simulation	-	-	1	20	4	80	0.80
Learning objectives	-	-	1	20	4	80	0.80
Promotion of critical thinking	-	-	1	20	4	80	0.80
Promotion of the ability to prioritize nursing assessments and interventions	-	-	-	-	5	100	1.00
Promotion of autonomous problem-solving	-	-	-	-	5	100	1.00
Simulated environment	-	-	-	-	5	100	1.00
Materials and equipment available to students	-	-	2	40	3	60	0.60
Aspects evaluated during the debriefing	-	-	2	40	3	60	0.60
Reflection and analysis of actions during the debriefing	-	-	2	40	3	60	0.60
Synthesis and feedback to the student during the debriefing	-	-	2	40	3	60	0.60
Average CVI							0.78

Note: *CVI = Content Validity Index; **n = number of responses.

Scientific Evidence" (CVI = 0.50), the Women's PHC protocol⁽¹⁵⁾ was added to the references used to prepare the content taught by educators before the student's insertion into the scenario.

For the items "Information provided to students before the simulation" (CVI = 0.40) and "Data provided to the student during the simulation" (CVI = 0.60) in Figure 1, a note was included, in which the facilitator was asked to introduce all materials available in the scenario to the students before starting the simulation. The reason for this inclusion was the fact that students did not use some materials available to assist in conducting the activity, claiming they were unaware that such materials were part of the scenario.

Still in relation to materials, a clear description of the provision of illustrative materials to students was added to the item "Materials and equipment available to students" (CVI = 0.60) in Figure 1, 'environment' topic, with the aim to facilitate their understanding and performance during the simulation.

Although scores ≥ 0.75 were achieved in the items "Complexity in relation to the student's level of knowledge and skills" (CVI = 0.75) and "Case description" (CVI = 0.80), the experts' suggestions were followed, including more partner lines in the script and during the initial presentation round, and a reduction in the number of participating students to two or three in order to improve teaching, attitude and communication between them. These changes contribute to giving partners greater visibility within the participant group, promoting comprehensive prenatal care, and facilitating the evaluation by partners through the Partner Prenatal Policy.

A CVI of 0.60 was achieved in the three items used to evaluate the debriefing instrument ("Aspects assessed during the debriefing", "Reflections and analysis of actions during the debriefing", and "Summary and feedback to the student during the debriefing"). Following the experts' recommendations, they were grouped into two broad sections (attitude and conduct) in the checklist to facilitate educator/facilitator assessment. Guiding questions were also included at the end of the instrument, which emphasize the student's perspective and encourage the initiation of a dialogue between students and the facilitator, based on their perceptions and emotions experienced during the simulation. Despite the lack of suggestions for changes to the debriefing items, the experts suggested adding an additional item to this section, about the partner's prenatal care.

In addition to the judges' suggestions, the students who participated in the simulation shared the value of the simulation in their training process and suggested aspects that could improve the scenario's development, such as increasing the number of chairs so they would be able to sit and communicate visually at the same level.

DISCUSSION

Nursing knowledge always seeks to meet the demands imposed on society, especially the provision of safe and quality care. Therefore, using new pedagogical approaches in the training of these professionals encourages greater student

motivation, engagement, and satisfaction, and facilitates learning development⁽¹⁶⁾.

Studies on the structuring and validation of scenarios for clinical simulation in nursing are growing, and rigorous adherence to the method ensures the consistency of scenarios resulting from these studies with reality and current scientific evidence^(17,18). For the faculty, using a validated scenario in simulated practice is much safer, both in terms of learning effectiveness and in addressing everyday clinical situations.

Simulated practices have various teaching/learning applications. They can be used before students are introduced to real-life scenarios, when the patient's life could be at risk given the group's inexperience. They also provide exposure to critical situations in a real clinical setting to train for rare and difficult situations⁽¹⁹⁾.

In general, it is essential that nurses develop the ability to conduct group activities, as this strategy is widely used in work activities conducted with different populations and age groups by PHC nurses. Newly graduated professionals who have not developed the ability to conduct group activities during their training may face significant difficulties and discomfort in doing so, given their exposure to adverse situations and considering the heterogeneous population with diverse basic needs^(1,4,6).

In this regard, a study conducted in Rio Grande do Sul, Brazil, found that nursing students learned more through activities developed using active methodologies than through lecture-based, dialogic, teacher-centered classes⁽¹⁷⁾. In addition, more than 80% of students reported that field and laboratory practices are strategies that promote learning^(19,20).

This context reinforces the importance of the scenario developed and validated in this study, which required a broad understanding of the pregnancy-related theoretical content from students for the successful development of group activities with pregnant women. The simulation of this scenario also allowed for the development of other skills related to communication and attitude, which would not be possible in didactic classes with a traditional teaching/learning approach alone.

Although clear and well-defined guidelines on the applicability of clinical simulation in undergraduate teaching/learning are lacking, the educators have chosen to use it. To this purpose, they have been conducting research on scenarios development and validation. This phenomenon is evidenced by the growing number of publications on the topic⁽²¹⁾.

The development and validation of scenarios with checklists to be used in the debriefing stage contributes to scenario harmonization, as the instruments can guide comments and discussions between the educators and learners involved in the scenario, facilitating teaching/learning⁽¹⁷⁾.

In this study, validation of the scenario developed for clinical simulation on educational activities performed by nurses with women in the first trimester of pregnancy was achieved through a mean CVI of 0.78 (minimum score considered 0.75), indicating 78% agreement with the responses among the experts. Although other

acceptable cutoff points exist, 0.75 was the point adopted in this study⁽¹²⁾. As long as a minimum of 0.75 is reached, all are considered validated and do not compromise the reliability of results.

The publication of scenario validation studies in the maternal and child health field is becoming increasingly popular. Different cutoff points have been used, such as simulation for the management of puerperal hemorrhage (CVI = 0.976)⁽²⁰⁾, management of gestational hypertension during prenatal care (CVI = 0.89)⁽¹⁶⁾, umbilical cord stump care (CVI > 0.91)⁽²²⁾, prenatal consultation with pregnant adolescents (CVI = 1.0)⁽¹⁷⁾, nursing consultation in reproductive planning (CVI = 0.98)⁽²³⁾, and management of severe preeclampsia during the postpartum period⁽²⁴⁾.

Despite the significant number of publications on various topics in the maternal and child field, studies on group health education activities, especially with pregnant women, were not found in the literature review, showing the innovative nature of the present study. It makes a satisfactory contribution to the teaching/learning process of nursing students, as well as to and to the training of professionals with limited experience in group activities applied to health education.

During validation, the debriefing and discussion with the experts were the most memorable moments, as it was possible to hear students' experiences during the simulation. They discussed the importance of the scenario for training and suggested increasing the number of chairs in the scenario so that the students leading the group could also sit, in order to level the educators' perspective with that of the users.

Since these details sometimes go unnoticed by instructors and the main focus is to reproduce a scenario as realistically as possible, the contribution of students' perceptions is important in developing an ideal scenario.

Regarding the debriefing and discussion, these moments also allowed for a broad discussion among those involved in the simulation (learners, educators, experts, and actors), especially the experts, who also verbally expressed their opinions about the details of the scenario and its applicability to teaching/learning.

Content validation involves obtaining scientific recognition of the simulation scenario based on the analysis by experts, who may or may not agree on the potential of the content covered to promote knowledge and contribute significantly to student education and healthcare professional development⁽²⁰⁾. Based on the experts' responses and discussions, the topic covered and the scenario objective were satisfactory, indicating that the students' guidance was in line with expectations, reaffirming the validation of the content covered.

When using stage elements, several items are also evaluated, such as clothing, personal items, makeup, patient speech and behavior, which bring the student closer to a real-life environment⁽²⁵⁾. The presence of actors characterized according to the context allows for greater veracity of the simulation's proposed theme, as students must understand the technical terms and scientific knowledge covered during the simulation. Furthermore, it also sensitizes them

to demonstrate greater empathy and embracement regarding the patients' concerns.

Actors should act as partners in the scenario without deviating from the objectives to be achieved. They should also provide clear information to participants, resolving doubts or confusion that could interfere with the performance and progress of the activity^(8,26).

In this context, several situations that contribute to improving the simulation and its future applications can arise during the debriefing, which is a very important moment in the simulation. It is a teaching/learning activity that develops judgment and decision-making skills, allows the reflection on the experiences lived during the simulation and the expression of individual perceptions about the topic, content, and resourcefulness of the scenario⁽²⁵⁾. For many, this is the most anticipated and time-consuming moment in the entire simulation^(8,26). The existence of a validated scenario, including its checklist, makes it a safer and more reliable teaching/learning tool.

Some limitations should be considered in this study. The first limitation was the development of a scenario based on the reality of the Federal District (Brazil) with the analysis and validation performed by professionals working in this community. Brazil is a continental country with many regional differences; therefore, it is necessary to adapt the simulation scenario to other Brazilian realities, including those of other countries. Another limitation of the study was the failure to check the full completion of the checklist by the experts when the forms were returned. Although some items were left blank, this did not compromise the validation of the clinical simulation, achieving an average CVI of scores ≥ 0.75 . As recommended in the literature, the study results were not compromised. For further refinement, we suggest the re-application in other scenarios with the changes suggested by the experts.

Regarding clinical implications, this study enabled the development of a low-cost, highly-effective teaching tool for nursing education. It can be used both in academic training and in professional development regarding group activities widely used in PHC in various contexts. It equips users for self-care, as it is an approach that fosters the exchange of experiences and socialization between patients and healthcare professionals, as well as among patients themselves. It also contributes to adherence to prenatal care and other types of follow-up recommended for pregnant women in PHC. Publications on scenario validation for clinical simulations are spreading throughout the scientific community when the scenarios are designed with methodological rigor, making them safer for use in teaching.

CONCLUSION

The scenario proposed in this clinical nursing simulation and the checklist have been validated. This is a complementary methodological tool for the traditional teaching and learning of women's health courses in undergraduate nursing programs, or even for the continuing education of nursing professionals.

For educators, a validated scenario can be seen as a powerful pedagogical tool that enables the transfer of knowledge between professionals and students, and the training of these future professionals for the potential realities faced daily in healthcare services. Furthermore, it represents an important educational advancement in terms of didactics and learning experiences, resulting from the strengthening of the theoretical-practical relationship advocated by this teaching and learning method.

It is expected that this scenario will be used in other universities as a teaching/learning method, strengthening the competence of nurses in prenatal care and that this study encourages other researchers to validate scenarios in Brazil and abroad as a way of disseminating creativity in teaching/learning and strengthening the professional nursing qualification.

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Author contributions – CRediT

FCN: conceptualization; data curation; investigation; and writing – original draft and writing – review & editing.

ECGB: data curation; writing – original draft; and writing – review & editing.

FCM: data curation; writing – original draft; and writing – review & editing.

AFSV: formal analysis; methodology; project administration; and writing – review & editing.

CGRMPL: methodology and writing – review & editing.

JMS: conceptualization; data curation; formal analysis; investigation; project administration; supervision; and writing – review & editing.

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Conflict of Interest

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