



Construction and validation of an educational game for pregnant women^a

Construção e validação de jogo educativo para gestantes
Construcción y validación de juego educativo para gestantes

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ABSTRACT

Objectives: To design an educational game for the guidance of pregnant women regarding their rights and good practices in the birth process and to validate the content of the textual information and images of the game with the collaboration of judges.

Method: This was a methodological, quantitative study. The validation of the content was carried out by 10 judges. **Results:** Of the 44 cards, only two were questioned and did not achieve 90% agreement, the image of card number 2 ($p = 0.01$) and the content of card number 9 ($p = 0.01$). **Conclusion:** The construction and validation of the content of the game proved to be adequate and feasible for guiding and preparing pregnant women regarding good care practices in the birth process.

Keywords: Health education; Educational games; Games and toys; Childbirth.

RESUMO

Objetivos: Elaborar jogo educativo para orientação de gestantes sobre seus direitos e as boas práticas no processo de parir e validar o conteúdo das informações textuais e imagens do jogo com a colaboração de juízes. **Método:** Trata-se de uma pesquisa metodológica, quantitativa. A validação do conteúdo foi realizada por 10 juízes. **Resultados:** O jogo foi nomeado "Boas Práticas no Parto". Das 44 cartas, apenas duas foram questionadas e não atingiram os 90% de concordância, a imagem da carta de número 2 ($p = 0,01$) e o conteúdo da carta número 9 ($p = 0,01$). **Conclusão:** A construção e validação do conteúdo do jogo mostrou-se adequada e viável para a orientação e preparo de gestantes sobre as boas práticas na assistência ao processo de parir.

Palavras-chave: Educação em Saúde; Enfermagem; Jogos e Brinquedos; Parto; Saúde da Mulher.

RESUMEN

Objetivos: Elaborar juego educativo para orientación de embarazadas sobre sus derechos y las buenas prácticas en el proceso de parir y validar lo contenido de las informaciones textuales e imágenes del juego con la colaboración de jueces. **Método:** Se trata de una investigación metodológica, cuantitativa. La validación del contenido fue realizada por 10 jueces. **Resultados:** De las 44 cartas, sólo dos fueron cuestionadas y no alcanzaron los 90% de concordancia, la imagen de la carta de número 2 ($p = 0,01$) y el contenido de la carta número 9 ($p = 0,01$). **Conclusión:** La construcción y validación del contenido del juego se mostró adecuada y viable para la orientación y preparo de embarazadas sobre las buenas prácticas en la asistencia al proceso de parir.

Palabras clave: Educación en salud; Juegos educativos; Juegos y juguetes; Parto.

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INTRODUCTION

Since the First International Conference on Health Promotion in Ottawa, Canada on 21st November 1986, important concepts such as health education, strengthening community action, healthy public policies, reorienting health services and health promotion have been discussed as a strategy for improving people's health. However, alongside the efforts undertaken by professionals and the adoption of a health education policy and the use of strategies such as educational groups, lectures and individual guidance, it can be seen that people often arrive at the health service without knowing the content explored in the meetings and especially without knowing their rights as citizens.¹

In the context of Women's Health, the same difficulty is observed, especially in relation to pregnant women, who are not aware of the signs and symptoms of labor, the practices used during childbirth and, above all, their rights during this period. In 1996 the World Health Organization (WHO), concerned with the delivery and birth, created a guide to normal birth to reduce the high rates of maternal and perinatal mortality. It contains a classification of common practices in the performance of a normal birth, guiding what should or should not be done in the parturition process. This classification was based on scientific evidence derived from the analysis of studies carried out worldwide. From this the Brazilian Ministry of Health created, through Ordinance 569/2000, the Program for the Humanization of the Prenatal Period and Birth (*Programa de Humanização do Pré-Natal e Nascimento* - PHPN) with the aim of modifying the paradigms of Brazilian obstetric care.²

Good practices are a set of behaviors and procedures capable of promoting healthy birth and delivery, with respect to the natural process, avoiding unnecessary or risky behaviors for the mother and the newborn, which must be monitored by the health professionals who follow the parturient woman.³ However, more than a decade after the creation of the ordinance, there are many institutions that still adopt unnecessary, ineffective and harmful practices during the labor, delivery and puerperium. As a consequence, because of a lack of knowledge of their rights and of the very dynamics of the process of giving birth women become hostage to the procedures or interventions of the professionals, who are not always adequately prepared to care for them according to the assumptions of good practice in obstetrics.³

Thus, the following questions arise: have the pregnant women been guided about good care practices during labor and delivery? Have the strategies used in the guidance groups been effective? Are there any other ways to sharpen the women's perceptions and make them understand parturition-related situations better?

Games have been consolidated as an important resource in health guidance. Several authors⁴⁻¹¹ affirm that the use of this strategy in health education can provoke changes in attitude and behavior in those who take part. Educational games consist of an iterative process that involves the acquisition of knowledge and the development of cognitive and affective skills, favoring

the exchange of experiences and information that enable mutual respect to be experienced and can be covered in group discussions.¹¹

Ludic instruments lead participants to use all the senses to think, making it possible to relate the content and meaning of the activity to the reality in which they are inserted, so that they can then seek to transform the reality.¹² The aim of the game as an education technique should be simple and motivating, with comprehensible language for the users, its rhythm set by the group that plays, without being massified, and created to support the development of the proposed educational theme.⁵

A review of the literature on educational games has identified that they have a wide field of application in health.¹³ However, there is a shortage of games available for application in Women's Health. Specifically, in the area of women's health, five (5) educational games were identified, three (3) of which were family planning and breastfeeding guidelines, and two (2) dealt with newborn care and signs of the birth.¹⁴⁻¹⁸

The search for games linked to the parturitive process or that refer to situations that the woman will face when in labor and delivery identified a gap to be filled. Therefore, the aim of this study was to design an educational game for the guidance of pregnant women regarding their rights and good practices in the birth process and to validate the content of the textual information and images of the game with the collaboration of judges.

METHOD

This was a quantitative methodological study. The methodological framework for the creation of this educational game is based on the study of Andrade et al.¹⁹ and was carried out in 6 stages: (1) definition of the set of objectives for the educational game, (2) review of previous research related to educational games, (3) design of the educational game, (4) construction of the educational game, (5) validation of the educational material and (6) guidelines on how to play the game.

In the content validation stage, specialists in the subject matter (judges) and people from the target audience for the educational material (pregnant women) were consulted by convenience.²⁰ The criterion adopted for the selection of the teaching nurses was having a doctoral degree and working in Women's Health and in Communication. For the nurses this was to have a specialization in Obstetrics and at least 5 years of practice in prenatal care. The main criterion adopted for the pregnant women was to have no training in the health area.

The judges were approached in their work places and the pregnant women in their homes through prior appointments. The teachers participated in the study in their respective Higher Education Institutions, one nurse and the midwife in the hospital during working hours and one nurse answered the study questions in the primary health unit. The pregnant women were recruited from consultations carried out by the researcher.

The data collection period was from January to March 2016. The images for the cards of the game were obtained in two ways: by buying images from the *Shutterstock* website and by the

researcher taking photographs with a professional camera. The photos were treated using Photoshop image editing software.

The analysis of the content validation of the cards by the judges was carried out through the application of the Test of Proportions. This test describes the intensity of the approval of the cards by the judges. For the null hypothesis the approval will be equal to or greater than 90%. The p -value associated with the test helps to decide whether there is sufficient evidence for this null hypothesis. When the p -value is lower than the level of significance, here adopted as 0.05, there will be insufficient evidence in the sample in favor of the null hypothesis and therefore it will be concluded that the approval is less than 90% for that card. Therefore, for each card the percentage of agreement and 90% confidence interval is established. Next, the test of proportions is applied to test whether there is evidence that this approval is greater than 90%.²¹

The research project was approved by the Research Ethics Committee of the University of Guarulhos, under authorization number 1.047.001 and CAAE 44175515.2.0000.5506. All participants that agreed to participate signed the consent form. The photographs of the pregnant women were authorized by means of an image use authorization form. The photos from the image bank are considered royalty-free after the user's purchase from the site.

RESULTS

The study resulted in the construction of a card game named by the authors as "Good Practices in Childbirth".

Step 1. Definition of the set of objectives for the educational game

At this stage the researchers defined the guidelines for pregnant women regarding their rights and good practices in the birth process.

Step 2. Review of previous studies related to educational games

A review of existing studies related to health education games was carried out to identify gaps in products elaborated and to identify ways to overcome their failures;

Step 3. Design of the educational game

In the design of this educational material the researchers considered the following characteristics: content, language, organization, layout, illustration and learning.²² The importance of the images for the legibility and comprehension of the statements should be emphasized. Their function is to attract the reader, to awaken and maintain their interest through the reading, complementing and reinforcing the information.

Step 4. Construction of the educational game

The construction of the game was based on the educational proposal of communication developed by Stefanelli²³ that proposes learning between the professional and the patient

through the exchange of knowledge. The content of the cards was prepared by the researchers based on the rules of the Ministry of Health³ related to good care practices for women in the process of giving birth.

The strategy for the educational game was to use the association of written (statements) and non-verbal (pictures) communication. The images transmit information more directly and attractively than words, are more easily remembered than written representations and present a positive effect of illustration in the learning.²⁴ The writing complements and validates the nonverbal communication expressed by the images.

The game consists of 44 cards, 22 present statement phrases about the good practices in childbirth care and the women's rights in the prepartum period, during the delivery and in the postpartum period and 22 present images corresponding to each statement. The cards are 10x15cm, colored, plasticized and numbered from 1 to 22 on the back, for both those containing images and those containing statements. This game is of association, therefore the participants must associate the statement of one card with the image of the other card corresponding to it (Chart 1).

Step 5. Validation of the educational material

Content validation is the determination of the representativeness of items that express a content, which can be based on the judgment of experts in a specific area. This stage included seven (7) judges and three (3) pregnant women. The profile of the judges was delineated as follows: four (4) doctor nurses, two (2) of whom worked in obstetrics and two (2) researchers in communication; two (2) nurses with specialization in obstetrics and one (1) with graduation in obstetrics.

Regarding the occupation of the professionals, four (4) were teachers and researchers, two (2) performed care activities in the delivery room and one (1) prenatal consultation care. The length of experience ranged from 10 years to 45 years. The pregnant women who participated in the study had a minimum age of 22 years and a maximum of 33, two (2) did not work and one (1) was an administrative manager. All were in the third trimester of gestation, two (2) were pregnant for the first time and one (1) for the second time with a previous normal birth.





The judges evaluated the game positively and highlighted the relevance of the educational material. Of the 44 cards, only two were questioned and did not achieve 90% agreement, the image of card number 2 ($p = 0.01$) and the content of card number 9 ($p = 0.01$). The judges asked for improvements in these two cards. Thus the image of card 2 was changed at the suggestion of the judges. However, the content of card 9 was retained as no suggestion for change was made by the judges.

There was a statistically significant difference between the judges regarding the image of card 2 ($p = 0.01$), that is, lower than the 90% upper limit. This card did not achieve the desired agreement because, its statement is: "the pregnant woman can eat and drink liquid freely during labor", however, the corresponding image card showed a pregnant woman eating, but without the image of any liquid (Table 1).

Chart 1. The legend of the illustrations are on the reverse side. Association of the cards with the statements and images of the respective cards, São Paulo, SP, Brazil, 2016.^b

No.	Statement	Image	No.	Statement	Image
1	The pregnant woman has the right to receive all the information and explanations that she wants.		12	The pregnant woman has the right to privacy in the place of the birth.	
2	The pregnant woman can eat freely during labor.		13	The woman has the right to have the companion of her choice during the birth.	
3	The pregnant woman has the right to have a companion of her choice during labor.		14	The woman can choose the squatting position to give birth	
4	The pregnant woman may take a shower during labor.		15	The woman can choose the lateral position to give birth	
5	The pregnant woman can walk and change position whenever she wants during labor.		16	The woman can choose the semi-seated position to give birth	
6	The pregnant woman can do exercises with a ball during labor.		17	The stomach cannot be pushed during the birth.	
7	In the maternity ward the vaginal touch examination can be performed.		18	The woman may receive a cut near the vagina.	
8	Shaving the hair before giving birth is harmful.		19	The baby should nurse from the mother in the first hour of life.	
9	Having an intestinal lavage before giving birth is harmful.		20	The baby should stay in skin-to-skin contact with the mother after birth.	

Continued Chart 1.

No.	Statement	Image	No.	Statement	Image
10	The woman can receive saline when necessary.		21	The woman has the right to have a companion of her choice after the birth.	
11	The woman can receive massage for pain relief during labor.		22	The baby should stay with the mother in the bedroom.	

There was a difference among the judges regarding the content of the card 9 ($p = 0.01$), being less than the 90% upper limit. The contents of this card have the following statement: "having an intestinal lavage before giving birth is harmful". The judges justified the inadequacy of the statement because they understood that the language would be difficult for laypeople (pregnant women) (Table 2).

In this study, there was no statistically significant difference regarding the compatibility between image and content (Table 3).

Step 6. Guidance on how to play the game

It is recommended that this game be applied starting with the formation of a minimum group of 10 people and that the pregnant women are at least 28 weeks pregnant, because in this period women are more motivated and have more doubts about and interest in the birth. The game may include the companion and should have a facilitator, preferably the one responsible for guiding the pregnant women in the prenatal care.

The facilitator should start by presenting each of the participants and giving the instructions about the way of playing, with the use of a dynamic at their discretion. The cards should be distributed to the participants, each one receiving a card with a statement and another card with an image. One caution in proceeding with the distribution is not to deliver cards of statements and images with the same number. On the back, the cards are numbered with small numbers, located in the lower right corner, so that this goes unnoticed by the player, as the aim of the numbering is to guide the facilitator when distributing the cards.

The game starts with the reading of the statement card by one of the participants, then the others must identify in their image cards the one that corresponds to the statement read. The person holding the image card continues the game by reading

Table 1. Percentage of agreement of the judges regarding the images of the cards, São Paulo, SP, Brazil 2016.

Card	Lower limit	Overall Proportion	Upper limit	p -value
1	65.69	80	94.31	0.08
2	53.60	70	86.40	0.01
3	100.00	100	100.00	1.00
4	100.00	100	100.00	1.00
5	79.26	90	100.00	0.50
6	79.26	90	100.00	0.50
7	65.69	80	94.31	0.08
8	65.69	80	94.31	0.08
9	79.26	90	100.00	0.50
10	65.69	80	94.31	0.08
11	65.69	80	94.31	0.08
12	65.69	80	94.31	0.08
13	65.69	80	94.31	0.08
14	79.26	90	100.00	0.50
15	79.26	90	100.00	0.50
16	65.69	80	94.31	0.08
17	79.26	90	100.00	0.50
18	65.69	80	94.31	0.08
19	65.69	80	94.31	0.08
20	100.00	100	100.00	1.00
21	100.00	100	100.00	1.00
22	79.26	90	100.00	0.50

Table 2. Percentage of agreement of the judges regarding the statements of the cards, São Paulo, SP, Brazil 2016.

Card	Lower limit	Overall Proportion	Upper limit	p-value
1	100.00	100	100.00	1.00
2	100.00	100	100.00	1.00
3	100.00	100	100.00	1.00
4	100.00	100	100.00	1.00
5	100.00	100	100.00	1.00
6	100.00	100	100.00	1.00
7	100.00	100	100.00	1.00
8	79.26	90	100.00	1.00
9	53.60	70	86.40	0.01
10	100.00	100	100.00	1.00
11	79.26	90	100.00	0.50
12	79.26	90	100.00	0.50
13	100.00	100	100.00	1.00
14	65.69	80	94.31	0.08
15	100.00	100	100.00	1.00
16	79.26	90	100.00	0.50
17	65.69	80	94.31	0.08
18	65.69	80	94.31	0.08
19	100.00	100	100.00	1.00
20	100.00	100	100.00	1.00
21	100.00	100	100.00	1.00
22	100.00	100	100.00	1.00

the statement card that they have and so on. At this point, the facilitator should encourage the discussion of the content of the cards in order to ask questions and adjust information.

After completing the game all the cards are returned to the facilitator who will present the images one by one, and will ask the participants the meaning of the card, the woman who raises her hand first has to remember the statement related to the image presented. The game is won by the woman that remembers more correct statements associated with the images.

The facilitator should prepare and conduct the activity for at least 40 minutes, ensuring that all the cards are read. Some care should be observed by the facilitator in order to avoid creating barriers or inhibiting the participants, such as: not wearing a white coat, wearing ordinary clothes and standing with the participants in a circle. At the end of the game, an immediate evaluation of all participants should be requested with regard to the understanding of the good care practices for the birth and the doubts related to the subject. The dynamics of this game were based on the guidelines of the educational game: preparing for the birth and delivery.¹⁵

Table 3. Percentage of agreement of the judges regarding the compatibility of the content and the images of the cards, São Paulo, SP, Brazil 2016.

Card	Lower limit	Overall Proportion	Upper limit	p-value
1	65.69	80	94.31	0.08
2	65.69	80	94.31	0.08
3	79.26	90	100.00	0.50
4	100.00	100	100.00	1.00
5	65.69	80	94.31	0.08
6	79.26	90	100.00	0.50
7	65.69	80	94.31	0.08
8	65.69	80	94.31	0.08
9	65.69	80	94.31	0.08
10	79.26	90	100.00	0.50
11	65.69	80	94.31	0.08
12	65.69	80	94.31	0.08
13	79.26	90	100.00	0.50
14	65.69	80	94.31	0.08
15	79.26	90	100.00	0.50
16	65.69	80	94.31	0.08
17	65.69	80	94.31	0.08
18	79.26	90	100.00	0.50
19	65.69	80	94.31	0.08
20	100.00	100	100.00	1.00
21	100.00	100	100.00	1.00
22	79.26	90	100.00	0.50

DISCUSSION

The evaluation of the game by the judges was positive and they highlighted the relevance of the educational material. It is believed that this game may contribute to the guidance of pregnant women, since the validation of the content performed by the judges was adequate.

In order for pregnant women to be aware of these good practices and to be able to demand them during the labor, delivery and puerperium care, it is recommended that they be educated and guided about them during the prenatal care.²⁵⁻²⁹ Educational practices are strategies in both individual care and collective processes, that is, in groups.^{25,30,31} Health education is a social practice based on dialogue and the exchange of knowledge, it is one of the structuring modes of health practices, above all, during the prenatal period.³²

Among the good practices that should be stimulated during labor and delivery are: the supply of liquids, empathic support by the professional, respect for the choice of the woman regarding

the companion during the labor, delivery and puerperium, clarification of doubts and provision of information that the women desire, use of non-invasive and pharmacological methods for pain relief, such as massage and relaxation techniques, therapeutic bath, freedom of movement and position, early skin-to-skin contact between mother and child and support for initiation of breastfeeding in the first postpartum hour,³³ points emphasized on the cards of the game.

Card number 2 (image) presents the following statement: "the pregnant woman can eat and drink liquid freely during labor", however the corresponding image chart showed a pregnant woman eating, with peripheral venous access in her left hand and showed no liquid to drink. The judges suggested a change in the image to include a drink and to remove the peripheral venous access, since according to the classification of good practices in obstetric care the presence of venous access for routine intravenous infusion in labor is an ineffective practice that should be eliminated. While, providing oral liquid is a clearly useful practice that should be encouraged.³

Card number 9 (content) presents the following statement: "having an intestinal lavage before giving birth is harmful". The judges evaluated this content as difficult to comprehend for the pregnant woman, since the language is not colloquial. However, they did not suggest any statement that could replace the one presented in the game.

Several studies were identified that elaborated educational material in the form of a game, however, none were found that associated an image with statements. The games presented in various works^{14-19,34} use written and verbal communication as the main focus of the game, however, they do not present an image. Images are important resources for communicating scientific ideas, as well as being fundamental as resources for visualization, contributing to the intelligibility of diverse scientific texts and playing a fundamental role in the constitution of ideals and their contextualization.³⁵ Furthermore, the image stands out because it is self-explanatory, with it overcoming any language barriers. Thus, it is considered important to use creativity to develop health education strategies to address significant issues to promote changes in attitudes and behaviors to improve the quality of care, especially in changes of paradigms.³⁶

The originality of this game was in the combination of images and statements. This made the information clearer and easier to understand, with the aim of passing on the good care practices and rights of the pregnant woman during labor, delivery and the puerperium, since the game portrays real situations that women may experience.

Limitations of the study

Despite the content validation, more studies, as well as the application, are necessary to evaluate the effectiveness of this game as a teaching-learning strategy. The game can guide the health professional in approaching the good care practices of childbirth with the pregnant women, however, it is necessary

to prepare the facilitator, especially when he/she is not an obstetrician, to deal with the issues and worries that may arise with the game.

Contributions to the area of nursing, health or public policy

This game, constructed for the guidance of pregnant women in the prenatal period, has the potential to help women understand their rights and the care practices considered appropriate in childbirth, providing the knowledge and conditions to demand these rights.

CONCLUSION

The construction and validation of the content of the game proved adequate according to the percentage of agreement of the judges. The educational material with images makes this game original and has proven to be adequate for guiding and preparing pregnant women regarding good care practices in the process of giving birth.

REFERENCES

1. Ministério da Saúde (BR). Secretaria de Políticas de Saúde. Projeto promoção da saúde: declaração de Alma-Ata, Carta de Ottawa, Declaração de Adelaide, Declaração de Sundsvall, Declaração de Santafé de Bogotá, Declaração de Jacarta, rede de mega países, Declaração do México. Brasília (DF): Ministério da Saúde; 2001.
2. Fujita JALM, Shimo AKK. Humanizing labor: experiences in the unified health system. *Rev Min Enferm* [Internet]. 2014 Oct/Dec; [cited 2016 Jan 20]; 18(4):1011-15. Available from: <http://www.reme.org.br/artigo/detalhes/979>
3. Ministério da Saúde (BR). Secretaria de Políticas Públicas de Saúde. Parto, Aborto e Puerpério. Assistência Humanizada à Mulher: manual técnico. 2ª ed. Brasília (DF): Ministério da Saúde; 2003.
4. Sanchez AL, Lange I, Campos C. El juego como técnica de educación en salud. *EPAS Educ Autocuidado Salud*. 1988;17(5):8-12.
5. Rosa RSD, Benevides RE, Maciel JB, Monteiro D, Bernardes RM. Recursos didáticos-pedagógicos na promoção da educação popular em saúde. Anais do 2º Congresso Brasileiro de Extensão Universitária. Belo Horizonte. Minas Gerais. 2004. [Internet]. [cited 2016 Jan 20]. Available from: <https://www.ufmg.br/congext/Saude/Saude176.pdf>
6. Mariano MR, Rebouças CBA, Pagliuca LMF. Educative game on drugs for blind individuals: development and assessment. *Rev Esc Enferm USP* [Internet]. 2013; [cited 2016 Feb 15]; 47(4):927-33. Available from: <http://www.revistas.usp.br/reeusp/article/view/78044/82066>
7. Stefanelli MC, Cadete MMM, Aranha MI. Proposta de ação educativa na prevenção da AIDS: Jogo educativo. *Texto Contexto Enferm*. 1998;7(3):158-73.
8. Vivas E, Sequeda MG. Um juego como estrategia educativa para el control de aedes aegypti em escolares venezolanos. *Rev Panam Salud Publica* [Internet]. 2003; [cited 2016 Feb 15]; 14(6):394-401. Available from: <http://www.scielo.org/pdf/rpsp/v14n6/a04v14n6.pdf>
9. Antunes C. Manual de técnicas de dinâmica de grupo, de sensibilização de ludopedagogia. 1ª ed. Petrópolis: Vozes; 2001.
10. Marzolo PL. Jogo educativo: quién sabe más de SIDA? *Educ Autocuidado Salud*. 1989;6(2):38-42.
11. Magalhães CR. The game as an educative pretext: educate and educate oneself in a health formation program. *Interface (Botucatu)* [Internet]. 2007 Sep/Dec; [cited 2016 Mar 11]; 11(23):647-54. Available from: http://www.scielo.br/scielo.php?pid=S1414-32832007000300021&script=sci_arttext&lng=pt

12. Handem PC, Rocha RG, Figueiredo N, Tavares R, Santos I. O jogo dramático na enfermagem como pedagogia libertadora: o indutor imagem para pensar o cuidado e a prática. *Enferm Bras*. 2003;2(5):287-94.
13. Coscrato G, Pina JC, Mello DF. Use of recreational activities in health education: Integrative review of literature. *Acta Paul Enferm* [Internet]. 2010; [cited 2016 Jan 23]; 23(2):257-63. Available from: http://www.scielo.br/pdf/ape/v23n2/en_17.pdf
14. Bonadio IC. Conhecimento de gestante nulípara sobre sinais e sintomas de trabalho de parto. *Rev Paul Enferm*. 1993;12(1):35-42.
15. Reis SEH, Bonadio IC. Jogo educativo sobre os sinais do parto para grupo de gestantes. *Nursing*. 2007;10(113):460-6.
16. Fonseca LMM, Schochi CGS, Bis CEF, Serra SOA. Utilizando a criatividade em saúde em alojamento conjunto neonatal: opinião de puérperas sobre o uso de um jogo educativo. *Rev Bras Enferm* [Internet]. 2000; [cited 2016 Feb 10]; 53(2):301-10. Available from: <http://www.scielo.br/pdf/reben/v53n2/v53n2a16.pdf>
17. Leite AM, Gonçalves R, Stefanelli MC, Bonadio IC. Jogo educativo na orientação grupal de puérperas em alojamento conjunto: uma estratégia de educação para saúde. *Texto Contexto Enferm*. 1998;7(3):59-72.
18. Fonseca LMM, Schochi CGS, Mello DF. Educação em saúde de puérperas em alojamento conjunto neonatal: aquisição de conhecimento mediado pelo uso de um jogo educativo. *Rev Latino Am Enferm* [Internet]. 2002; [cited 2016 Mar 10]; 10(2):166-71. Available from: <http://www.scielo.br/pdf/rlae/v10n2/10510.pdf>
19. Andrade LZC, Freitas DT, Holanda GF, Silva VM, Lopes MVO, Araujo TL. Desenvolvimento e validação de jogo educativo: medida da pressão arterial. *Rev Enferm UERJ* [Internet]. 2012; [cited 2016 Feb 1]; 20(3):323-7. Available from: <http://www.facenf.uerj.br/v20n3/v20n3a07.pdf>
20. Beaton DE, Bombardier C, Guillemin F, Ferraz MB. Guidelines for the process of cross-cultural adaptation of self-report measures. *Spine (Phila Pa 1976)* [Internet]. 2000; [cited 2018 Apr 5]; 25(24):3186-91. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/11124735>
21. Magalhães MN, Lima ACP. Noções de probabilidade e estatística. 7ª ed. São Paulo: Edusp - Editora da Universidade de São Paulo; 2015.
22. Oliveira SC, Lopes MVO, Fernandes AFC. Development and validation of an educational booklet for healthy eating during pregnancy. *Rev Latino Am Enferm* [Internet]. 2014 Jul/Aug; [cited 2016 Feb 15]; 22(4):611-20. Available from: <http://www.scielo.br/pdf/rlae/v22n4/0104-1169-rlae-22-04-00611.pdf>
23. Stefanelli MC. O uso do jogo educativo no ensino da enfermagem. *Rev Esc Enferm USP* [Internet]. 1991 Dec; [cited 2016 Jan 20]; 25(3):347-61. Available from: <http://www.scielo.br/pdf/reeusp/v25n3/0080-6234-reeusp-25-3-347.pdf>
24. Torres MRL. A importância da leitura de imagens para o ensino e aprendizagem em artes visuais [monografia]. Tarauacá: Universidade de Brasília. Departamento de Artes Visuais; 2011.
25. Rios CTF, Vieira NFC. Ações educativas no pré-natal: reflexão sobre a consulta de enfermagem como espaço para educação em saúde. *Cienc Saúde Coletiva* [Internet]. 2007 [cited 2016 Jan 10]; 12(2):477-86. Available from: <http://www.scielo.br/pdf/csc/v12n2/a24v12n2.pdf>
26. Souza VB, Roecker S, Marcon SS. Ações educativas durante a assistência pré-natal: percepção de gestantes atendidas na rede básica de Maringá-PR. *Rev Eletr Enferm* [Internet]. 2011; [cited 2016 Feb 10]; 13(2):199-210. Available from: https://www.fen.ufg.br/fen_revista/v13/n2/v13n2a06.htm
27. Backes VM, Lino MM, Prado ML, Reibnitz KS, Canaver BP. Competência dos enfermeiros na atuação como educador em saúde. *Rev Bras Enferm* [Internet]. 2008 [cited 2016 Jan 10]; 61(6):858-65. Available from: <http://www.scielo.br/pdf/reben/v61n6/a11v61n6.pdf>
28. Moura ERF, Rodrigues MSP. Comunicação e informação em saúde no pré-natal. *Interface Comun Saúde Educ* [Internet]. 2003; [cited 2016 Mar 16]; 7(3):109-18. Available from: <http://www.scielo.br/pdf/icse/v7n13/v7n13a07.pdf>
29. Sartori GS, Van Der Sand ICP. Grupo de gestantes: espaço de conhecimentos, de trocas e de vínculos entre os participantes. *Rev Eletr Enferm* [Internet]. 2004; [cited 2016 Jan 10]; 6(2):153-65. Available from: <https://revistas.ufg.br/fen/article/view/821/950>
30. Silva FMB, Paixão TCRP, Oliveira SMJV, Leite JS, Osava RH. Care in a birth center according to the recommendations of the World Health Organization. *Rev Esc Enferm USP* [Internet]. 2013; [cited 2016 Jan 10]; 47(5):1031-8. Available from: <http://www.scielo.br/pdf/reeusp/v47n5/0080-6234-reeusp-47-05-1031.pdf>
31. Progiante JM, Costa RF. Práticas educativas desenvolvidas por enfermeiras: repercussões sobre a vivências de mulheres na gestação e no parto. *Rev Bras Enferm USP* [Internet]. 2012; [cited 2016 Jan 1]; 65(2):257-63. Available from: <http://www.scielo.br/pdf/reben/v65n2/v65n2a09.pdf>
32. Costa APC, Bustorff LACV, Cunha ARR, Soares MCS, Araújo VS. Contribuição do pré-natal para o parto vaginal: percepção de puérperas. *Rev Rene* [Internet]. 2011; [cited 2016 Feb 10]; 12(3):548-54. Available from: http://www.revistarene.ufc.br/vol12n3_pdf/a14v12n3.pdf
33. Organização Mundial da Saúde. Maternidade segura. Assistência ao parto normal: um guia prático. Genebra: Organização Mundial da Saúde; 1996.
34. Fernandes CS, Martins MM, Gomes BP, Gonçalves LHT. Family Nursing Game: Desenvolvendo um jogo de tabuleiro sobre Família. *Esc Anna Nery* [Internet]. 2016; [cited 2016 Jan 15]; 20(1):33-7. Available from: http://www.scielo.br/pdf/ean/v20n1/en_1414-8145-ean-20-01-0033.pdf
35. Belmiro CA. A imagem e suas formas de visualidade nos livros didáticos de Português. *Educ Soc* [Internet]. 2000; [cited 2016 Feb 15]; 21(72):11-31. Available from: <http://www.scielo.br/pdf/es/v21n72/4191.pdf>
36. Lobiondo-Wood G, Haber J. Pesquisa em enfermagem: métodos, avaliação crítica e utilização. 4ª ed. Rio de Janeiro: Guanabara-Koogan; 2001.

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^b The images referring to the cards of the game numbered 6, 7, 8, 9, 10, 14, 15, 17 and 18, were produced by the authors and the person who appeared in the image signed a authorization term for the use of the images for publication. The images referring to the cards numbered 1, 2, 3, 4, 5, 11, 12, 13, 14, 16, 19, 20, and 22 were purchased from the stock database of Shutterstock, thus obtaining prior authorization to use the images.