

Family Nursing Game: Developing a board game

Family Nursing Game: Desenvolvendo um jogo de tabuleiro sobre Família

Family Nursing Game: Desarrollando un juego de tablero sobre la familia

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ABSTRACT

Some nurses in Portugal still have no training on family nursing and their professional practice is only based on their personal experience as a member of a family. The aim of this study is to describe the development of an educational tool, a board game called "Family Nursing Game", which was developed, tested and validated for nurses learning the content of family nursing within a hospital context. The development of the methodology followed the ten stages proposed by Jaffe, from the definition of the content, objectives, game formulation with its rules, evaluation of reliability and validity, until its testing with the target population. The results, from the evaluation of nurses who agreed to perform the board game test along with other educational strategies, highlighted their preference for the game, due to the source of interaction and reflection provided among participants, and motivation for family care, making the game a learning facilitator agent.

Keywords: Hospital nursing service; Nurse; Family nursing; Continuing education; Educational technology.

RESUMO

Alguns enfermeiros em Portugal ainda não possuem formação em enfermagem de família, e sua prática profissional se baseia tão somente na experiência pessoal enquanto família e membro de uma família. Este artigo tem o objetivo de descrever o desenvolvimento de um material didático, jogo de tabuleiro intitulado "Family Nursing Game", construído, testado e validado, para enfermeiros na aprendizagem do conteúdo de enfermagem de família em contexto hospitalar. A metodologia desse desenvolvimento seguiu as dez etapas propostas por Jaffe (2011), desde definição de conteúdo, objetivos, formulação do jogo, avaliação da confiabilidade e validade e testagem de sua aplicação na população alvo. Os resultados, segundo a avaliação dos enfermeiros que se submeteram ao teste deste jogo de tabuleiro, ao lado de outras estratégias, realçaram preferência pelo jogo, pela fonte de interação e reflexão que ele permite entre os participantes e por motivarem-nos ao cuidado da família, fazendo do jogo um agente facilitador da aprendizagem.

Palavras-chave: Serviço hospitalar de enfermagem; Enfermeiro; Enfermagem de família; Educação continuada; Tecnologia educacional.

RESUMEN

Parte de los enfermeros en Portugal no tienen formación en enfermería de familia y sus prácticas solamente se adaptan con la propia experiencia, siendo familia también. El objetivo fue describir los pasos metodológicos en el desarrollo de un juego de tablero para enseñar sobre familia llamado "Family Nursing Game". El mismo fue construido y validado para enseñar la enfermería de familia a los enfermeros en el contexto de los cuidados en una unidad hospitalaria. La metodología de este desarrollo siguió las diez etapas propuestas por Jaffe, desde la definición del contenido y objetivos, la formulación del juego con evaluación de su confiabilidad y validez hasta probarlo con la población. Como resultado, los enfermeros hospitalarios que sometieron a la prueba del juego, los mismos realizaron preferencia por este juego, entre otras estrategias educacionales, por la fuente de interacción y reflexión que permite a los participantes, motivación para cuidado de la familia y considerando al juego como agente facilitador del aprendizaje.

Palabras clave: Servicio de enfermería en hospital; Enfermero; Enfermería de familia; Educación continua; Tecnología educacional.

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INTRODUCTION

The evolution that occurred in the last decades has created impacts on several levels: family, work, health, education, research and society in general. Hospitals have been targeted for many changes, namely in their structure, function and operation. They have been gradually considered as companies, in an increasing process of rationalization of practices. Although the opening of Portuguese hospitals to families has evolved in the last years, from the nurses' point of view the family is especially considered a support and a resource for patient care¹. Nurses recognize the importance of families for the care of the hospitalized patient, however, they lack a comprehensive view of the health and illness concept in the family, since the illness of a relative affects the whole family and its dynamics, leading the family to a need for professional care². Therefore, streamlining the training of professional nurses to help and embrace the hospitalized individuals and their families is of utmost importance.

Among several educational strategies applicable for the continuing education of healthcare professionals, the researchers decided on the development of a didactic material, a board game to teach family nursing, with the main purpose of showing nurses the possibilities to embrace accompanying/visiting families of hospitalized individuals by recreating means of intervention, favoring the family system, incorporating the usual individual paradigm of our acts into the focus on the family system as a unit.

The board game in question represents a teaching and learning strategy that triggers interest of students on the focused subject, enabling the acquisition of knowledge and skills, review of contents, increased attention³, promotion of interaction among students⁴, and a more intense involvement in the learning process. Regarding the applicability of this strategy on adults, the literature indicates that games meet their needs, since adults prefer to take over responsibility for their learning and having their own knowledge integrated^{4,5}. The use of games challenges the current perspectives of adult education, and human resource management and training in companies.

In the present society, we are led to learn from innovative strong interactive stimuli and we seek to find an innovative way for adult learning. Education in a work context, most times called in-service education, intends in its concept to work the theory-practice binomial in solving real problems, by contextualizing the knowledge on the complexity of the nursing practice⁶. However, people's way of thinking and/or acting must change for education to take place. The great complexity is how to develop an education time, facilitator of learning, to motivate nurses to look for a specific knowledge on family.

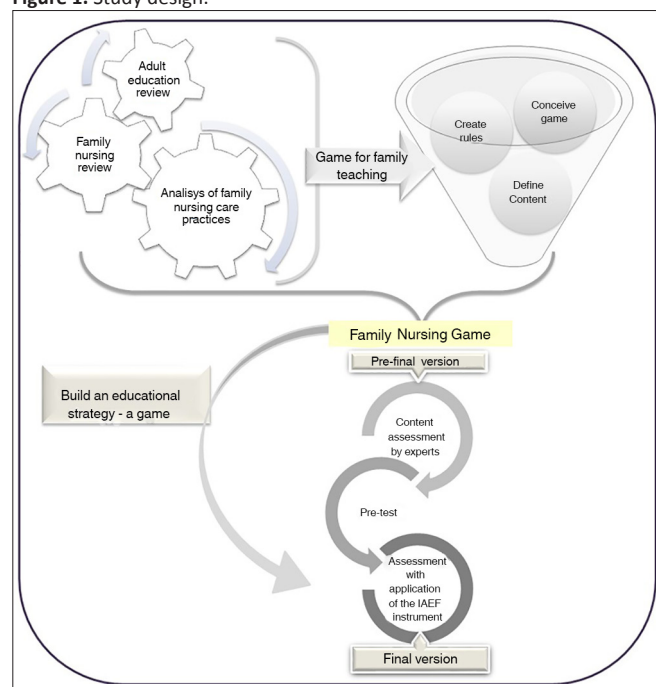
Games can meet these characteristics, since they are experimental and may provide a regular feedback, being a way to motivate, reinforce skills and promote collaboration⁷. The literature indicates that the first nurses interested in games as a teaching strategy date back to the early 1980s⁸. This concern leads us to the choice and development of a board game as an innovative strategy, a helping agent for change in an in-service education program on family nursing with hospital nurses of a

Central Hospital in northern Portugal. The study objective was to describe the methodological steps for the development of this board game, called "Family Nursing Game", which was created, tested and validated to teach nurses on family care within a hospital context^{9,10}.

METHODOLOGY

The idealization of the board game called Family Nursing Game was motivated by the acknowledgement that innovation and creativity of games may constitute strategies that meet the target audience needs. Our concern was focused on creating a different tool to qualify adults on family knowledge and family nursing. Figure 1 presents the study design, describing the development of stages, as proposed by Jaffe⁶, test and validation of the game.

Figure 1. Study design.



In the previous stage to the conception of the game, a review of educational resources of teaching/learning was carried out, in a search for applicable training strategies for adults. A review of contents on family nursing was also conducted, namely definitions of family concept, family process and functions, as well as assessment tools and family nursing intervention. The review was of utmost importance for the development of the Family Nursing Game, as a pre-final version^{9,10}.

Test and evaluation

Collaboration of 62 nurses, considered specialists in family nursing, was requested for evaluation of the game's content. An on-line questionnaire was sent by e-mail, with a sample of 40 of the 360 questions of the game (each card of the game contains 6 questions, being 20 cards for each level (beginner, advanced

beginner and expert), of which 37 (59%) specialists answered. The distribution of the specialists was performed according to their professional activity area. Most specialists were health care providers within the hospital context (67.5%, 25 nurses), followed by professionals from the education (24.3%, 9 nurses) and management areas (8.1%, 3 nurses).

The test and evaluation of the game were conducted at a Central Hospital in the north of the country, with capacity of 1,105 beds. The participation of nurses was limited to those who were working at medical service units. A convenience sample of 85 participants was selected in a population of 100 nurses working at the hospital, who voluntarily joined the study, within an estimated period for its conduction. After the use test of the Family Nursing Game, a self-administered questionnaire tested for adult training (IAEF¹⁰, as per its acronym in Portuguese) was administered. The questionnaire consists of 20 questions on a Likert scale, with five possible answers from 1 to 5 in each item, whose evaluation may result in the minimum score of 20 and maximum of 100. The tool is comprised of three dimensions: evaluation of satisfaction, evaluation of results, and evaluation of procedure. It has high internal consistency, with 0.952 of Cronbach's alpha.

The administration board of the hospital permitted the development of the study and all study participants provide free and informed consent: the specialists who evaluated the game content and the nurses who agreed to perform the game to test its application.

RESULTS

The present study led us to develop and use a board game called "Family Nursing Game" as mentioned before. The development of this educational tool followed the stages of Jaffe⁷, already published, adapted and with the incorporation of results (Figure 2).

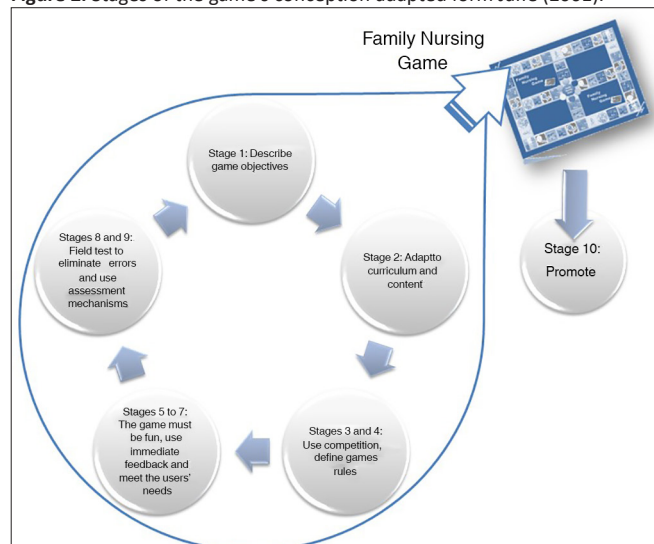
Stage 1: Description of the specific objectives of the game

Games necessarily integrate educational strategy in general. According to Jaffe⁷, when developing a game, the educator must determine its content, discuss educational context and determine objectives. That is, games do not emerge from nowhere just to be different, because they will not have any effect on the results⁷. In this case, the objectives of the game consisted in recalling knowledge on the family development process through the life cycle, means of observing families by its unique nature and systemic perspective, strategies to develop skills to evaluate families and intervene in family care, development of reflexive criticism to understand family interference in the health/illness process and the development of care practices shared with families.

Stage 2: Adoption of the game in continuing education context

It is worth mentioning the importance in questioning whether the game helps in learning family definitions and developing relevant skills for nursing practice with families in certain contexts³.

Figure 2. Stages of the game's conception adapted from Jaffe (2001).



This is because, as referred by Wright & Leahey, specialists in family nursing, in any clinical practice environment, it is useful and necessary that nurses adopt a precise conceptual structure with a map of evaluation conducts and interventions according to the context and needs of the families¹¹.

Stage 3: The game as a competition place - learning stimulus

The game must represent a challenge for students, triggering their interest and motivation to participate³. Usually, there are winners in playful games. In educational games, even with losers, they must feel that the experience is stimulating and challenging. It is possible for an apprentice to compete against himself³.

The Family Nursing Game is a board game in which the progress is determined by the player/team capability in answering questions about contents related to family care^{9,10}. Each team receives a pad with a family photo, associated with the team's color, and must acquire the corresponding parts of the puzzle to complete it. The winning team will be the first to acquire the six pieces of the puzzle.

Stage 4: Definition of the game rules

Some questions must be considered in this stage of definition of rules, such as format of the game, challenge, number of players and game time among other questions⁷. Thus, our Family Nursing Game provides organized cards in six topics and defined rules. In the game application, it is possible to involve groups up to 30 players, distributed into six teams wearing vests with specific colors such as orange, yellow, green, blue, pink and brown. The cards may acquire different levels of complexity, depending on the target population (level I for beginners, level II for advanced beginners, level III for experts).

Stage 5: The game rule is to provide entertainment

Providing entertainment and fun is the game rule³. Encouraging players to "laugh with each other", in opposition to "laugh

at others" is Jaffe's⁷ recommendation. The development of the Family Nursing Game carefully privileged such characteristics, which were emphasized on the evaluation of nurses who performed the game test, showing their preference when comparing it to other teaching methods^{9,10}.

Stage 6: The game provides instant feedback from participants

The methodology adopted in our game provides instant feedback from nurses testing it. Most of them said to be motivated by the interaction with the competition team and in the group participants as a whole, challenged to reflect on the approached subject and felt that learning on family was made easier⁹.

Stage 7: The game must meet the participants' needs

The importance of planning an educational strategy stands on meeting the target population's needs and interests, considering aspects such as age, gender, culture, ethnicity, activity, socio-economic condition, social context and academic level⁴. These requirements were observed in the development of the game, intended for a population of adults, nurses with experience in hospital practice and a higher propensity to kinesthetic activities^{12,13}.

Stage 8: Field test is essential

The game must be tested in a practical field, criticized and eventually reviewed for elimination of application errors⁷. In this respect, the development of the Family Nursing Game reached for two strategies to respond to this stage: the validation of the questions by specialists and the practical test. According to Henderson³, when a game is developed, its value must be analyzed by evaluating its validity, reliability and usefulness. Content validity indicates that the game has the elements for which the used indicators may translate the adopted concepts¹⁴. The evaluation was based on the agreement among the 37 specialists in family care that examined the content of the tool. There are disadvantages in the game use, as it happens with any other teaching strategy: the wording of good questions may depend on the context and circumstances of application¹³. However, its reliability is a requirement that must produce predictable results. The results may not be the same for different groups, but they must be consistent and predictable³. This verification is usually made before the final data collection, in a pre-test¹⁴. The Family Nursing Game was initially tested with 85 participants of the 100 hospital nurses working at the medical service units of a Central Hospital, of which 35 (41%) reported that they did not have education in family nursing.

Stage 9: The importance of the evaluation tool

The games must be carefully planned and must include time to gather opinions¹⁵. The evaluation is an important stage of any development process. A self-administered questionnaire

tested for adult training was used as an evaluation tool. In a score between 20 and 100, the game had a mean rating of 81.4 with a standard deviation of 9.210.

Stage 10: Game promotion

As games are active strategies, further research regarding the learning results¹³ must be carried out to provide consistency of its reliability and validity in continuous usage. Besides being advantageous for the scientific community, this knowledge must be spread and shared⁷.

DISCUSSION

The different stages in the development of the board game Family Nursing Game, especially its validation and evaluation, indicate the possibility of including it among the educational teaching and training strategies of nurses and nursing students on family nursing.

Based on the results of stage 8, reviews regarding the game's questions were conducted, identifying the appropriate group size, so that it would not conflict with the strategy objectives. According to some authors, restrictions on small groups may be seen as disadvantages for the use of games^{4,13,16}. It was also possible to identify the game as a useful tool for diagnosis, training and review. The style games can be advantageous for formative evaluation and to verify whether students achieve the learning objectives, or if they need more training in a particular area¹⁵.

Regarding its validity to teach families, the game contemplates the criteria for an effective learning, since it draws attention to a particular subject; and its meaning and knowledge enable it to be discussed and carried to practice¹⁷, proving to be valid to teach contents of nursing family, as per the tested nurses.

The evaluation of the Family Nursing Game by nurses was extremely positive in the several dimensions of the scale, regarding satisfaction, results and procedure.

Although the development and use of educational games are not frequent in the Portuguese nursing literature, its use is not recent and it is widely promoted in the international context. Tradition is among the obstacles for using¹⁶ games, which are not considered serious enough to be used in teaching. This opinion was corroborated for many years by traditional professors, who were followers of strict rules and regulations¹⁸. Those who support the use of games as a teaching strategy in nursing (including the authors of this study) expect games to arouse enthusiasm and produce satisfaction, increasing motivation and retention of knowledge, and consequently improvement of learning¹².

CONCLUSION

The development of information networks, where everything is available within just a click, set great challenges for educators. The resource to innovation and creativity may be an educational strategy to meet the target audience needs, in which games are

included. The present study was conducted in a hospital practice context, integrating adult education in a professional context, and it may be replicated and tested on nursing education or in other similar contexts. The use of games in education may increase interest and motivation for learning. The results prove that the game is a strategy that needs to be incorporated to adult education. In this context, a game such as the Family Nursing Game may be considered an ideal tool for learning.

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