Application of an Educative Health Technology in the Training of the Caregiver Family

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Abstract: The focus of this research is the use of an Educational Technology in Health (ETH) to train the family caregiver in the adherence of hypertensive users to treatment. The participation of the effective family is a factor that can interfere favorably in the other factors, due to its salutary importance in the involvement of the health-disease process of its members. Participant research with the objective of evaluating the changes in the participation of the family caregiver in the adherence of the hypertensive user to the treatment with the application of the Educational Technology in Health, carried out in a Primary Health Care Unit (PHCU) in Fortaleza, Ceará, Brazil, with a group of eleven family caregivers (CF) indicated by the same number of hypertensive users registered in the cited PHCU. The ETH was elaborated based on the assumptions of health education. The ETH consists of 11 (eleven) weekly meetings, with an average duration of sixty minutes. The information was organized through the Bardin content analysis. After the analysis of the results with the application of ETH, we noticed the occurrence of learning among the FC, but in an unequal way. It is seen that the deficit of previous knowledge about arterial hypertension and the treatment differentiated between them, since each one reported diversified experiences.

1 INTRODUCTION

The focus of this research is the use of an Educational Technology in Health (ETH) for training the caregiver family (CF) in the adherence of hypertensive users to treatment. The Systemic Arterial Hypertension (SAH) is a serious health problem in Brazil and in the World (Who, 2013).

The SAH is correlated with clinical complications that lead a significant number of person brazilians to death. Many complications could have been avoided and/or minimized, such as acute myocardial infarction, stroke and renal failure, if they had adhered early to the therapeutic plan (Piccini et al, 2012).

The family is paramount in the care of its members in both health and disease conditions and its importance has been related to a greater adherence to treatment by individuals with a health problem, especially when it is included as a participant in the health-disease process, since it contributes substantially to the promotion of health (Squarcini et al, 2011).

For Martins et al (2012), the family context is the first space of identification and explanation of the illness of its members and where the phenomena of health and disease acquire greater relevance. The impact of the disease falls on all family members, just as family interaction has an influence on their cure.

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The follow-up of coping with the disease in the family depends on some factors. These refer to the stage of life in which the family finds itself, to the role played by its sick member, to the implications of the impact of the disease on each of them and to the way it is organized during the period of illness (Brazil, 2006).

Regarding the interaction and family participation, the assistance to SAH has been approached and highlighted by numerous studies, where, increasingly, there are studies that show the success that can result from the association between family care and care (Lopes and Marcon, 2009).

The participation of the effective family is a factor that can interfere favorably in the other factors, due to its salutary importance in the involvement of the health-disease process of its members. Among the relatives, usually one and at most two stand out in the care with the others. However, in the provision of effective and adequate care, the FC should be trained to perform preventive actions and/or control of injuries to the health of the member, especially when it comes to a chronicity.

Thus, we agree with Soares et al (2011) at affirming that, when the CF properly trained and with adequate knowledge about SAH is a great facilitator of the treatment adherence process. Although the perception of the benefits regarding the adoption of measures for the prevention and control of hypertension does not necessarily imply the coherence and effectiveness of actions in search of adherence.

Therefore, it is very important to provide the person with hypertensive elements so that he can understand the treatment leading him to believe that he will have positive results if he follows it properly. Because of the fundamental importance of family participation in determining hypertensive patient adherence to treatment, the need arose to empower or empower CF through an ETH with the purpose of making their participation effective and efficient in adhering to the hypertensive person to the treatment, as well as, to adopt preventive measures of the risk of the SAH between the relatives, since this aggravation is hereditary.

The ETH are important tools for the performance of educational work and the caring process. The ETH integrates the group of light technologies, called relationship technology, such as hosting, bonding, automation, accountability and management as a way of governing work processes (Merhy, 2002).

The technologies are processes materialized from the daily experience of health care and some derived from research for the development of a set of activities produced and controlled by human beings. It serves to generate and apply knowledge, to master processes and products and to transform empirical utilization, so as to make it a scientific approach (Nietsche et al, 2014).

The use of these technologies contemplates the existence of a dynamic work object, in continuous movement, no longer static, passive or reduced to a physical body. This object demands from health professionals, especially nurses, a differentiated ability to look at it so that they perceive this dynamicity and plurality, which challenge subjects to creativity, listening, flexibility and sensitivity (Rosso and Lima, 2005).

The recommendations for care usually require interventions of light, hard and soft technologies, associated with changes in lifestyle, in a process of continuous care that does not lead to cure (Brazil, 2014).

So, based on the relevant performance of the family caregiver in the hypertensive user's adherence to the treatment, we asked: What does the CF know about SAH and treatment? How has the CF experienced participation in hypertensive treatment adherence? and the ETH can facilitate the participation of the CF in the adherence of the hypertensive user to the treatment?

Based on these questions, we opted for this study with the objective of analyzing the participation of the caregiver family in the adherence of the hypertensive user to the treatment with the application of an educational technology in health.

The results of this study will be presented to the Coordinator and Family Health Teams of the Primary Health Care Unit (PHCU) (study locus) with the purpose of contributing to the (re) planning of the actions directed to the training of CF for effective participation in the adherence of the hypertensive person to the treatment by Implementation of ETH, as they will also be published in article formats or in book chapter.

2 OUTLINE OF OBJECTIVES

To evaluate the changes occurred in the participation of the family caregiver in the adherence of the hypertensive user to the treatment with the application of the Educational Technology in Health (ETH).

3 STATE OF THE ART

Before any discussion about health promotion through health education, it is necessary to

understand the health-disease process considering it as a result of a certain social experience and diverse influences as factors linked to education as culture, intellectuality, education, and also related to the environment such as sanitation, transportation, housing, drinking water and, finally, the economic aspect. These factors influence and characterize social life and quality of life. Therefore, it is perceived that "*health*" has varied meanings and intimate relation with well-being and conception of the environment (Longhi, 2013).

In educational practice, health promotion actions seek to intervene in people's living conditions, so that they are dignified and appropriate, helping in the decision-making process towards quality of life and health. On the other hand, preventive educational actions guide actions to detect, control and weaken risk factors, focusing on actions that distancing or avoiding the disease (Pinafo et al, 2012).

Thus, empowering people with illness through health education is a way of motivating them to cope and accept their health condition and enable them to comply with the prescribed therapeutic plan (Brazil, 2014).By becoming caregivers, people share their perceptions, emotions, feelings, values, and knowledge as being in their care (Oliveira and Carraro, 2011).

Since the earliest times, the family has played an important role for the individual and is therefore considered a primary social system within which the individual is cared for and develops on a physical, personal and emotional level (Sarmento et al, 2010) .

There are several reasons why the family member performs this caregiver role, among them: duty or obligation; gratitude/retribution; financial dependence; degree of kinship; genre; physical and affective proximity; marital status; family tradition. Many are also the difficulties faced by the caregiver. According to studies, the main difficulties are related to the type of care, financial problems and social restriction. The prior relationship with the person being cared for, the cause and degree of dependence of the elderly, the help given by other family members, the demands placed on caregivers, the family income, the caregiver's health status and the acceptance of the caregiver. Care are factors that generate stress to the family caregiver (Cruz et al, 2010).

The CF show a set of needs, which should be privileged focus of attention and intervention of nurses. These professionals should then orient their interventions to adequately meet these same needs and thus obtain the desired health gains and well-being of caregivers (Melo et al, 2014).

The tasks attributed to the caregiver often without adequate guidance and the support of the institutions that attend the family member under care have an impact on their quality of life (Amendola et al, 2008). Thus, understanding the family's interactions with the disease allows the practitioner to realize that CF also need care, counseling, and strategies for stress relief. Thus, they may have better living conditions and, consequently, may provide better quality care for the sick relative (Manoel et al, 2013).

The role of this approach is a challenge for health and education professionals, who demand intersectoral attention (Barros et al, 2006) to promote the general health of families and the community (Leão et al, 2011).

The practices of Health education (HE) involve three segments of priority actors: health professionals who value prevention and promotion as well as curative practices; managers who support these professionals; and the population that needs to build their knowledge and increase their autonomy in care, individually and collectively. Although the definition of Ministry of Health (MS) presents elements that presuppose this interaction between the three segments of the strategies used for the development of this process, there is still a great distance between rhetoric and practice (Falkenberg; Mendes.; Moraes; Souza, 2014).

For Melo et al (2014) to provide caregivers with the knowledge and skills they need is important, not only to take better care of their family members, being a facilitating factor for a healthier performance of functions.

Thus, HE seen as a social practice began to be rethought as a process capable of developing reflection and critical awareness of the people about the causes of their health problems, prioritizing the event of a process based on dialogue, so that people can move to work and not to people (Freire, 1983; Brazil, 2007).

In this regard, Alves and Aerts (2011) explain strategies of educational action as: the participation of health professionals in the training of individuals and population groups, in order to assume responsibility for their health problems; understand that the subjects of this process have different visions about social reality and that these should be the starting point of the educational action; popular participation and the strengthening of the role of the health service.

For Daniel and Veiga (2013) even though the identification of the diagnosis is considered easy and there are efficient therapeutic measures for the maintenance and effective control of the therapeutic regimen related to SAH, it has been an arduous task. This situation has been experienced by the patient, his family, professionals and health institutions.

Early detection of SAH and interventions for risk factors, such as changes in lifestyle, favor the control of this disease, since it has no cure. In addition, the knowledge of its risk indicators can be of great value in directing health policies (Silva et al, 2014).

Adherence to therapy by patients with chronic diseases such as hypertension has been discussed as a complex and multifactorial process. From the point of view of the individual, adherence is related to the recognition, acceptance and adaptation to health condition, as well as to the identification of risk factors in the adopted lifestyle and the development of self-care and healthy habits and attitudes (Reiners et al, 2008).

In view this context, the importance of the association between health services, the health team and the family, where each one plays a role of relevance to adherence to treatment is perceived. Health services collaborate in adherence to the control of Systemic Arterial Hypertension (SAH) through previously scheduled and routine consultations. The health professional is responsible for transmitting his theoretical skills, taking the role of educator and health promoter through the health guidelines for patients and their families. The family represents a link, giving continuity to the treatment. Educational technologies are tools that aid the assistance and teaching-learning process that are used by professionals through health education, where there is a transfer of knowledge, allowing participation in the whole process allowing the exchange of experience and the improvement of Skills (Barros et al, 2012).

The HE should be seen as a technology in the work process of health professionals, reorienting their work practices, based on the principles of SUS, causing changes in the lives of users and health professionals themselves.

In this context, it is possible to notice the importance of the association between health services, health team and family, where each one represents a relevant role for adherence to treatment. Health services collaborate in adherence to the control of SAH through previously scheduled and routine consultations.

The health professional is responsible for transmitting his theoretical skills, taking the role of educator and health promoter through the health guidelines for patients and their families. The family represents a link, giving continuity to the treatment.

For Ayres (2004), the organization of health practices and therapeutic relationships in the production of care with an emphasis on light technologies enables the effective and creative manifestation of the subjectivity of the other, based on the mechanisms of reception, attachment, autonomy and accountability contained organization of health care.

A valuable alternative to seek health promotion in order to deepen discussions and increase knowledge are the educational work in groups, so that people overcome their difficulties and obtain greater autonomy, better health conditions and quality of life (Silva, 2003).

4 METHODOLOGY

4.1 Type of Study

Participating research. This research modality provides the researcher with the knowledge of the target reality, but also enables the participants-researchers to integrate, through a continuous action-reflection-action of the defined situation, the awareness and understanding for decision making, aiming at transformation (Guarient and Berbel, 2000).

We emphasize as a central point of this methodology the concern with the process itself and not with the product. To that end, Guariente and Berbel (2000) emphasize that the interaction between the researcher and the researched group becomes essential, providing space, where people speak for themselves, revealing their reality, interacting and teaching each other. In this sense, the population involved in the Participating Research has part in the whole process. Population and researcher become partakers of the process under construction for transformation.

4.2 Research Site

The study was carried out in a Primary Health Care Unit (PHCU) of the Regional Executive Secretariat VI (RES VI), in Fortaleza-Ceará-Brasil. The stages of the participant research are: approximation of the target population, with presentation and acceptance of the research proposal; delimitation of the objective of the research by the population involved, through the educational area; data collection for greater knowledge of the participants, through interview; delimitation of the objectives of research by the participating group from their interest; and collective knowledge construction, through the analysis of the data emitted by the participants, of the identification and prioritization of the study objectives, with classification of the situations by the explanations and relationships that arose between the contrast of

everyday knowledge and the systematized universally. Still in the final stage of the research, the elaboration of propositions of transformative actions for the situations raised (Guariente and Berbel, 2000).

4.3 Study Subjects

Participating in the study were a group of 11 (eleven) of the 15 (fifteen) caregivers family (CF) indicated by the same number of hypertensive users enrolled in the PHCU regardless of age, schooling, color, etc. We opted for this number through the possibility of evasion, as in fact occurred, because 04 (four) gave up. We call CF, that member of the family who stands out most in the care of the hypertensive users.

4.4 Work Development

We try to make a reflective description of the process to be experienced by the participants through three moments so planned:

First stage - pre-process participatory process, with data collection with the CF of the PHCU;

Second stage - period of the participatory process, with transcription, categorization and analysis of the speeches issued at the meetings of the participating group; and

Third stage - participatory post-process period, with a new data collection with the subjects participating in the research, for the purpose of evaluating the changes in the participation of the CF in the adherence of the hypertensive user to the treatment with the application of the Educational Technology in Health (ETH).

The ETH was elaborated based on the assumptions of health education. We opted for this theoretical-methodological referential, since we consider it of great relevance to explain the adoption of behaviors that may help in the prevention and control of diseases and also to predict the acceptance of recommendations on care for the health of self and the people of their conviviality.

The ETH consists of 11 (eleven) weekly meetings, with an average duration of sixty minutes. In the meetings, educational workshops were developed through group dynamics, aiming to motivate and strengthen the affective bonds in the outpatient environment, favoring the collective construction of the knowledge about hypertension and treatment. The consolidation of an adhesion group is referred to by Silveira (2005) as a space of solidarity that allows access to information, exchange of experiences, exchange of motivations, mutual support and the experience of a plurality of situations that create opportunities. For the subjects to position themselves, to answer their doubts, to interact and overcome difficulties in the treatment process.

We emphasize that the determination of the day of the week and time for the meetings were determined with the CF, so as not to hinder their daily routine.

4.5 Data Analysis

The information was organized from the content analysis, following the postulates of Bardin (1977), according to the steps for the analysis and interpretation of the collected data:

- *Pre-analysis*. We have done an exhaustive reading of interviews and notes in the field diary.

-*Exploration of material*. After reading, we identify and construct the categories - sociodemographic and sanitary characterization of family caregivers; description of CF' knowledge about systemic arterial hypertension and treatment; description of previous experience of CF with participation in hypertensive treatment adherence; and evaluation of the changes that occurred with the application of educational technology in health -, and later the excerpts from relevant statements were selected.

- *Treatment of results*. Based on the results obtained, we proceed to the interpretation, based on the assumptions of health education, and in the selected literature.

4.6 Ethical Aspects

This research was developed in accordance with Resolution 466/12 of the National Commission of Ethics in Research (NCER), which regulates research with human beings. At participants were guaranteed anonymity and the right to withdraw consent at any time they wish. The data were collected after signing the Free and Informed Consent Term(FICT) and issuing the favorable opinion of the Ethics Committee of the University of Fortaleza (UNIFOR), under number 1.540.566. The subjects were identified by the letter E, followed by the relative numeration of the number of participants (E01 to E11).

5 EXPECTED OUTCOMES

After the analysis of the results with the application of the Educational Technology in Health (ETH) we noticed the occurrence of learning among the caregivers family (CF), but in an unequal way. It is

seen that the deficit of previous knowledge about systemic arterial hypertension (SAH) and the treatment differentiated between these, since each one reported diversified experiences.

With the application of ETH, the CF experienced learning experiences mediated by information exchange, dialogue, socialization of experiences, clarification of doubts and link establishments, and beyond the CF commitment with self-care. We perceive in the CF report the commitment to seek knowledge to provide a quality care to the hypertensive person. The changes that took place were highlighted in the learning and commitment of CF with self-care.

The regular participation in the meetings emphasizes the interest of learning about what one wants to take care of efficiently and effectively.

Women, culturally, have stood out as caregivers, not only in the family system, to a certain extent in other systems - health and social. Regarding the family system, participation is of fundamental importance for the hypertensive person to be treated.

The mode of participation of the CF was revealed by the collaboration, integration and solidarity between the members of the family; performance as a multiplying agent of educational guidelines on the control of hypertension; and in the monitoring of the conducts of control of this aggravation. Participation has led to a change in lifestyle, with the adoption of healthy habits, and the conviction that the family environment is fundamental to this change.

The participation of the CF was facilitated by the experience with the same grievance; nearby residences; hypertensive user acquiescence; and love of life. The forms of participation revealed by CF consisted of: guidance on SAH and treatment; reminder about medication; preparation of meals; option for collective meals; acquisition of medication in case of absence in the UAPS; monitoring in the consultations; monitoring in physical exercises; use of alternative therapies; stress management; medication administration; and reminder about the date of the consultation.

The results of the study may allow the (re) planning of health education strategies by the Family Health Team with CF in order to lead hypertensive users to adherence to the therapeutic management of hypertension and health and wellness promoters, consequently minimizing the problem of public health, which will expand with the prevalence of the elderly in the brazilian population, predicted for 2020, which is likely to increase the prevalence of this condition, since it increases with age, if all possible efforts for its early detection and/or control are not implemented, since SAH has been a preponderant risk factor for cardiovascular and cerebrovascular diseases.

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