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Interrelationship of health education actions in the context of the family health strategy: nurses' perceptions

Inter-relação das ações de educação em saúde no contexto da Estratégia Saúde da Família: percepções do enfermeiro

Interrelación de las acciones de educación en salud en el contexto de la Estrategia de Salud Familiar: percepción de las enfermeras

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ABSTRACT

Objective: To assess the perceptions of nurses about the interrelationship of health education actions in the context of family health strategy. **Methods:** Qualitative nature study in a descriptive-exploratory approach with 15 nurses from the urban area of a Maranhão municipality. The project was approved by the Ethics Committee in Research of the State University of Maranhão under the opinion No. 974,947. **Results:** They were divided into categories: educational activities in family health strategy; impact of the actions on the community; difficulties and strategies inherent in educational activities; self-assessment of nurses as health educators. **Conclusion:** The educational action constitutes itself as an activity inherent in the work of nurses, whose actions are interrelated around a common objective, the promotion of health for the population.

Descriptors: Health Education, Family Health Strategy, Nurses.

RESUMO

Objetivo: Conhecer as percepções do enfermeiro acerca da inter-relação das ações de educação em saúde no contexto da estratégia saúde da família. **Método:** Estudo de cunho qualitativo numa abordagem descritivo-exploratório com 15 enfermeiros da zona urbana de um município maranhense. O projeto foi aprovado pelo comitê de ética em pesquisa da Universidade Estadual do Maranhão através do parecer Nº 974.947. **Resultados:** Foram divididos em categorias: atividades educativas desenvolvidas na estratégia saúde da família; repercussão das ações sobre a comunidade; dificuldades e estratégias inerentes as ações educativas; autoavaliação do enfermeiro enquanto educador

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em saúde. **Conclusão:** A ação educativa se constitui em atividade inerente ao trabalho do enfermeiro, cujas ações estão inter-relacionadas em torno de um objetivo comum, a promoção da saúde da população.

Descritores: Educação em Saúde, Estratégia Saúde da Família, Enfermeiras(os).

RESUMEN

Objetivo: Conocer las percepciones de los enfermeros sobre la interrelación de las acciones de educación para la salud en el contexto de la estrategia de salud de la familia. Métodos: Estudio de naturaleza cualitativa en un enfoque exploratorio descriptivo con 15 enfermeras de la zona urbana de un municipio Maranhão. El proyecto fue aprobado por el Comité de Ética en Investigación de la Universidad del Estado de Maranhão a través de la opinión Nº 974.947. Resultados: Ellos fueron divididos en categorías: las actividades educativas en la estrategia de salud de la familia; impacto de las acciones en la comunidad; dificultades y estrategias de actividades educativas inherentes; autoevaluación de las enfermeras como educador de la salud. Conclusión: La actividad educativa constituye la actividad inherente a la labor de las enfermeras, cuyas acciones están relacionados entre sí en torno a un objetivo común, la promoción de la salud.

Descriptores: Educación en Salud, Estrategia de Salud Familiar, Enfermeros

INTRODUCTION

Health Education (HE) is a central element of the Health Promotion Strategy (HPS). When effective, it provides for the emancipation of the population, the democratization of knowledge, and the stimulation of social participation, promoting the generation of appropriate habits, with direct repercussions on the health of the individual and community.¹

The Family Health Strategy (FHS) plays a fundamental role in the educational actions that take place in the community.² In this context, the FHS presents itself as a facilitating tool for community empowerment, contributing to the HF.³

In HE, it should be emphasized the popular education in health, which values the wisdom and prior knowledge of the population and not only the scientific knowledge in order to fill in the knowledge gaps of the professionals, with actions directed to the qualification of health work processes considering the local specificities and the needs of real work.⁴

The HE represents a facilitating tool for community empowerment, contributing to the HPS.³ In this scenario, nurses play a fundamental role in the development of educational actions and present themselves as facilitators of the learning process.² Nurses' performance in this practice requires critical analysis of their educational roles, due to the proximity with the population, given that educating and caring are indissociable attributions in the nursing work process, being considered an essential professional to the team in the construction and restructuring of the health care model.⁵

When seeking a transformative educational practice, the nurse also becomes a worker, by expanding his critical awareness about his own work process and as an educator, and this subjectivation of work allows him to re-signify his practice, in addition to the norms and routines imposed by

the prescribed work.⁶ Thus, the objective of the work was to assess the nurses' perceptions about the interrelationship of health education actions in the context of the FHS.

METHODS

The research is characterized by a qualitative study in a descriptive-exploratory approach. Qualitative research is capable of incorporating meaning and intentionality as inherent in acts and social structures and requires, as essential acts, the flexibility, the capacity for observation and interaction between researcher and social actors involved.⁷

The study was conducted in the city of Caxias-MA, a municipality in the state of Maranhão, Brazil. The study scenario was the Basic Health Units (BHUs) of the urban area that integrate the Family Health Program (FHP) of the city of Caxias - MA. The research was carried out with fifteen nurses working at the FHS, obeying the following inclusion criteria: working at the FHS for at least six months; accomplishment of health education activities; work in the urban area of the municipality; accept to participate in the research, by signing the Term of Free and Informed Consent and, as a criterion of exclusion: to be away from the service due to vacations, licenses or health problems.

The instrument used in the data collection consisted of a questionnaire composed of open and closed questions. The questionnaire was applied in the period of August and September 2015, with the use of a recorder for later transcription of the speeches in their entirety and subsequent analysis.

The collected data were analyzed through the Bardin content analysis technique, which covers the initiatives of explicitness, systematization and expression of the content of messages, in order to make logical and justified deductions about the origin of these messages, who issued them, what was the context or what effects these intend to cause.⁸

Upon authorization of the ethics committee under the opinion No. 974.947 and CAAE 39880514.8.0000.5554, and consent of the subjects of the study, data collection was initiated. Each participant signed the TFIC, in accordance with the recommendations of resolution 466/12 of the National Health Council, formalizing their agreement to participate in the research, in addition to clarifying the objectives, justification, importance and form of collecting the research data, and ensuring the anonymity of information.

In the presentation of the speeches, study participants were coded to ensure their anonymity. The abbreviation of the nurse name "ENF" was used to designate the nurses in the interview order.

RESULTS AND DISCUSSION

Initially the characterization of the nurses is presented. Then, the categories emanating from the Bardin content analysis process are presented: health education activities developed in the FHS; repercussion of health education activities on the community; difficulties for the

development of educational actions; strategies used in the development of educational actions; self-evaluation of the nurse as a health educator.

Characterization of nurses interviewed

Of the fifteen nurses interviewed who participated in the study, it was identified that the vast majority were female, with a predominance of the age group between 26 to 31 years. With regard to vocational training, the majority (13) graduated in public institutions and have a *lato sensu* postgraduate course (eight in family health, four in public health, two in teaching in higher education, three in maternal infant health, two in urgency and emergency, two in Intensive Care Unit (ICU), one in management), and most nurses had more than one specialization. The activity duration of the unit ranged from six months to nine years.

Health education activities developed in the family health strategy

There are numerous HE activities, recommended by the Ministry of Health, to be developed in the FHS with different groups. Therefore, we sought to investigate the activities carried out and the target audience to which they were directed. Reports of professionals interviewed can be seen below.

I give lectures with pregnant women, hypertensive women, diabetics, women who have recently given birth, mothers of children under two years of age (ENF 01).

[...] I usually work with pregnant women, hypertensive and diabetics [...] but we are planning to approach other publics, the child [...] and also men (ENF 02).

Look I develop lectures in the area, right, with the elderly, with pregnant women, aiming for prenatal quality (ENF 03).

Hypertensive, diabetic, the general population, right[...] (ENF 04).

We are the first people for the pregnant women, we guide the pregnant women, then in the other month we guide the health of the elderly, now we will guide the health of men and then leprosy and tuberculosis (ENF 05).

Eh, the target audience that we have more here I've already said, those are the cases of hans, the hypertensive, pregnant women too, and the public, we are always working with them, developing activities (ENF 06).

[...] It is general, HIPERDIA, women, prenatal, children, and activities in relation to STDs, so it is general (ENF 07).

According to the nurses' reports, there is a predominance of activities directed to specific groups, such as: hypertensive, diabetic, pregnant and developing children

as main educational action, lectures. From the testimonies it is observed that the conception of HE is conceived from the traditional perspective of educating for health. The speeches coincide with the existence of educational activities marked by the focus of the contents.

According to the reports, we have as a priority target the elderly and, as subjects addressed, the diseases related to this age group, followed by pregnant women, whose themes permeate this phase. Some of the professionals describe that they carry out activities with the population in general, however their reports do not contemplate this affirmation, since the health of the woman, adolescent and men are not part of the actions commonly performed by the nurses in the BHUs.

The population in general is how we work with health at school, we have also been developing educational activities with children and adolescents (ENF 08).

I also develop actions in schools with adolescents, and anthropometry, I develop evaluation, lectures, pass videos for them (ENF 03).

Here lectures are done, both in the unit and out of the unit, there is the HSP, then it is done in schools [...] (ENF 07).

The Health in School Program (HSP) in some reports appears as part of the public contemplated in educational actions where the health of the adolescent appears as the focus of the activities carried out.

We have developed all the activities [...], we have as partners the community health agents [...]. And then we have meetings in groups with pregnant women, [...] and that's how we have the day for attending the elderly, hypertensive ... (ENF 04).

It is worth noting the partnership of the Community Health Agents (CHAs). Another aspect is the method used to develop HE activities. According to the reports, the lectures are prioritized and, in some situations, conversation circles, meetings, and individual orientations are carried out during the home visit.

The home visit is made mostly by the CHAs, and the other professionals of the team rarely perform this activity, however, it is emphasized that the education carried out in the homes is also focused on information transmission, health control and surveillance.

Plus the importance of prenatal ... [...] just lectures, not so much lecture, these are more conversation circles, because in speech the people is very dispersed, I do not like it very much. (ENF 09).

Health education activities, lectures, right [...] when we do a home visit [...] the nurse gives the guidelines to the patient [...] when he/she is very old then we give the guidelines for care ... (ENF 02).

Especially meetings and lectures, we here on family health strategy visits a lot, we do a lot of home visits ... (ENF 05).

There we put videos, we give lectures ... use the data show and also the serial albums that we have available, right? (ENF 04).

The conception of HE as information transmission is strongly present in the daily practice of the professionals observed, as can be appreciated from the excerpts from the presentations, being this the predominant behavior, where nurses describe the practice of HE as the act of passing, reviewing, informing, guiding and transmitting knowledge to the patient.⁹

Impact of educational activities on the community

In view of the activities developed, it was sought from the description of the nurses to identify the repercussion of the activities on the community.

The issue of health education, it is so if you do sporadically (...) it does not have much result, but if it is such a continuous thing, you realize that the patient is changing, goes according to what the design says, that he has about it, about certain things [...] then I think it is of paramount importance to change the quality of life of the patient (ENF 08).

Very positive repercussions (ENF 09).

The repercussion of the activities? I think it helps a lot in the issue of self-care of the person, I think that is the main repercussion of the activity, to help in self-care, of the person and in the prevention of disabilities [...] (ENF 02).

The interviewees pointed out as positive the repercussions on the community related to continuity, promote the quality of life, the promotion of self-care and the prevention of disabilities.

Difficulties for the development of educational actions

This category aims to demonstrate the difficulties faced in the implementation of educational actions. Numerous difficulties are described: physical structure, lack of interest of the population, difficulty speaking in public and lack of knowledge of professionals, material resources, excess of programs, and lack of participation of CHAs. Issues related to infrastructure point to the physical space, lack of educational materials, audiovisual resources and human resources, points highlighted in several studies.¹⁰⁻¹¹

The question of the structure of the unit [...] sometimes we have some patients that I realize that it is lack of interest even if you are participating (ENF 01).

The great difficulty is the material resources [...] there is a lot that is missing, this is the main difficulty, material resources (ENF 03).

The training of professionals to approach certain topics, their lack of knowledge, and difficulty speaking in public is pointed out as a difficulty for HE. The reports also address the time spent in bureaucratic activities, where care activities are outdated.

The main difficulties, I think have no difficulty, no, I think that sometimes professionals have difficulty in the matter, like public speaking, but I think the difficulty would be this, to sometimes give information, sometimes lack of knowledge, right (ENF 04).

The main difficulty is the fact that we FHP people have several programs at the same time and we end up getting very stale in the bureaucratic part, in the care part. (ENF 08).

When developing HE, both in the individual and in the collective context, the nurses who work in the FHS face barriers, among which the main one is the resistance to changes and acceptance to the new care model. Linked to the issue of acceptance and adherence to educational activities, there is the level of education of the participants that interferes with the understanding about the themes addressed. ¹² The factors that are most pointed among the difficulties are related to attracting the public, the participation of the population, and adhesion, as stated.

One of the biggest difficulties is still being able to attract the public, this is the biggest difficulty (ENF 09).

The main difficulties encountered, the truth is the participation of the population [...] then the real difficulty is found only in the population to accept it, they can contribute (ENF 06).

It is the issue of the population ... (ENF 07).

[...] sometimes the health worker does not want to lecture, [...]there is the issue of materials as well that sometimes ... (ENF 08).

In order for health service users to grasp the directions and work together with the team in action planning, they need to have an effective understanding of shared knowledge in order to understand the purpose of educational actions. Another aspect to be considered is the development of educational activity in an expanded and qualified manner, and should be carried out by all the members of the multiprofessional team, in which each, based on their knowledge, can collaborate. 12

Such notes brought by professionals are described in another study, in which they affirm that due to the socioeconomic difficulties of the population and illiteracy, HE is not valued as it should be.¹¹ Thus, professionals find it difficult to visualize the results.

It is relevant to reflect on the educational practice in health as a producer of care and transforming social and life contexts, but it is necessary to go beyond and problematize the barriers that impede its effectiveness, either within the work of the team, or in disagreements with one's own population. Studies have been carried out with the purpose of identifying the development of educational actions by health professionals working in the community, many of whom have realized that these actions are not carried out very frequently, mainly due to the disorganization of demand, the low educational level of the users and the resistance of the population to educational actions. 11-12

Despite the limitations and impasses of this strategy, considerable advances in the way of producing health in Brazil are perceived, since the FHS space allowed an approximation of the management and work for the population, fostering the need for an articulation of knowledge for health care.¹⁵

Strategies used in the development of educational actions

The work in the FHS is a challenge to nursing in all its tasks, always requiring renewal of its practices, redirection of pathways and creation of new behaviors in the face of new paradigms.¹³ In order to carry out the educational practice in the FHS, professionals must believe on their work, because the obstacles exist, but with commitment and dedication it is possible to begin the process of change.¹² The interviewees report.

[...] we have to offer something to them (ENF 01).

We offer toast, snack, trousseau, or we do some activity, like some dance, a corporal activity... (ENF 09).

Among the main strategies used, one consists of the bargain, in order to attract the community, the resources are offered according to the target audience. Another strategy is presented as the execution of activities in the area, beyond the physical limits of the BHU, having as partners the CHAs, providing community interaction and integration.

The strategy we use is to go to the area, do educational activities in the area, or to carry out the educational activities at the BHU, right, and we have as one of the major partners the CHAs (ENF 04).

The language used was pointed out as a strategy, which should be easy to understand, aimed at the target audience, methodology and support of the CHAs in promoting and participating.

[...] I think the main strategy we use is the language ... (ENF 02).

Eh! The strategies that we always use are lectures, right, that's basically it, so that we can see what we can do, we have the CHAs too, that works a lot with it [...]they are a link between the population and the health unit, so that is basically it (ENF 06).

So, we always talk to the health workers so that they can help too (ENF 07).

Self-evaluation of the nurse as a health educator

It was sought, through the interview, to identify the nurse's self-assessment as a health educator, aiming to know their conceptions about it. Here are some excerpts from the testimonials:

I think I'm a good educator, I try to pass on the information in their language as much as possible so that they understand, that they have a good understanding of what I'm saying and try to insert them in the best possible way, always adapting myself when their needs are not met, so much mine or theirs when something always suits them (ENF 01).

Boy, I am [a health educator], I think I'm regular, I think I can say something and people can understand (ENF 04).

According to the sections above we observed that nurses evaluate themselves differently, where they consider that they can pass on the information during the execution of the activities in order to adapt to the language of the public, to the comprehension of the population, adapting to the situations.

Ah! I evaluate myself... as a good health educator, because I, look, here in the unit, I try to divide, to work in group with the other, teamwork, right, with the health agents that are the main link between the community and the unit right? (ENF 03).

Um ... lousy (laughs) lousy [...] I believe that I do not do what should be done even on account of my speaking, so there is no availability in the community, because really what it would be ideal to work this within the community [...] and I am also very committed to doing these educational activities because we have the programs [...] and it ends up with a lack of care in that issue, in the part of the education (ENF 06).

The testimonies show that professionals attribute the association of their work as a health educator to the methodologies used to develop educational activities, highlighting the role of the CHA as a link between the BHU and the community. Some nurses relate the numerous programs to the deficit in the activities performed, restricting their development.

It can be perceived from the excerpts presented that in the educational process, the professional is part of the patient's knowledge, but does not promote health in its broad concept, its educational focus is directed to diseases.⁹

Faced with the perception that the educational practice in health is a potential for change, health workers are the subjects of work processes that both distances and approaches the belief of a new health care focused on the integrality of attention. ¹⁴ And for the concretization of this new model of attention, the worker needs to become an agent of change.

However, it is essential that the HE should be made from the reality of the user, from his daily life and that he is an active subject in this process, giving him autonomy to act in the benefit of his health. ¹⁶

CONCLUSION

It is necessary to expand educational practices in order to strengthen social participation and user autonomy. It is necessary to rethink and evaluate health education as a work technology that reveals different processes of acting in health, reorienting this practice, taking as principles the precepts of the UHS and a meaningful learning, so that it promotes change in the life of the users and workers, as well as the reality of the current health care model.

It is observed that the actions of health education are interrelated and need to be developed as such, taking into account the needs of the population, encompassing all groups and ages, where the nurse is fundamental in directing activities and in the results obtained from it.

It is concluded that the nurse needs to know the limitations with regard to the educational practice in the FHS and, through them, seek alternatives to overcome them, in order to develop this action, which should not be considered as just another activity to be carried out in health services, but mainly as a practice that underpins and reorients all primary health care.

REFERENCES

- Ministério da Saúde (BR). Escolas promotoras de saúde: experiências do Brasil. Organização Pan-Americana da Saúde. Brasília (DF);2006.
- Alves GG, Aerts D. As práticas educativas em saúde e a Estratégia Saúde da Família. Ciência & Saúde Coletiva [internet]. 2011 [acesso em: 10 mai 2016];16(1):319-25. Disponível em: http://www.redalyc. org/pdf/630/63015361030.pdf.
- Cervera DP, Parreira BDM, Goulart BF. Educação em saúde: percepção dos enfermeiros da atenção básica e m Uberaba. Ciência & Saúde Coletiva[internet]. 2011 [acesso em: 20 abr 2016]; 16(1):1547-54. Disponível em: http://www.scielo.br/pdf/csc/v16s1/a90v16s1.pdf.
- Falkenberg MB. Educação em saúde e educação na saúde: conceitos e implicações para a saúde coletiva. Ciência & Saúde Coletiva[internet]. 2014 [acesso em: 27 abr 2016]; 19 (3): 847-52. Disponível em: http://www.scielo.br/scielo.php?pid=S1413-81232014000300847&script=sci_abstract&tlng=pt.
- 5. Acioli S. A prática educativa como expressão do cuidado em Saúde Pública. Rev Bras Enferm [internet].2008 [acesso em: 02 mai 2016]; 61(1):117-21. Disponível em: http://www.scielo.br/pdf/reben/v61n1/19.pdf.
- 6. David HMSL, Acioli S. Mudanças na formação e no trabalho de enfermagem: uma perspectiva da educação popular e de saúde. Rev Bras Enferm [internet]. 2010 [acesso em: 27 abr 2016];63(1):127-31. Disponível em: http://www.scielo.br/pdf/reben/v63n1/v63n1a21.pdf.
- Minayo MCS. O desafio do conhecimento: Pesquisa Qualitativa em Saúde. 10ª Ed. São Paulo: HUCITEC; 2007.
- 8. Bardin L. Análise de conteúdo. Lisboa: Ed 70; 2008.
- 9. Besen CB.A Estratégia Saúde da Família como Objeto de Educação em Saúde. Saúde e Sociedade[internet].2007[acesso em: 04 mai

- 2016];16(1):57-68. Disponível em: https://www.nescon.medicina. ufmg.br/biblioteca/imagem/0807.pdf.
- 10. Melo G, Santos MR, Trezza MCSF. Entendimento e prática de ações educativas de profissionais do Programa Saúde da Família de São Sebastião-AL: detectando dificuldades. Revista Brasileira de Enfermagem[internet]. 2005 [acesso em: 25 abr 2016]; 58(3):290-95. Disponível em: http://www.scielo.br/pdf/reben/v58n3/a07v58n3.pdf
- 11. Sales FMS. Ações de educação em saúde para prevenção e controle da dengue: um estudo em Icaraí, Caucaia, Ceará. Ciência & Saúde Coletiva[internet]. 2008 [acesso em: 04 mai 2016]13 (1):175-84. Disponível em: http://www.scielo.br/pdf/csc/v13n1/21.pdf.
- 12. Roecker S, Budó MLD, Marcon SS. Trabalho educativo do enfermeiro na Estratégia Saúde da Família: dificuldades e perspectivas de mudanças. Rev Esc Enferm USP [internet]. 2012 [acesso em: 02 mai 2016];46(3):641-9. Disponível em: www.revistas.usp.br/reeusp/article/download/40992/44520.
- 13. Villas bôas LMFM, Araújo MBS, Timóteo RPS. A prática gerencial do enfermeiro no PSF na perspectiva da sua ação pedagógica educativa: uma breve reflexão. Ciência & Saúde Coletiva [internet] 2008 [acesso em: 25 abr 2016];13(4)1355-60. Disponível em: http://www.scielo.br/ pdf/csc/v13n4/33.pdf.
- 14. Scherer MDA, Pires DSY. Trabalho coletivo: um desafio para a gestão em saúde. Rev Saúde Pública [internet] 2009 [acesso em: 02 mai 2016];43(4)721-5. Disponível em: http://www.scielo.br/pdf/rsp/ v43n4/90.pdf.
- 15. Solla J. Dilemas e desafios da gestão municipal do SUS: avaliação da implantação do sistema municipal em Vitória da Conquista (Bahia), 1997-2008. São Paulo: Hucitec; 2010. 347 p. Disponível em: http://www.scielo.br/pdf/sdeb/v36n94/a20v36n94.pdf.
- 16. Carvalho ACS, Lacerda AC. A enfermagem atuando na educação de pacientes e familiares: uma visão ampliada. R. pesq.: cuid. Fundam. Online [internet] 2010 [acesso em: 16 jul. 2016]. out/dez; 2(Ed. Supl.):445-8. Disponível em: http://www.seer.unirio.br/index.php/cuidadofundamental/article/view/1007/pdf_169.

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