

## Health education shares in the context of chronic diseases: integrative review

Ações de educação em saúde no contexto das doenças crônicas: revisão integrativa

Educación de acciones de salud en el contexto de las enfermedades crónicas: revisión integradora

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### ABSTRACT

**Objective:** To analyze studies developed on educational activities in health in the context of chronic diseases. **Method:** integrative review of articles published in the literature from 2008 to 2014 in the databases MEDLINE, SciELO, BDENF and IBECs. The keywords used to search for articles were: chronic disease and health education. They found twenty full articles available. **Results:** It was found that most intervention research studies are conducted by nurses. The analysis enabled identification of a variety of health education methodologies developed around people with chronic diseases showing positive experience for controlling the same. **Conclusion:** The analysis provides healthcare professionals with the knowledge and practice of methodologies that can serve as a basis for teaching, research and extension with users. It highlights the need for increased national studies on the subject.

**Descriptors:** Chronic Disease, Health Education, Health Consumer Information.

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## RESUMO

**Objetivo:** analisar estudos desenvolvidos sobre ações educativas em saúde no contexto das doenças crônicas. **Método:** revisão integrativa da literatura de artigos publicados no período de 2008 a 2014 nas bases de dados MEDLINE, SCIELO, IBECs e BDEF. Os descritores utilizados para busca dos artigos foram: doença crônica e educação em saúde. Foram encontrados vinte artigos disponíveis na íntegra. **Resultados:** verificou-se que a maioria dos estudos são pesquisas de intervenção desenvolvidas por enfermeiros. A análise possibilitou identificação de uma diversidade de metodologias de educação em saúde desenvolvidas junto a pessoas com doenças crônicas evidenciando experiências positivas para o controle das mesmas. **Conclusão:** a revisão possibilita aos profissionais de saúde o conhecimento e prática de metodologias aplicadas que podem servir como base para o ensino, pesquisa e extensão junto aos usuários. Destaca-se a necessidade de intensificação de estudos nacionais sobre a temática.

**Descritores:** Doença Crônica, Educação em Saúde, Informação de Saúde ao Consumidor.

## RESUMEN

**Objetivo:** Analizar los estudios desarrollados en las actividades de educación en materia de salud en el contexto de las enfermedades crónicas. **Método:** revisión integradora de la literatura artículos publicados desde 2008 hasta 2014 en las bases de datos MEDLINE, SciELO, BDEF y IBECs. Las palabras clave utilizadas para buscar artículos fueron: enfermedades crónicas y la educación para la salud. Encontraron veinte artículos disponibles en su totalidad. **Resultados:** Se encontró que la mayoría de los estudios de investigación de intervención se llevan a cabo por las enfermeras. El análisis permitió la identificación de una variedad de metodologías de educación en salud desarrolladas en torno a las personas con enfermedades crónicas que muestran experiencia positiva para el control de la misma. **Conclusión:** El análisis proporciona a los profesionales de la salud con el conocimiento y la práctica de metodologías que pueden servir como base para la enseñanza, investigación y extensión con los usuarios. Se destaca la necesidad de incrementar los estudios nacionales sobre el tema.

**Descriptor:** Enfermedades Crónicas, Educación para la Salud, Salud Información al Consumidor.

## INTRODUCTION

Facing the complexity of chronic diseases' problem, considering their various environments, the commitment of health teams with initiatives aimed at reducing risk factors and the occurrence of chronic diseases seems relevant, through actions/education strategies health within the various levels of care health, contributing to the quality of life of the population.

The increase in the incidence and prevalence of chronic diseases is a serious public health problem, and is a major cause of death. This fact stems from the current stage of demographic/epidemiological transition in Brazil, besides the aging population.<sup>1</sup>

Researches on chronic diseases have been intensified in order to be a serious public health problem with increasing number of cases each year. Thus, it is relevant to the use of health education strategies that contribute to the change

in the lifestyle of the users, with respect to risk factors for various diseases.

For the control of chronic diseases and particularly its complications, health education practices that encourage adherence to treatment and provide them with information and guidance needed in order to contribute to the quality of life are very important and needed.

In this context, it is relevant to consider that health education is a field that can contribute to compose a new vision of health-illness care process as objective the promotion and the development of knowledge in order to contribute to the health of people involved.<sup>2</sup>

The health education principles aim to motivate people to adopt and maintain healthy living standards; use properly health services available to them; and make their own decisions, both individually and collectively, to improve their health and the environment in which they live.

Thus, educational practices that shed light on the health-disease-care, as they are the precepts of health education, allow this to be developed as a process of exchange and building responsible involvement of all participants in creating alternatives culminate with the individual and collective health.

With regard to chronic diseases, the World Health Organization (WHO)<sup>3</sup> includes cardiovascular diseases, neoplastic, chronic respiratory and diabetes mellitus, and other diseases that affect the individual, the family and society, such as mental disorders, diseases neurological, oral, bone, joint, and genetic hearing.<sup>2</sup> The High Blood Pressure (HBP) and diabetes mellitus (DM) have highlighted the incidence and the mortality rates, due to epidemiological, demographic and nutritional transitions that occurred in the past decades, and are also the leading cause of hospitalizations in the Single Health System (SUS).<sup>4</sup>

In this sense, the present investigation begins from the following questions: What health education activities are developed with the users of health services affected by chronic diseases? How such practices are being developed? What results have they produced?

Thus, the objective of the study is to analyze scientific studies on educational activities in health developed with the users affected by chronic diseases.

## METHODS

An integrative review of literature study was conducted from November 2013 to May 2014. The electronic search was conducted in five databases: Latin American and Caribbean Health Sciences (LILACS), International Literature Sciences health (MEDLINE), Scientific Electronic Library Online (SciELO), Spanish Bibliographic Index in health Sciences (IBECs) and Nursing Database (BDEF).

It was used the descriptor “chronic illness” to search for articles in the databases. To narrow the search, the combination with the descriptor “health education” was held, and also the following inclusion criteria adopted: publications from 2008 to 2014; studies in Portuguese, English or Spanish available in full and free. The outlined Exclusion criteria were: articles in duplicate; theses and dissertations; lack of information related to educational activities in health to people with chronic diseases and the results achieved in the abstract; lack of clarity regarding the stages of educational interventions. After meeting the inclusion and exclusion criteria, a sample of 20 articles was obtained.

The reading of the material was performed, proceeding to the analysis and interpretation of results, summarizing and recording in a summary table containing the following items: completion date, bibliographic reference, purpose of study, type of study, sample data, description of the action, evidence/achieved results, applicability of the strategy and limitations/difficulties. To achieve the objectives outlined, the results were summarized and presented in table and chart and discussed in the light of the relevant literature.

## RESULTS AND DISCUSSION

Table 1 shows the main characteristics of the studies regarding the sample to the activities and results achieved from its implementation.

Among the studies analyzed, fourteen were developed in Brazil, one in Mexico, one in South Korea, one in the US, one in Korea, one in Spain and one in Pakistan. It is important to emphasize that this result is due to the fact that many foreign items are not available for free in its entirety.

Regarding the year of publication of the inserted studies in this review, it was noted that 2012 is the year with the largest number of scientific articles published on the subject, totalling 7 publications. It was observed a decrease in the following year, and it was found 5 articles, followed by 3 in 2011, 2 in 2009 and 2010, and only 1 in 2008.

About academic researchers, the nursing participation prevailed in 8 publications whose health education action was performed only by nurses. Noteworthy is also 5 studies by doctors, nurses, psychologists and nutritionists, who were responsible for 5 publications.

In relation to chronic diseases covered in the research, it was found that most health education actions contemplated carriers of SAH, corresponding to 11 articles, followed by DM, with 6 articles.

In 9 studies, health education activities were carried out with the elderly (over 60 years) and 11 users of different ages. The results of educational activities were considered positive, as reported in 18 articles. In only 2 items, significant changes were not found.

Regarding the design of the studies, it appears that intervention studies were the most frequent, being included in the category research and studies involving participant action research (Table 1).

A larger number of researches on the elderly was observed, which may be considered that population aging evidenced in the national and world stage has motivated researchers to develop research in this age group, especially in relation to chronic diseases. In Brazil, concomitant to this scenario has been the reduction in birth rates, thus increasing the number of elderly in the country.<sup>25</sup>

According to IBGE, in 2050 the elderly will account for 30% of the population and the growing increase in this population. It is also observed the increase in life expectancy, the consequent natural increase in the number of individuals with chronic diseases. This implies changes in the health systems of the country, as the focus on public health and care to primary care are of fundamental importance for the care of these diseases.<sup>25</sup>

The analysis of the articles identified that health education activities are especially geared to chronic hypertension and diabetes. The identified strategies were performed with conversation circles, lectures, assessment of vital signs and group therapy, followed questionnaires application before and after the actions in order to measure the knowledge of the topic discussed. It also identified the associated medical consultation or not the home visits in one of the studies analyzed.<sup>19</sup>

Hypertension is a disease of slow clinical progression. Treatment requires a long-term monitoring, adherence to healthy lifestyle habits and use of medication correctly so that there are no complications, affecting the quality of vida.<sup>26</sup> Epidemiological studies carried out in Brazil show a prevalence of hypertension ranging from 40 % and 50% in adults over 40 years of age.<sup>4</sup>

The DM has shown worldwide epidemic dimension, with estimated six million people living with this disease.

Table 1 – Design of studies in databases from 2007 to 2013. João Pessoa, PB, 2014

Study Design	N	%
Intervention study	5	25.0
Randomized clinical study	8	40.0
Quasi-experimental study	4	20.0
Experience report	2	10.0
Observational study	1	5.0
Total	20	100.0

Chart I – Characteristics of the studies and the main results achieved. João Pessoa, PB, 2015

Author/Year	Target Audience	Description of educational action	Main results
Oliveira TL et al., 2013. <sup>5</sup>	261 users with SAH registered in USF aged ≥ 18 years.	Home visit to application of questionnaire, PA measurement and weight. A meeting for educational intervention with dialogued exposition and educational materials. Weight Rating, PA and knowledge about the disease three months after the intervention.	Change in consumption of vegetables and physical activity. Improvement in blood pressure levels.
Silva R et al., 2012. <sup>6</sup>	15 users with SAH registered in an USF.	Action taken in Educational Group Meetings of an UBS in Belo Horizonte. Six meetings with a maximum duration of 30 minutes each, with educational workshops, lectures and dialogued application questionnaire on food in the first and last meeting.	Reduction in average waist circumference (WC) and waist/hip ratio (WHR). Increased amount of consumed vegetables. Reduction in meat intake and reducing the habit of replacing lunch or dinner for snacks.  Verbalization as the best quality of life.
Menezes TM et al., 2012. <sup>7</sup>	32 users with DM.	Action taken in five meetings with an average of one meeting every 45 days. Conducted theoretical and practical educational activities on various topics. Filling the Diagnostic Assessment records and tracking and BP measurement, weight, height, waist circumference and blood glucose at the end of each meeting.	There was no change in adherence to treatment because of the difficulty of changing lifestyle reported by users.
Pereira DA et al., 2012. <sup>8</sup>	62 users with DM type 2 registered at a reference service for the treatment of hypertension.	-Group Intervention (GI) - 12 educational meetings for six months with fortnightly and average duration of two hours.  -Group Control (GC) - without participation in educational meetings and followed up in the outpatient care routine.	There was a significant increase in knowledge about GI DM, in all matters. In the control group, some observed changes in knowledge were lower when compared to GI.
Faria HTG et al., 2013. <sup>9</sup>	51 users with DM in a USF.	20 meetings with three hours each. Group teaching with educational lectures and individual counselling, as needed by the participant. He worked in rotation scheme: nursing, nutrition, psychology and physical education.	Improvement in almost all areas. significant difference in overall health.
Torres HC et al., 2009. <sup>10</sup>	104 adult users with DM2, participants of a diabetes education program.	-Education Group: eleven meetings with two hours and 13 participants each, in which were involved play and interactive dynamics of DM.  -Individual Education: six sessions with 30 minutes long. Performed guidelines and physical evaluation.	The results were similar in attitude test, the change in behaviour and quality of life.  Reduction in levels of glycated haemoglobin (HbA1c) in both groups, but only in the education group the difference was statistically significant.
Otero LM et al., 2008. <sup>11</sup>	54 users with DM registered in the care of diabetic patients.	Weekly meetings for twelve months and duration of 3 hours each. Application of educational activities in groups in the classroom, with educational lectures, and individual by strengthening the guidelines every nursing consultation. Applied questionnaire with 41 questions before and after the implementation of health education.	There was an increase in the number of correct answers, demonstrating improving on all topics.
Spinato IL et al., 2010. <sup>12</sup>	15 users with hypertension who were part of Hypertension League.	Eight weekly meetings lasting 60 minutes each in two moments: practice of walking followed by educational workshops. semi-structured interviews at three different times.	Most participants reported that continue to pursue the practice of walking six months after the start of the intervention, reaching the goal of changing behaviour.
Baldissera VDA et al., 2012. <sup>13</sup>	6 users with SAH participating in a weekly group meeting in a USF.	Action research: First: two meetings in which the issue was discussed by leisure-focus group technique. Second: household interviews. Third: educational action from generating themes listed in the previous time.	The leisure time was considered by the participants as a way to cope and treat hypertension and to reduce loneliness, allowing socialization and joy for life, promoting mental health.

Author/Year	Target Audience	Description of educational action	Main results
Martin CR et al., 2009. <sup>14</sup>	101 adult users with hypertension in primary care.	<b>Randomized:</b>  -Intervention group: 51 participants. Six meetings with study topics on lifestyle, covered in workshops and discussion sessions.  - Control group: 50 patients seen in routine consultations.  - Applied questionnaire about quality of life, nutrition, physical activity, lifestyle and risk factors for the groups before and after the action.  - Intervention group: 77 participants. Used participatory communication	Improvement trend over time in the intervention group higher than control.
Rodriguez M CP et al., 2013. <sup>15</sup>	154 adult users with type 2 diabetes for more than five years without foot ulcers.	- Control Group: 77 participants. Used the traditional model of communication.  Theme: care of the diabetic foot. Five weekly sessions. Assessment by questionnaire.	The use of participatory communication model favored positive changes in relation to self-care. Favored learning and choice of behavior for self-care.
Moreira CB et al., 2012. <sup>16</sup>	Users of a Reference Institute for Oncological Treatment for children and adolescents.	Experience report: Four meetings with the discussion of topics of interest to users with evaluation.  Experience report.	There were clarifications and new knowledge to adolescents. Participation and interest in the issues addressed. Increased interest in the topics presented in a fun and dynamic way.
Matsumoto, PM et al., 2012. <sup>17</sup>	166 users Self-Monitoring Glycemic Program in a UBS.	Weekly groups with change method for home visits due to the difficulty of accomplishment.  Discussions about changing lifestyle. Evaluation at the end of each meeting through interviews.	The actions generate reflections in health teams in relation to care, as well as users on the self-care.
Rugh D 2011. <sup>18</sup>	1,518 users with DM in primary care.	Guidelines conducted during a year through educational materials, telephone calls and consultations, encouraging changes in lifestyle. Randomized clinical study in four groups:	Users had motivation to make changes in lifestyle and continued to participate in the program after its completion.
Jafar TH et al., 2011. <sup>19</sup>	1,341 users with hypertension in 12 communities.	-Group 1: home education with visiting health workers for guidance on preventive measures and control of hypertension;  -Group 2: received visits guiding the way to the doctor's appointment at UBS;  -Group 3: Home education associated with the consultation of the general practitioner;  -Group 4: control without any intervention. Questionnaire was administrated in users diagnosed with deficient knowledge.	The combined education intervention in home visits associated with the consultation of the general practitioner in the treatment of hypertension is potentially accessible and better than the common strategy.
Fava SMCL et al., 2010. <sup>20</sup>	20 users with SAH registered in an USF.	Performed nursing interventions with theoretical actions and evaluation of interventions in accordance with the care plan. - Intervention group: 515 participants. Four meetings lasting 15 minutes each, using written pamphlets and exposure topics by the nurse.	Overcoming difficulties were observed, obtaining autonomy and improvement of health status and quality of life.
Guirado EA et al., 2011. <sup>21</sup>	996 users with hypertension treated in primary care centers.	- Control group: 481 participants. Routine care of primary care centers. Prior assessment of knowledge about	Increased knowledge about the disease in the intervention group, as well as adherence to treatment.
Song IH et al., 2012. <sup>22</sup>	319 adult users with SAH treated at a primary care center.	hypertension. After five years of program with topics on prevention and control of hypertension, a post-test with the same population was carried out.	There was a significant difference in the level of knowledge. Most significant variables in knowledge about hypertension among men.



Author/Year	Target Audience	Description of educational action	Main results
Chang AK et al., 2012. <sup>23</sup>	52 users with hypertension in a health center.	- <b>Intervention group:</b> 30 participants. Eight weekly sessions of group discussions and physical training.  - <b>Control Group:</b> 22 participants. Received standard care for hypertension. Randomized clinical trial.	The intervention group had significant improvements in symptoms of metabolic syndrome and improved self-management behaviors and walk.
Mussi CM et al., 2013. <sup>24</sup>	200 adult users diagnosed with CHF.	- <b>Intervention group:</b> 101 participants. Four home visits and four telephone calls to strengthen the guidelines for six month follow-up;  - <b>Control Group:</b> 99 participants. They received only accompaniment.	Significant improvement was observed in knowledge, self-care and treatment adherence in the intervention group.

This fact is a major challenge for health systems because it causes great economic impact as a result of treatment and complications of the disease.<sup>4</sup>

Some educational activities implemented in the studies analyzed were operationalized from the combination of traditional methods with other active methods, such as in studies of<sup>5-6-7</sup>. In these predominated lectures, conversation circles and interactive dynamics.<sup>5-6-7</sup>

The use of dialogued lecture or conversation circles in order to guide and answer questions about the disease and/or drug and non-drug treatment, and to promote the integration between users and health team were widely chosen by researchers as methodologies. The use of teaching materials (brochures, posters, booklets, etc.) was of great importance to the success of educational activities. At the same time, some authors associated practical activities, such as simulations, role plays, physical activities, among others.<sup>9</sup>

It is important to note that despite the talks being chosen to clarify certain subject, it can often limit learning, discouraging interaction with listeners, because it does not necessarily dialogue and question the problem with participants<sup>27</sup>. It is evident therefore, the importance of introducing active methods in educational activities in the community, in order to encourage the involvement and meaningful learning for the sake of individual and collective health.

Among the different ways of doing educational work, we highlight the group discussions. In the field of primary health care, health education can be quite explored since prioritizes health promotion and disease prevention to it, aiming at the participation of individuals and communities as active subjects of the health care process.<sup>28</sup>

As an example, we can mention the conversation circles that prioritize the discussions around a selected theme together, taking into account the purpose of the meeting. It enables information sharing, encouraging the exchange of views, even contradictory, being the main positive aspect of this health education method that avoids the permanence

of questions. On the other hand, it differs from other group activities, such as not exposing their secrets or intimate, as occurs in group therapies. Participants are guided only express their opinion on the subject, leaving his personal life apart from the activity.<sup>29</sup>

Group therapy has as positive the possibility of strengthening the emotional ties between the health professional and the participants, highlighted the dynamism and with the objective of integration between the health education group, accentuating the self-care and co-responsibility practices of the population.<sup>30</sup>

The use of different health education methods was of fundamental importance for achieving the goals of the selected studies, observed from the results. Much of the success of the methodologies is given to the participation of nurses in this process, most of which was involved in educational practice, which reinforces the important role that they play in primary health care.

The nursing staff works directly with educational activities mainly in primary health care services, it is empowered and able to take care of the user and the community, taking into account the curative, preventive needs as well as educational in the health care context.<sup>28</sup>

The prevention and control of chronic diseases require major changes in lifestyle that involves changes in eating habits, physical activities, adherence to drug treatment and abandonment of alcohol and smoking. For being behaviors and ingrained practices for years, it seems important to develop health education actions from different methodologies, aiming to increase individual membership and collective behaviors and healthy habits.

## CONCLUSION

Chronic diseases, for the extent to which propagate in different populations and the complexity involved in adherence to preventive and control measures, require researchers, educators and professionals from different areas a look quite careful so that one can glimpse improving scenario that presents itself.

The study allowed the identification of a variety of methodologies used in health education developed with people with chronic diseases, highlighting positive experiences for the control of them from the adherence to healthy lifestyle habits that can support the planning of actions.

This research shows health professionals the knowledge and practice of applied methodologies that can be adapted in similar situations. Moreover, it can serve as a basis for further research and extension activities with users and academic community. In addition, it emphasizes the role of nursing in the prevention and control of chronic diseases through health education actions.

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