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Social Participation in Health and the Nursing Role: Using the **Ecological Model**

Participação Social Na Saúde e o Papel da Enfermagem: Aplicação do Modelo Ecológico

Participación Social en la Salud y Papel de Enfermado: Aplicación del Modelo Ecológico

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ABSTRACT

Objective: This study aimed at identifying the elements of the Ecological Model by analyzing scientific publications on social participation in health and the role of nursing. Methods: This integrative literature review was carried out in June 2017. The articles were selected using pre-established inclusion and exclusion criteria, obtaining 19 studies for synthesis. Results: Individual, organizational and environmental elements of the Ecological Model were highlighted, allowing the identification of social participation in health and the role of nursing through ecological thinking, environmental and health awareness, and changes in behaviors and lifestyles. These actions were promoted by the community's involvement, health institutions, universities, and health professionals. Conclusion: Nursing professionals should encourage social participation, decision making towards the care service, and the implementation of public policies, then promoting public awareness.

Descriptors: Social participation, Ecosystem, Nursing.

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RESUMO

Objetivo: Estudo com objetivo de identificar os elementos do modelo ecológico na análise da produção científica acerca da participação social na saúde e o papel da enfermagem. Métodos: revisão integrativa realizada em junho de 2017, os artigos foram selecionados por meio de critérios de inclusão e exclusão pré-estabelecidos, obtendo-se 19 estudos para síntese. Resultados: evidenciaram-se elementos individuais, organizacionais e ambientais do Modelo Ecológico, possibilitando a identificação da participação social na saúde e o papel da enfermagem, por meio do pensamento ecológico, conscientização ambiental e de saúde, mudanças de comportamentos e estilos de vida, além do envolvimento da comunidade, instituições de saúde, universidades e profissionais de saúde nessa promoção. Conclusão: a Enfermagem deve incentivar a participação social, tomada de decisões de cuidados e implementação de políticas públicas, promovendo a conscientização.

Descritores: Participação Social, Ecossistema, Enfermagem.

RESUMEN

Objetivo: Estudio con el objetivo de identificar los elementos del modelo ecológico en el análisis de la producción científica acerca de la participación social en la salud y el papel de la enfermería. Métodos: la revisión integrativa realizada en junio de 2017, los artículos fueron seleccionados por medio de criterios de inclusión y exclusión preestablecidos, obteniéndose 19 estudios para síntesis. Resultados: se evidenciaron elementos individuales, organizacionales y ambientales del Modelo Ecológico, posibilitando la identificación de la participación social en la salud y el papel de la enfermería, por medio del pensamiento ecológico, concientización ambiental y de salud, cambios de comportamientos y estilos de vida, además de la participación de la comunidad, instituciones de salud, universidades y profesionales de la salud en esta promoción. Conclusión: la Enfermería debe incentivar la participación social, la toma de decisiones de cuidados y la implementación de políticas públicas, promoviendo la concientización.

Descriptores: Participación Social, Ecosistema, Enfermería.

INTRODUCTION

The Ecological Model is explored in health promotion due to the possibility of studying the relationships between individuals and the environment in which they live with a multidimensional approach: analyzing the factors related to the nature of individuals and environment. This model is linked to new interventions for disease management through community involvement and social participation in programs aimed at providing health care. 2

Therefore, the Ecological Model is focused on disease prevention and health promotion, seeking for interventions for individuals, groups, and environment, aiming at the individual determinants for health, such as behaviors and skills, and at the environmental level (organizations, institutions and policies). The intervention strategy, based on the Ecological Model, is derived from the intervention initiative for promoting health. One of the targets of the intervention strategy is the clients' individual, interpersonal, organizational, community, and political environment.³

Health interventions will be more effective through social participation, which has become a fundamental part

of health claims during the development of the *Sistema Único de Saúde (SUS)* [Unified Health System], with the population's pursuit for democracy, characterized by the process of political openness. Thus, community participation could be seen as a condition for the full exercise of health, promoting equity and necessary transformations for the care delivered in health care units.⁴

Thinking about participatory management implies the existence of free channels of participation and clear information. Also, this management requires processes that favor autonomous, representative and co-responsible participation, and the acknowledgment of the need for strengthening social movements as important tools for health changes.⁵

A study carried out in Brazil, in which community leaders were interviewed, showed little community participation in health councils. Sixty percent of the participants were unaware of any counselor in the neighborhood and 25% reported not knowing the existence of Health Councils. Nevertheless, those who have already participated in a Health Council meeting pointed out that they received the invitation through the community health agents, proving the multiprofessional team's importance in promoting community participation.⁶

Full participation allows a group to decide on issues of general interest to the community, which means deciding, monitoring and evaluating the service management, that is, exercising social control. So, it is important that the population's different realities are taken into consideration while developing policies, requiring broad debate and discussion of what will be best for the entire population.⁴

According to a study conducted in 2012, the SUS was viewed by the participants as one of the largest social mobilization systems in relation to access, coverage and continuity assurance. The business features of the SUS, which promotes community participation in discussions about health, were also pointed out.⁷

An important feature linked to participation is the way health information and knowledge are provided for communities with the purpose of developing their autonomy. Health education is one of the main strategies for effective action towards communities. Providing awareness, coping possibilities, sharing of personal stories, and community participation for people can induce transformative actions necessary for health.⁴

Given this framework, nursing can be carried out creatively and autonomously in different levels of health care, either by using it as health education or applying it to promote people's rehabilitation or health. Nurses play an increasingly decisive role in identifying the population's care needs, as well as in promoting and protecting the health of individuals considering its different dimensions.⁷

Accordingly, nursing work is a fundamental component

for local health systems, since it trains, assists and coordinates care practices in order to promote and protect the health of individuals, families, and communities, also influencing the people's need for being protagonists and for empowerment.⁷

Based on the above considerations, there is an interest in investigating the role of nursing in social participation, specifically in relation to the individuals' environmental, physical, social, and organizational relationships according to the Ecological Model. Hence, this study aims to identify the Ecological Model elements by analyzing the scientific knowledge about social participation in health and the nursing's role.

METHODS

This is an integrative literature review carried out through the following steps: defining the guiding question; determining the inclusion and exclusion criteria; identifying what information will be extracted from the articles; analyzing the selected articles; interpreting the results; and presenting the integrative review.⁸ The following guiding question was defined: "Which Ecological Model elements are present in scientific publications on social participation in health and the nursing's role?" To answer this question, the following inclusion criteria were defined: articles whose abstracts contain Ecological Model elements; articles in Portuguese, English or Spanish; and articles available in full and free of charge regardless the period of time they have been published. Exclusion criteria were: theses and dissertations and publications without abstracts.

Literature research was performed in the following databases: Literatura Latino-Americana e do Caribe em Ciências da Saúde (LILACS) [Latin-American and Caribbean Literature in Health Sciences], Scientific Electronic Library Online (SciELO), Cumulative Index to Nursing and Allied Health Literature (CINAHL), and International Medical Literature Analysis and Retrieval System Online (MEDLINE) through the PubMed.

The descriptors were selected according to the Medical Subject Headings (MeSH), List of Headings from CINAHL Information Systems, and Health Sciences Descriptors (DeCS) from the Virtual Health Library. The results were refined using the Boolean operator AND by using the following combinations: "Participação Social AND Enfermagem AND Ecossistema"; and "Social Participation AND Nursing AND Ecosystem". Literature research was carried out in June 2017.

Data collection by using the databases resulted in 107 publications published from 1992 to 2017. A sample of 19 articles was chosen after applying the inclusion and exclusion criteria, reading 80 abstracts, applying the Social Ecological Model, and reading 33 articles in full. This process is illustrated in **Figure 1**.

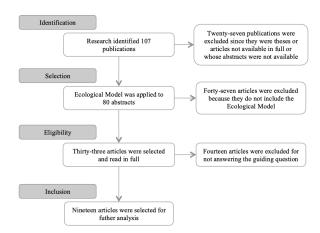


Figure 1 - Flowchart of the process of article selection.

The following features were taken into account for sample analysis: journal, country, publication year, evidence level, and Ecological Model elements,³ and participants (including how they participated in the research and in what environment it was carried out).

Evidence level identifies how the evidence is classified according to the hierarchical form and the methodological approach adopted. Evidence level is classified as level 1 (systematic review or meta-analysis of multiple randomized clinical trials), level 2 (well-designed randomized clinical trials), level 3 (well-designed clinical trials without randomization), level 4 (case-control and cohort studies), level 5 (systematic reviews on descriptive and qualitative studies), level 6 (descriptive or qualitative studies), and level 7 (expert opinion).

RESULTS AND DISCUSSION

Considering the 19 selected articles, five were published in 2011, three in 2014, and two in 2015. Regarding the nationality, five studies were published in Brazilian journals. Concerning the country of publication, seven were developed in the United States of America, five in Brazil, four in the United Kingdom, two in Canada, and one in Iran. The level of evidence that most characterized the sample was level 7 with 11 articles. **Table 1** presents a summary of the publications analyzed in this review.

Table 1. Features of the selected articles according to journal, year, country of publication, and evidence level.

No.	Journal	Country of publication	Year	EL
01	Preventive Medicine ¹⁰	United States of America	2015 7	
02	Ciência, Cuidado e Saúde ¹¹	Brazil		7
03	Physical & Occupational Therapy In Pediatrics ¹²	sical & Occupational Therapy In Pediatrics ¹² United States of America		6
04	Ciência, Cuidado e Saúde ¹³	Ciência, Cuidado e Saúde ¹³ Brazil		6
05	Health Promotion International 14	United Kingdom	2011	7
06	Journal of Social Work ¹⁵	United States of America	2014	7
07	Texto & Contexto Enfermagem ¹⁶	Brazil	2004	7
08	Social Science & Medicine ¹⁷	United Kingdom	2017	7
09	International Journal of Geriatric Psychiatry ¹⁸	United Kingdom	2011	4
10	Preventive Medicine ¹⁹	United States of America	2014	7
11	Social Science & Medicine 20	United States of America	2015	6
12	Revista Mineira de Enfermagem ²¹	Brazil	2011	6

13	Escola Anna Nery Revista de Enfermagem ²²	Brazil	2010	7
14	AAOHN Jornal ²³	United States of America		7
15	Canadian Journal of Public Health ²⁴	Canada	2011	7
16	Nursing Leadership ²⁵	United States of America	2007	6
17	Tobacco Control ²⁶	United Kingdom	2012	5
18	Canadian Journal of Public Health ²⁷	Canada	2006	6
19	International Journal of Environmental Research ²⁸	Iran	2003	7

Individual and environmental elements from the Ecological Model were found in 14 articles, and nine presented organizational factors from this model. Nurses were the main agents for social participation in six articles. Regarding the environment in which the research was carried out, ten articles highlighted the community as the main environment for change. Also, the way in which this social participation was developed included, among others, education, program implementation, reflection, and public policies, as shown in **Table 2**.

Table 2 - Ecological Model elements present in the selected articles.

In what

Ecological Model

No.	elements	Who participates?	environment?	In what way?
01	Individual and Environmental factors	Health professionals, patients, and society	Global environment	Health promotion and education about climate changes
02	Individual and Environmental factors	Nurses and the elderly	Family, community, and hospital	Changes in the health care process
03	Individual and Organizational Factors	Children, families, and society	Family, School, and community	Implementing intervention programs
04	Organizational and Environmental factors	Nurses and patients	Hospital	Changes in the health care process
05	Organizational and Environmental factors	Individual and community	Global environment	Improvements concerning environmental degradation and climate change
06	Individual and Organizational Factors	Social workers and patients	Community	Chronic care model
07	Organizational and Environmental factors	Nurses, multidisciplinary team, community, and mother and child	Community and global environment	Building epidemiological profiles and establishing health and environmental policies
08	Individual and Organizational Factors	Multidisciplinary team, families and patients	Hospital and community	Program for better assistance activities
09	Individual factors	Caregiver and people with physical and cognitive disabilities	Family	Environmental adaptations
10	Individual and Organizational Factors	University students	University	Reflection on responsibility for your health and the community
11	Individual, Organizational, and Environmental factors	Interdisciplinary researchers	Community	Use of communication technologies to promote change in health behavior
12	Environmental factors	Nurses and community	Community	Prevention of ecosystem problems
13	Individual and Environmental factors	Nurses	Hospital	Inter-relationship in care between hospital units
14	Individual and Environmental factors	Nurses	Global	Physical and psychological care, organization and leadership
15	Organizational and Environmental factors	Government, communities, and society	Global environment	Healthy public policies, supportive environments, community empowerment, personal skills, and redirected health services

16	Individual and Environmental factors	Nursing students	Community	Building safe places for the community
17	Environmental factors	Farmers	Family	Developing and implementing policies.
18	Individual and Environmental factors	farm communities and researchers, health care professionals, and local politicians	Community	Recognizing and treating poisoning better; improving pesticide policies
19	Individual and Environmental factors	Indian communities	Family and community	Hygiene practices

OThe articles were summarized for the organization, analysis, interpretation, and presentation of results. Therefore, the following categories emerged: "Social participation in health care from the Ecological Model" and "Nursing's Role in the Ecological Model for social participation".

Social participation in health care from the Ecological Model

Social participation in health care comprises individuals who integrate health care systems and can act in favor of human health, especially health care professionals, who are responsible for educating patients and society, as well as participating in public policies. Climate changes, for example, has threatened human health, requiring new practices to be carried out in order to deal with this context, changing behaviors in favor of health, offering social support and environmental security, and seeking health promotion.¹⁰

Human beings are responsible for ecological, planetary, collective, and environmental care since they live in the same ecosystem and depend on it to survive.²¹ An act towards personal health is not individual and autonomous only: behavior and lifestyle have profound and far-reaching consequences for community, national and global contexts.¹⁹

A reflective study on the Ottawa charter highlights the individuals' commitment to address the environmental issues that affect their health, as well as global ecological issues stemming from their way of living. Also, the study highlights the empowerment of people and communities and their participation in health decisions, which ensures that people have greater control over their lives and environments.²⁴

The Ottawa charter further portrays the existence of an implicit hierarchy when approaching governments at all levels, communities, and society as a whole, with responsibility for ensuring the conditions for good health. According to the charter, healthy public policies, supportive environments, strengthened community action, personal skills, and redirected health services are needed to promote health in communities.²⁴

In order to make progress towards improvements in relation to environmental degradation, climate changes, and social inequality, it is necessary to rethink health promotion practices by creating supportive environments and seeking positive ways to address environmental challenges, social and cultural changes, and society's lifestyle.¹⁴

A study conducted in India on the occurrence of hygienerelated diseases revealed that its incidence can be attributed to home conditions, micro-ecosystem, and human behavior and lifestyle. Human behavior is influenced and determined by social traditions, customs, and culture. In addition, other factors such as health awareness and health promotion measures can ease behavior and lifestyle changes harming health in communities.²⁸

According to another study, the development of health awareness helps to change behaviors because conscious people seek knowledge and advice and work hard to improve their hygiene and health. Also, the study reports that just reflecting that hygiene habits are not healthy will make the necessary changes happen. Thus, it is important for people to change their attitude.²⁸

Nonetheless, it is still clear that human health often takes second place. A study on the effects of oil spills, in which the effects on marine wildlife and ecosystem are well documented, reported shocking results. However, the effects on the health of workers trying to contain these disasters are little studied. The consequences of these oil spills for human health are loss of muscle coordination, migraines and many lung diseases.²³

The implementation of health care programs eases and promotes the changes needed for human and environmental health, as shown by a study that evaluated the social life context of children with developmental coordination disorder who were followed up according to an intervention program. The study's results pointed out that a holistic view facilitates partnerships between families, schools, and communities, allowing for social participation and better quality of life. So, it is necessary to increase children's social participation at home, allowing them to perform homework, feed and dress themselves without help; in school through writing, music, and physical education classes; and in the community through participation in leisure activities. 12

A health care team in a public hospital in South Africa also implemented a program for improving patient care by creating a space for sharing and exchanging ideas, promoting creativity, innovation and a sense of community. Furthermore, the program aimed at identifying ways to better work with the community, providing high-quality services, encouraging and supporting the patients' families, among others.¹⁷

Another study identified the Problem Adaptation Therapy (PATH) as a new intervention carried out in homes for reducing depression and disability in physically and cognitively disabled people, focusing on the patient's ecosystem, which includes the patient-caregiver-environment triad. The development of this therapy incorporates environmental adaptations and caregivers' participation by using environmental adaptation tools that tend to bypass patients' functional and behavioral limitations creating an easier environment to live in.¹⁸

According to a review on the impacts of tobacco farming on environmental health and on knowledge gaps, developing and implementing interventions against the negative environmental impacts of tobacco production around the world are critical for protecting the farmers' health and their families, particularly in low-income countries. However, there are insufficient studies and policies addressing the negative health, environmental and socioeconomic impacts associated with tobacco production, as well as addressing solutions to these problems.²⁶

Among the health issues linked to the exposure of farmers to agrochemicals used in tobacco production, dermatological, respiratory, neurological and psychological problems stand out. Pesticides used in tobacco farming can, in fact, be a major risk for a series of adverse health conditions that can lead to death, thus requiring the development and implementation of policies that deal with the challenges faced by farmers and their families.²⁶

Universities are major allies in promoting awareness and behavior changes. A study pointed out that university curricula have global citizenship as one of their components, which leads students to reflect on them being responsible for their health and the health of the community's people. ¹⁹ In the ecosystem perspective, social workers are professionals who play a fundamental role in the model of chronic care. They can support and train patients and create positive interventions for them, highlighting the patients' proactive role in facing a chronic disease condition. ¹⁵

Higher education can also act in the fight against Noncommunicable Diseases, including obesity. Through promoting choices such as avoiding precarious lifestyle, physical inactivity, and unhealthy eating habits, suffering can be avoided and lives can be saved since fat people can change their lifestyle. Consequently, each citizen has the power to change this crisis through personal responsibility, but in some cases "personal" responsibility is not the answer, requiring "global" responsibility.¹⁹

The International Development Research Centre (IDRC), in Canada, has been established as an independent institution guided by an International Board of Governors to establish health policies and priorities. Its health sciences division was organized into three programs based on a holistic model of health ecology: 1) health and community; 2) health systems; and 3) health and environment. This center financially supports the EcoSalud project developed in Ecuador. Communities, agricultural researchers, health professionals, and local politicians participate in this project to promote pest management, recognition, and treatment of intoxications, and improvement of pesticide policies in the country.²⁷

Another ally to promote changes in health behavior and to facilitate the decision-making process is the use of new and emerging communication technologies that have been increasingly used by health professionals. One Health is the idea that the health of humans, other animals and ecosystems are interdependent. Thus, health not only can be understood as physical health, but also includes broader indicators for people and societies through psychological, emotional, spi-

ritual, and economic well-being and through socio-political stability. $^{\!\!\!\!^{20}}$

The integration of human, animal and ecosystem health is a context for new research on communication technology and human behavior, which requires multidisciplinary attention and urgency for supporting research and health. Many public health organizations use social media as a tool for information propagation and public connectivity, such as the biomonitoring technology called HealthMap, which uses resources from the internet for monitoring diseases and epidemics in real-time. These initiatives collaborate for a healthier and more conscious global community.²⁰

Nursing's role in the Ecological Model for social participation

Nurses play an important role in decision making during the care process, but they can be affected by patients' behavior. On the one hand, there are the patients' involvement, health interests, questions, and suggestions, which allow them to participate in care actions. On the other hand, patients with passive and alienated behaviors contribute to their non-participation in care decisions. ¹³

Therefore, nurses can participate in the development of epidemiological profiles of communities for improving the health care services taking into account the interaction between man and ecosystem. Also, they can develop health care actions and identify environmental risk factors according to the specificity of each community, seeking to promote health, prevent diseases and provide quality care for individuals. In addition, nurses play a fundamental role in the establishment of health and environmental policies in different government departments, which can increase awareness on this subject and make it possible for actions aimed at promoting and preserving health to be implemented.¹⁶

The nurses' work in the face of environmental disasters is important. They work on the front line and are the first responding agents in addition to carrying out management and leadership actions during crisis situations and providing physical and psychological care for workers. Occupational health nurses also can influence policies, regulations and emergency preparedness by educating workers on the importance of health promotion, prevention, and educational programs so that injuries and possible diseases caused by environmental disasters do not affect their health.²³

A study¹¹ aimed at applying the ecosystem approach to the complexity of nursing care for the elderly. For this end, different health care environments were considered, such as the family, community and hospital ones. Furthermore, multiple interactions between the individuals who received care were also considered, as well as what elderly people think about their health condition, disease, needs, and weaknesses, seeking to perform actions for preserving and improving their autonomy.

A reflective Brazilian study aimed at understanding the meaning of ecological/planetary/collective care of the environment for nursing professionals in the light of complex thinking, highlighting the importance of care awareness being thought and rethought in individual practices for environmental problems, taking into account that these attitudes reflect on the community, since environmental problems can cause health problems for the population.²¹

A Brazilian study discussed the healthy and sustainable hospital environment and the nursing contributions to this process, emphasizing the strength of interdependence and interrelation among the productive hospital units, also seeking a sustainable and healthy space through partnerships. These interconnections among different professionals are favored by nursing professionals, who can be the major agents of transformation in hospital environments, producing health through a healthy and sustainable hospital environment.²²

Actions for building capacity in high-quality nursing education systems, clinical research, and safer health care were evaluated in a study carried out in Canada. In this study, research teams were led by nurses who applied knowledge of health sciences, health ethics, and ecological restoration to study and strengthen organizational ethics and safety practices in current health care environments, involving students, teachers, health policies, and services across the country and beyond it.²⁵

Ecological thinking encourages the ability to think, and eco-efficiency is achieved when researchers involve students, policy makers and community members in integrated cycles of research, practice and adaptive learning. ²⁵ Hence, the nursing efforts to prevent and find ecosystem-related problems are important. These actions can define priorities and strategies for health management. ²¹

CONCLUSIONS

The analysis of scientific literature by identifying the elements from the Ecological Model allowed the selection of studies on the relationship between environmental, individual and organizational factors that influence health promotion, focusing on social participation and the nursing's role in this process. Also, this study produced knowledge about this relationship in different realities and demonstrated knowledge gaps due to the low number of articles identifying elements from the Ecological Model.

The need to promote ecological thinking among individuals, environmental awareness, and development of health awareness through behavior and lifestyle changes is evident. These are fundamental factors for environmental sustainability and for individuals' health. Another relevant aspect is the participation of health institutions, universities, communities in various environmental contexts that can influence the individuals' activities and attitudes, especially those related to their health.

Some studies have pointed out ways of implementing programs in both nursing and other areas that facilitate and promote changes for human and environmental health, in addition to stimulating awareness in the community. Nursing as the front line in care has a fundamental role in the development and application of interventions through these programs, stimulating the participation of different professionals and developing a holistic vision with regards to the health problems and necessary solutions.

Social participation permits the involvement of individuals in different environments for health promotion and prevention. This participation is encouraged by health professionals, especially nurses, who play a key role in making decisions for environmental care and preservation, stimulating awareness about environment and health. In addition, nurses participate in the process of choosing public policy priorities, which can favor better living conditions for the population and environment.

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