

LEARNING TO CARE OF THE ELDERLY:

DYNAMICS OF THE COOPERATION NETWORKS IN NURSING EDUCATION

Helena Reis do Arco - Doutor. Instituto Politécnico de Portalegre; Escola Superior de Saúde, C3i, CesNova

Adriano Dias Pedro - Doutor. Instituto Politécnico de Portalegre; Escola Superior de Saúde, C3i, CesNova

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ABSTRACT

Aging is a reality and care that cope the constant daily challenges and needs of older people. Nurse training cannot be unrelated to this fact. To answer the following demands of society and quality objectives, more and more students have in their curriculum, units where they learn to care the elderly. Objective: Nursing training is done in close collaboration between the nurse school and the health organizations, so is necessary analyze the structure of the established social network and the dynamics of cooperation that sustained relationships between the actors in the training of nursing students in the context of long-term care for the elderly. Methods: Anchored in the analysis of social networks, we questioned twenty-one actors involved in the process of cooperation for training in nursing. The ethical aspects are preserved. Results: We found that the cooperation network had a 45.7% density in clinical teaching context with a particular structure and positioning of the actors through. The answers that they have provided, explained the importance they attached to cooperation. Conclusion: Cooperation had more connections during the clinical training period than during the theoretical period. The participants highlighted the need of continuing to invest in this network, since it was considered a good way to diffusion knowledge and the nursing training in elderly's care, constitute an added value to the current needs of society.

Descriptors: Elderly; cooperation network; nurse training.

INTRODUCTION

The population aging is increasing and more and more we live in network. So, we need to understand the structure of relations established between different actors within the nurse education, particularly in care for the elderly. Today poses challenges to which we must be attentive.

The nursing education, has been much linked to health organizations, today is currently based on new models of management and training, by redefining boundaries, establishing networks of cooperation between higher education organizations and health care providers organizations.

Also facing the population aging and the increase of people in situations of dependency, new answers emerge in terms of health care, such as the Rede Nacional de Cuidados Continuados Integrados and the nursing education must be aware of this reality.

Called by the indispensability to face the new challenges, schools try to comply with the quality of the teaching/learning process of students, and also meet the socio-political and organizational evolution, the care needs of the population, and also the prospects of employment of new graduates. At a time when the demand increases and profitability prevails, it is increasingly necessary to question the cooperation strategies adopted in the context of nurse training, with a view to the perspective of sustained propagation of information and social capital enhancer (Coleman, 1988). We are also concerned, how the established social networks could promote access to employment.

Anchored in qualitative methodologies and analysis of social networks, we set our goal to analyze the structure, content and dynamics of the established cooperation network for training in nursing, under the purpose of care for the elderly in the context of long-term care.

We think that is essential the knowledge of this reality, because only then we can draw plural and multidimensional strategies. Only with that, we can provide quality education and health care, and also the development of skills that promote access of young nurses to employment.

Nurse Training, Elderly Caring and Cooperation Networks Training and Nursing Care for the Elderly

Training is a process that currently occupies an increasingly important place. It can be understood as a process of development and structuring of the person, considering the subject student and agents of their own training. Canário (1999). distinguishes the concepts of education and training, in the case of adults, associated with two great traditions: the literacy and professional training.

The training process can be understood as a complex and global activity, which emphasizes the integral development of the person, and that arises from a double reflective process that comes from the awareness of being formed by the other, the world of things and itself. The person is formed in a way that appropriates of its own training (Moniz, 2003). The concept of training (Josso, 1991), has taken a multiplicity of meanings depending on the different approaches. The sociology emphasizes the dimension of socialization, psychology emphasizes the personal development of the subject, anthropology addresses it as inculturation and psycho-sociology directs it to the group interrelations.

We agree with Josso, (1988, p.37) considering that, the word education presents a semantic difficulty, for designating both the activity in its temporal development, as the respective result (...) keep an ambiguity as far as the concept used does not allow to distinguish the action of the form (the trainer's point of view, the pedagogy used and the learner) of action to form. The same author (Josso, 1991) also states that there are three coexisting key components of training: training as a form of learning skills, training as the transformation process and the formation as the project itself. In the context of this study, we consider the importance of the three-pole theory for formation of Pineau (1991), since it proposes a model for understanding of the formation process as a complex formed by three poles (itself, the others and other things), articulating self-training (I), the hetero-training (the others) and the eco-formation (things). Self-training brings us to the individual, solitary but not closed responsibility, taking as subject and object of their own training. In hetero-training, the author explains the place of others in the training process, the interrelation of experiences with each other may be forming if transformed into knowledge. The eco-formation highlights the environment material and physical in the training process, that is, the relationship that the individual establishes with things.

The practice of nursing care focuses on the interpersonal relationship of a nurse with a person or a nurse with a group of people [family or community], (Ordem dos Enfermeiros, 2002). The nursing care consider the whole person, taking it in its different dimensions (biological, psychological, cultural, social, environmental and spiritual), recognizing their particular way of interacting with their environment and helping to maintain or acquiring balance in accordance with their needs or difficulties.

Colliére (1989) considers that the changes due to aging require stimulation care, maintenance of one's capabilities and support what that individual can still do, in order to prevent greater functional limitations. The care for the elderly, should not focus on prolonging life expectancy, but in prolonging life with minimal disabilities, considering that each person is unique and unrepeatable, and that the aging process does not result only of biological aging, but a combination of other factors such as diseases and social changes. This care will concern the identification of needs from the biological point of view, psychological, sociological, cultural and spiritual, emphasizing prevention, treatment and rehabilitation from diseases, whilst giving equal weight to the promotion of physical functioning, psychological and social. The ultimate goal of care is health, conceived as welfare, from the perspective of the person cared for, as human development and decision making bend their activities of daily living (Basto, 2007).

The American Nursing Association set standards for nursing care of the elderly, in particular: the multiple facets of the aging process; personal rhythms of aging; the many losses associated with aging; grief work required to accept losses; relations between the biological, social, psychological and economic; the response of the elderly to the illness and treatment; the cumulative effects of chronic and/or degenerative disease processes; the social values associated with aging and social attitudes (Berger, 1995; Martins, 2005) states that nursing care for the elderly rely on the same philosophy of long-term care through the continuity of a comprehensive and integrated care, assessment of global health status, the participation of the elderly and their families and quality of care.

Interorganizational Cooperation and Analysis of Social Networks

Nowadays, even in the context of higher education organizations, we speak of interaction and cooperation. We take as a starting point the bet of the European Commission itself on the premise of "Education and training" as a development strategy, which sets out a series of operation axes to achieve the goals set for 2020 (European Union [EU], 2009). In this strategy is present the need for effective cooperation between universities, research centers and companies in a strategic perspective of developing a knowledge network capable of generating innovation and development.

The reasons for the establishment of these networks are often associated with intrinsic needs of organizations. On the other hand, higher education institutions have associated research centers where demand and development of knowledge is a constant, they also have students who need to make their internships and companies have the settings for this, as well as within it, behave professionals, often experts, which could be an asset in monitoring and supervision of these students. If an asymmetry is diagnosed from the start, through the establishment of an effective cooperation network, where reciprocity is safeguarded, can lead to increased efficiency and stability, gains in image, reputation and prestige, so conditions are created for the dynamics of these processes.

However in the existing literature, not only in the field of training but also economic and social (Arco & Silva, 2013; Clegg, & Hardy, 2001; Ebers, 2002; Fialho, 2008) found that in many cases the cooperation network attempts were just imperfect alliances.

Referring to this, the fact that within such networks, coexist processes not only of cooperation as well as competition and individualism anchored in games and strategies (Crozier & Friedberg, 1977), where the effective organization is a construction that results of the various actions that actors mobilize. And where each one enjoys the freedom, autonomy and rationality that underlie the strategies that mobilize, taking into account not only the organizational goals as well as their own individual goals.

Knowing that, is necessary to establish an effective cooperation network, the existence of dense relationships based on trust, primarily focused on the collective well-being, relations that could have a formal or informal nature (Krackhardt & Hanson, 1993; Lazega, 2004; Uphoff & Wijayaratna, 2000), we are referred to the underlying typological complexity to the relationship established between the actors that make up the various organizations involved, systematically, taking into account the regularities and patterns of social interaction (Molina, 2001). Factors such as the history of the relationships established, not only formal and informal, often determine the value generated by complementing the individual skills of each individual to become a common good. However, these paths and established cooperation dynamics have underlying obstacles and challenges that are necessary to overcome. More difficult is even when stakeholders do not share identities and/or similar cultures, assuming singularities that are difficult to converge.

Combining the concepts of nursing training and care of the elderly, having as context the reality experienced, today in higher education, and the quality we want to give to the training of future nursing professionals, knowing that this has always prevailed in a close association between theory and practice, the cooperation between schools and health organizations will have to be increasingly consolidated.

By the literature review, we found that these paths are not always easy, it is necessary to invest, in the unveiling of the established interactions and the dynamics underlying these processes. That was the way we set ourselves to.

METHODS

Having in the horizon the problem of the dynamics that underpin the cooperation networks for the training of nursing students, in the framework of the care of the elderly, our aim is to design this study of exploratory nature, establishing as objective: To analyze the dynamics of cooperation that sustained relations between the actors in the training of nursing students in the context of long-term care for the elderly.

As participants we selected all Students, Teachers and Nurses who participated in the Curricular Unit of Continuing Care in the context of Convalescence Units and that accepted to participate in the study.

We note that, for the development of the study, we obtained the authorization of the institutions involved, ethics committees of healthcare organizations as well as the consent of the participants.

Sustained in complementary methodologies, we applied a questionnaire of social networks and structured interviews to students, nurse supervisors and teachers who were involved in both the theoretical discipline as in selected clinical teaching. We questioned, in total, twenty-one participants. We also analyzed the scientific-pedagogical training support documents.

The analysis performed to the network questionnaires, was performed in the Ucinet 6 program. Qualitative data were analyzed using content analysis, sustained in the prospects of Bardin (2009).

The analysis dimensions stood around:

- The structure of the cooperation network established and resulting interactions;
- The importance given by guiding nurses, teachers and students, to the cooperation networks as an enhancer element in the training of nursing students, under the care of the elderly in the context of long-term care;
- The perspective of stakeholders (Guiding Nurses and Teachers), about the potential, constraints and effects of the cooperation strategy used.

RESULTS AND DISCUSSION

The investigative journey about the conditions of cooperation, must be made through an understanding and explanation path of phenomena, in order to understand the historicity of it, the operating modes, where the regularity of relationships and the dynamics underlying them, are essential factors to understand the functioning of this social reality.

Knowing that as described by Crozier and Friedberg (1977), the organizational situation never constrains completely the actor and the interaction in the system is always shaped by the strategies they adopt, the perspective that participants had about the process of cooperation, put us in the path of understanding through unblinding of the underlying logical to pipelines and interactions undertaken in this action system.

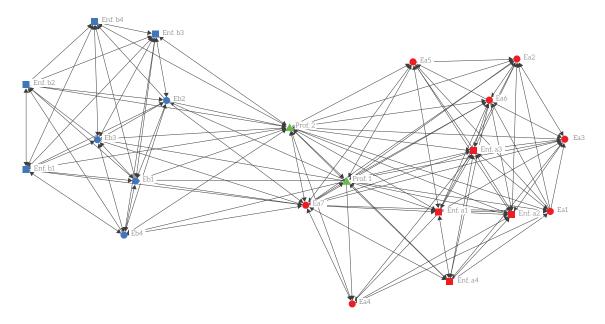
On the other hand, the question around effective information sharing, give us material about the structure of the network, because the theory of social networks is compatible with systems theory and organizational learning (Borgatti, 2003). So, in our training system, we asked to the actors participants to indicate first: During the theoretical period of the course, with whom they had shared information about the nursing care of the elderly, in the context of long-term care; second: During clinical teaching, with whom they shared information about the nursing care of the elderly, in the context of long-term care.

We intend in this way, and using sociometric data, identify the structure of the two networks (theoretical and clinical training period) and the positioning of the actors that constituted the networks, and then, we deepen the underlying operating dynamics, complemented by analysis of attributes.

The typology of the matrices used was square, identical and normal, taking into account the guidelines of Alejandro and Norman (2005).

We found that during the theoretical period, density of the network of information sharing, has been limited confronting us with a very weak network, where there is the absence of regular relationships between organizations that are involved in this project. This was due to the fact that only nurses of health organization that was geographically closer to school participate in the training process of the students during the theoretical period. On the other hand this could also be explained and given the theory of cooperation, as the first experience still ongoing, being the historicity factor of the relations still fragile (Ebers, 2002).

In the clinical training period the network of information sharing has already assumed a different structure, as can be seen in Graphic 1.



Graphic 1. Sharing information about the nursing care of the elderly in clinical instruction in the context of long-term care

The graphic shows us, different characteristics of network information sharing during the period of theoretical training. It is a network with 45.7% of density, 191 of 420 possible flows. This meets the theoretical premises, since the school had maintained before, cooperative relations with the two health organizations represented here, and with nurses involved in the supervision of students. We can also observe, however, that this sharing of information is done in two distinct groups, teachers working as a bridge, linking the actors, shared information between nurses of health organization A (indicated by a red square) and nurses [Enf] of the health organization B (marked with blue square).

Such also demonstrates the need to invest in cooperation strategies for these networks, evolving in a dynamic way and intensifying the ties between teachers, nurses and students.

Since we are dealing with a matrix of directed relations, for the nodal degree, we have chosen to calculate as illustrated in Table 1 the degree of input (*InDegree*) which is the sum of the relationships described with each actor of the network, this is, what each actor receives. The level of output (*OutDegree*) is the sum of relations that each actor has reported with the other actors of network.

	Enf a1	Enf a2	Enf a3	Enf a4	Enf b1	Enf b2	Enf b3	Enf b4	Prof 1	Prof 2	
Indegree	9	11	9	8	9	8	8	7	9	18	
Outdegree	12	8	12	8	9	5	8	5	16	20	
	Ea1	Ea2	Ea3	Ea4	Ea5	Ea6	Ea7	Eb1	Eb2	Eb3	Eb4
Indegree	6	10	10	7	8	8	17	7	8	8	7
Outdegree	8	5	9	3	6	10	13	9	9	9	8

Table 1. Centralization of input and output of actors: Network Clinical Practice (Source: Questionnaire)

To discuss the analyzed data by Freeman's Degree Centrality Measures and regard to centrality of entry, we found that the actor more connected both in terms of inflows and outflows is teacher 2 [Prof. 2], perhaps because he is responsible for the Curricular Unit involved in this process. With also regard that, in nurse a1 [Enf. a1]and nurse a3 [Enf. a3] of the health organization A and also in nurse b1 [Enf. B1] of health organization B. This can happen because these nurses are service/team responsible. By the analysis carried out to the responses around the perception on the cooperation established, all expressed that, this cooperation promotes the dissemination of information and sharing knowledge, contributing to the development, not only of students, but also of the professionals involved.

Regarding to students, we found that the student 7 [Ea7] often worked as an actor key in information sharing, receiving and sending flows not only with colleagues who shared the same context of clinical training, as also with colleagues who carried out in another health organization.

Regarding the centrality, we verified a predominance of the actors already mentioned, this leads us to the important role in the issue of flows and the exchange of information in the network, Hanneman (2000) also alerts us to the fact that a high outdegree may also inform us about the influence that an actor could have on the network. If there is an interest in continuing this process of cooperation for training in nursing, we must have a special attention to the role of these actors in network development.

Another calculated value was the power index Bonacich Power, that because an actor can be very central in the network, but then did not exert, much influence on others.

Again, the Teacher 2 [Prof.2] with (3,4), appears in a prominent position immediately followed by teacher 1 (3) and enf. A1 (2,4). If in the context of coordination, teacher 2 exerts great influence on information sharing, on the other hand the nurse a1, for his work during the semester, both in terms of cooperation in the theoretical component, as during clinical training, access and sharing many flows through participation that has the two organizations, which makes him, an actor with great power of influence. Also he is a specialist nurse with twenty years of service, with strong ties to professionals, not only of his healthcare organization but with other health organizations and with school.

Supported the quantitative data, which illustrate the structure of this network, and knowing that as before we did, the organizational situation never completely constrains the actor and the interaction in the system is always shaped by the strategies they adopt, we tried to analyze the response we got around themes and categories shown in Table 2.

Themes	Categories				
Perception About	Cooperation established as enhancer element of training				
Cooperation	Specific Curricular Unit				
	Participation of Professionals of Contexts of Practice in Lectures (Potentials and Constraints)				
Strategy Adopted	Interaction Strategy for Clinical Trial (Potentials and Constraints)				
The Future of	Diffusion of knowledge				
Network Cooperation	Continuity				

Table 2. Matrix of Coding and Analysis

In respect to "Perception about the established cooperation," we found that, teachers and nurses who cooperated in the supervision of students, and also them, considered that this process increases the connection/interaction/information sharing, not only during clinical teaching but also during the theoretical period. Teachers and nurses considered that established cooperation favored the personal and professional growth of those involved.

When we asked about the "existence of a specific curricular unit of Continuing Care", we found responses as "an added value", "a bet on the future" to face population aging. Also the fact that students gain skills in these contexts, meets the needs of care and current jobs. Another dimension that emerged from the responses was the specificity of care in this context, involving a multidisciplinary team.

In order to understand the dynamics we tried deepen the "Strategies Adopted ", both during the theoretical as in the practical component. It was found that, the participation of practicing professionals in the theoretical component, was, in the perspective of most of the actors involved in this process, a positive experience. Knowledge sharing and the closer to the real context, through daily practices described made most interesting and interactive the lessons, as it allowed interconnection with theoretical concepts taught. However, since professionals who participated are only originating from the health care organization A, this was considered a constraint.

This dynamic illustrates the structural data of the network, as previously mentioned, this has lower density and a clear similarity between the organization's participants and the school.

During the clinical training, participants considered the facilitator interaction strategy of joint learning and dissemination of knowledge by the dynamic established between nurses, students and teachers, meeting the perspective they had about the process.

However the health organization geographically furthest from the school, and with less tradition of cooperation, was considered that the sharing of information should in future be deeper. Triangulating the dimension that emerged from the answers to the centrality of data, including input and output information flows (see Table 1), we can see that the nurses of Health Organization B have a number of lower flows.

Despite the constraints we met, the strategy was positively appreciated as describes student [Eb2]: "Sharing made me adopt strategies to deal with the various situations that I came across and gave me many knowledge". Also for professionals, as alluded by nurse [Enf.b3]: "It's an added value this cooperation, because it allows learning and the exchange knowledge."

We emphasize once again, that this was the first experience of cooperation with this organization, being necessary to deepen the same over time, acting strategically on the identified constraints and seeking to consolidate the bonds of trust, so necessary in this process as referred Ebers (2002).

Wanting to bet on the future and in the quality of training, we questioned participants about the future of this network, which in turn will influence the future of the curricular unit and future clinical teachings. We realized by the analysis of the responses that cooperation was clearly considered an added advantage for the sharing and dissemination of knowledge, not only for the students involved, but also by contributions to the updating of professionals (teachers and nurses) as illustrated by nurse [Enf.b1]: "The sharing and contact between the various actors (nurses, teachers and students) allows the acquisition of more knowledge and experience, in addition to remind acquired knowledge".

CONCLUSION

Population aging and the increase of people in situations of dependency are now a reality in Portugal and in Europe. To meet the emerging needs, new answers begin to be developed in terms of health care, such as the *Rede Nacional de Cuidados Continuados Integrados*.

Nurse training was and are always linked to health organizations, so, cannot be oblivious to the needs for care and the evolution of the society.

Today is growing the concern about the formation of our future professionals. We want that they can respond to the challenges they face, by the evolution of society and cares in an inclusive perspective of transculturality (Leininger 2006), because we cannot be oblivious to the fact that our graduates provide care inserted in a culture of diverse and universal care, where quality will have to be present.

It was in order to contribute to improving the quality of nurse training that we set out to do this work.

Having regard to the first objective traced and subsequent analysis of the same dimensions, the following conclusions emerged:

Regarding the network structure, we verified that presented a higher density sharing of information about the elderly nursing care in clinical teaching context than information shared during the theoretical period of the curricular unit. As such, the positioning of actors in the network also took different values, explained by the analysis of responses, where the geographical proximity of the organizations involved in the process and the historicity of the relationship between the actors that in it intervened, were important factors. In respect to the underlying dynamics to network, we found that the perspectives around the process were influenced by the operation strategies adopted. In general, the process of cooperation was considered important as enhancer element of the formation of nursing student under the care of the elderly in the context of long-term care. We need to continue the investment because of the knowledge diffusion potential that provides for the all actors involved.

As constraints were identified increased difficulties in sharing information by actors coming from healthcare organizations that are geographically distant from school, being necessary to invest in more effective communication strategies.

However, despite the constraints, the effects of effective cooperation network were positive, by the diffusion of knowledge, exchange of experiences made and also, by the opportunities of straight and self-training that emerged from it. It was also considered relevant and a bet on the future, the existence of curricular units where aging issues and integrated continued care network are approached.

As prospects of development of cooperation network, will be needed, based on the constraints, we can later identify the evolution of dynamics of this cooperation network.

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Correspondence: Helena Reis do Arco - helenarco@essp.pt