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Nursing in adherence to treatment of tuberculosis and health technologies in the context of primary care

Enfermagem na adesão ao tratamento da tuberculose e tecnologias em saúde no contexto da atenção primária

Enfermería en la adhesión al tratamiento de la tuberculosis y tecnologías en salud en el contexto de la atención primaria

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Abstract

Objective: To describe and analyze the relationships between adherence to tuberculosis treatment and health technologies in the context of nursing action in Primary Care. **Method:** Contextual reflection, using the theoretical reference of Hinds, Chaves and Cypress. **Results:** They were categorized according to the conceptual perspective of each context, in an immediate, specific, general and metacontext, respectively: nursing actions in Primary Care and adherence to treatment of tuberculosis; nurses' performance through personal and environmental factors, health technologies and adherence to treatment; influence of nurses' beliefs about adherence to treatment and overall health status, and use of health technologies and shared views of patients and nurses on adherence to treatment as a responsibility for preventive action. **Conclusion and implications for practice:** Adherence to the treatment of tuberculosis is directly linked to the substantial performance of the nurse, which presents potentialities to contribute to greater articulation between actions necessary to the success of the treatment, reducing the weaknesses in its operationalization. The technologies in the context of nursing action can favor praxis, especially in the incentive to join, and can subsidize new strategies appropriate to the reality of services.

Keywords: Adherence to Treatment; Tuberculosis; Health Technologies; Primary Health Care.

Resumo

Objetivo: Descrever e analisar relações entre adesão ao tratamento da tuberculose e tecnologias em saúde no contexto da atuação da enfermagem na Atenção Primária. **Método:** Reflexão analítica de contexto, utilizando-se o referencial teórico de Hinds, Chaves e Cypress. **Resultados:** Foram categorizados em contexto imediato, específico, geral e metacontexto, respectivamente em: ações de enfermagem na Atenção Primária e adesão ao tratamento da tuberculose; atuação do enfermeiro mediante fatores pessoais e ambientais, tecnologias em saúde e a adesão ao tratamento; influência das crenças dos enfermeiros sobre adesão ao tratamento e o estado de saúde geral; e uso de tecnologias em saúde e visão compartilhada do doente e do enfermeiro sobre a adesão ao tratamento como responsabilidade para agir preventivamente. **Conclusão e implicações para a prática:** A adesão ao tratamento da tuberculose está atrelada diretamente à substancial atuação do enfermeiro, que apresenta potencialidades para contribuir para maior articulação entre ações necessárias ao sucesso do tratamento, reduzindo as fragilidades na sua operacionalização. As tecnologias no contexto de atuação da enfermagem podem favorecer a práxis, sobremaneira no incentivo à adesão, podendo subsidiar novas estratégias adequadas à realidade dos serviços.

Palavras-chave: Adesão ao Tratamento; Tuberculose; Tecnologias em Saúde; Atenção Primária à Saúde.

Resumen

Objetivo: Describir y analizar relaciones entre la adhesión al tratamiento de la tuberculosis y las tecnologías en salud en el contexto de la actuación de la enfermería en la Atención Primaria. **Método:** Reflexión analítica de contexto, utilizando el referencial teórico de Hinds, Llaves y Cypress. **Resultados:** Se categorizaron según la perspectiva conceptual de cada contexto, en inmediato, específico, general y metacontexto, respectivamente en: acciones de enfermería en la Atención Primaria y adhesión al tratamiento de la tuberculosis; actuación del enfermero mediante factores personales y ambientales, tecnologías en salud y la adhesión al tratamiento; la influencia de las creencias de los enfermeros sobre la adhesión al tratamiento y el estado de salud general y el uso de tecnologías en salud y visión compartida del enfermo y del enfermero sobre la adhesión al tratamiento como responsabilidad para actuar preventivamente. **Conclusión e implicaciones para la práctica:** La adhesión al tratamiento de la tuberculosis se vincula directamente a la sustancial actuación del enfermero, que presenta potencialidades para contribuir a mayor articulación entre acciones necesarias al éxito del tratamiento, reduciendo las debilidades en su operacionalización. Las tecnologías en el contexto de actuación de la enfermería pueden favorecer la praxis, sobre todo en el incentivo a la adhesión, pudiendo subsidiar nuevas estrategias adecuadas a la realidad de los servicios.

Palabras clave: Adhesión al Tratamiento; Tuberculosis; Tecnologías en Salud; Atención Primaria de Salud.

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INTRODUCTION

Tuberculosis (TB) is one of the 10 leading causes of death, and the leading cause of a single infectious agent (above HIV/AIDS); millions of people continue to fall ill every year. By 2017, TB caused about 1.3 million deaths among HIV-negative people, and there were an additional 300,000 deaths among HIV-positive people.[1]

One of the main challenges in addressing this disease is the promotion of adherence to treatment, which leads the Brazilian Ministry of Health to invest in maintaining treatment as the central axis of disease control.[2] In this perspective, access to TB treatment is assured by public policies and is available in Primary Health Care (PHC), however, it is often based on technical procedures, and does not prioritize the relationships established between people with TB and the professionals responsible for their care.[2,3]

Promoting adherence to TB treatment involves encouraging self-care and empowering the user in an active way for their health, understanding the risks to which they are exposed so that they can at eliminate them.[4] The incompleteness of TB treatment may have repercussions on unfavorable outcomes such as drug resistance and maintenance of the chain of transmission.[5]

Therefore, it is important to consider the context of the user for the success of the treatment, and also to consider the strengthening of humanized care and integration with a multiprofessional team, carried out by nursing historically and nowadays, favoring adherence to TB treatment, a disease that is configured as a relevant social phenomenon.[3,6,7]

Nursing has been gaining prominence in the application and development of technologies, when it is possible to use them in care and educational contexts. Its use has shown greater professional growth and benefits of the relationship between professional and customer.[8]

In this perspective, it is considered as technology in health knowledge that is constituted for the generation of singular products and organization of human actions in the productive processes, and the need to examine the relations between nursing and technology, especially those based in communication and reception.[9,10] The objective of this study was to describe and analyze the relationship between adherence to tuberculosis treatment and health technologies in the context of nursing performance in PHC.

METHOD

An analytical context reflection study, using the theoretical framework of Hinds, Chaves and Cypress.[11] The meanings of the contexts were considered and analyzed according to literature relevant to the thematic identified through a literature review.

The sources researched were publications *online* of scientific articles available on Latin American and Caribbean Literature in Health Sciences (Lilacs) and *Scientific Electronic Library Internet* (Scielo), from 2008 to 2017, accessed from October 2017 to January 2018. The following descriptors were used: treatment adherence, tuberculosis, nursing, with the Boolian and. We selected 23 articles and 1 dissertation for analysis.

Context is conceptualized as a set of four layers that interact and that are distinguished by the extent to which their meaning is shared (from the individual to an almost universal), by the time (present or future) and by the celerity with which changes in the layers can occur. The focus is how the phenomenon fits into the context layers.[11]

The immediate context is characterized by immediacy, observation in the instant that an act is performed, the focus is the present. The specific is characterized by the elements that are present in the environment and that influence the phenomenon, encompasses the immediate past and relevant aspects of the present situation: personal and environmental factors now that influence the situation itself. In the general context we find inserted the frames of reference of life of the subject from the interpretations that were made of the past and current interactions. Personal beliefs and cultural values is what influences the phenomenon in question. The metacontext reflects and embodies the past and the present, as well as highlighting conditions and learning for the future, it is the source of socially constructed knowledge that operates continuously and results in a shared social perspective.[11]

RESULTS

The results found in the integrative review were categorized into four sub-themes: 1. Nursing actions in primary care and adherence to treatment of tuberculosis; 2. Nurses' performance through personal and environmental factors, health technologies and adherence; 3. The influence of nurses' beliefs about adherence to tuberculosis treatment and general health status; 4. The use of health technologies and shared views of patients and nurses on adherence to treatment as a responsibility for preventive action.

The immediate context in which the phenomenon occurs presents adherence to the treatment performed by the nurses in PHC, whose follow-up activities are performed through the delivery and/or supervision of the medication. Personal, environmental, and health technologies are described mediating the actions of the nurse when monitoring the treatment of tuberculosis. The general emphasizes nurses' interpretations of past and current interactions that may influence outcomes. Such contexts are interrelated to a metacontext that reflects the shared view of the patient and the nurse on adherence to treatment.

DISCUSSION

Nursing actions in Primary Health Care and adherence to treatment of tuberculosis (immediate)

Directly Observed Treatment (DOT) has the potential to contribute to TB control, not only because of supervised shunts, but because it is understood as the moment to recognize the health needs of the person with TB. However, operational problems hamper the achievement of the objectives of this strategy in units of PHC.[12]

Such treatment is most often performed by professional nurses, and is considered by professionals and patients to be difficult and laborious.[12] Its effectiveness is observed when there is quality assistance, bonding and reception by professionals and the adequacy of supervision schedules according to the need.[12,13,14,15,16]

This acceptance, knowledge of the context in which people are inserted, working and living conditions and family relations can have repercussions on a greater commitment and on a professional basis, and consequently influence the person with TB to carry out his production process of health, so that it becomes co-responsible for its treatment.[14,15,17]

Factors considered as contributors to nonadherence to treatment are related to the patient, who receives the greatest responsibility for adherence/noncompliance.[13,18] But it is known that professionals, health services, governments, and educational institutions also take actions under their responsibility to be developed.[18]

The role of the nurse as a fundamental piece in the control is emphasized, guiding the relationship between latent TB infection and disease, bacillary transmissibility, the importance of adhering completely to treatment, the consequences of non-adherence,[19] including adverse reactions that have repercussions on adherence, solving them in the unit of PHC.[12,16]

The nurse acts in a systematic way in the care process to the person with TB, developing also: visits (knows the living conditions), general spoken and written guidelines, educational actions, follow-up of the treatment, monthly consultations accompanied by someone of confidence of the patient to facilitate wellness and safety, request for medicines, tests and basic food, control of communicators, active search for symptomatic respiratory and operational meetings.[7,20]

It is, therefore, notorious among the PHC professionals that the nurse is a participatory and decisive agent in the actions of organization of TB care, which ends up causing an overload of this professional's functions and makes it a reference for people with TB, making its work relevant in the work process in the PHC.[20]

It is conceived, then, that adherence to TB treatment comprises a dimension that goes beyond biological and clinical aspects, moving from a multifactorial disease health process to a socially determined one.[12] At times, they are considered defining elements of that adhesion: attendance at monthly consultations, routine examinations and ingestion of the drugs.[4] However, a study that focuses on abandonment of treatment considers only the criterion of non-attendance to monthly consultations for more than thirty consecutive days,[13] which limits the promotion of adherence to TB treatment to a rather reductionist view.

However, in both cases, the idea prevails that the person under treatment should submit to the recommendations of health professionals, as well as autonomy to adhere or not to the treatment, being the professional aside, without proper to take responsibility for the consequences of this decision, inasmuch as the person with TB fails to observe the recommendations and indications of the professionals and/or the service, he/she is considered as non-adherent.[18]

Nurses' performance through personal and environmental factors, health technologies and adherence to treatment of tuberculosis (specific)

The nurse, in general, maintains contact with the person with TB throughout the treatment, so the way in which he or she receives and approaches these people has the potential to be the differential for adherence or not to treatment, since the social representations (SR) act in the motivation of the people, interfering in their choices, in this case, in the decision to care for patients with TB.[3,6]

These factors are limiting in the nurses' performance: absence of a computerized system and periodicity in the accomplishment of the DOT; difficulty in articulating team actions and work overload,[6,20] distancing from welfare practices, intensifying bureaucratic/administrative activities,[21] centralized verticalization of control actions under the PHC; professional training and articulation between health care points and strategies for monitoring fragile TB control actions.[22]

Other negative aspects that contribute to the non-adherence of the user identified by PHC nurses are: unpreparedness and lack of interest of other staff members, limited time for drug supervision and insufficient number of employees; determinants for quality care and for interaction between professional and person with TB, which has repercussions on the establishment of a link.[6,12,13,17,21]

In this scenario, there is also occupational insecurity under the conditions offered by the work environment, it is pointed out that work permeated by situations different from any kind of violence (physical, psychological) demonstrates that the individual vulnerability of the professional in his occupational locus can produce different reactions in the worker, which assumes meaning and endorses the behaviors that will be adopted in the relationship with the patient.[3]

As for the disease being socially determined, financial difficulty is defining the absence of minimum conditions of confrontation, since often there are no good living conditions, such as adequate food, work, safe housing, education, leisure, and healthy habits, such as physical exercise and non-use of licit or illicit drugs.[14]

In addition, patients' values and beliefs influence their health decisions. In evidence-based practice, both scientific evidence and values and beliefs must be considered. Nurses must develop a set of skills so that they can help clients to mediate their current values, beliefs, and scientific evidence based on the empirically tested health belief model, focuses on prevention, and guides understanding of the client's health perspectives.[23,24]

From this perspective, in order to reach the goals of the Strategy for Ending TB, it is expected to establish three pillars: patient care, social component and research and innovation. The first, integrated and patient-centered prevention and care, is in line with the findings of this study, when it aims to adequately and timely treat all diagnosed cases of TB aiming at integral care, developing care centered on the person with TB.[25]

Adherence is therefore a dynamic and complex phenomenon, with a wide range of factors influencing it, it is also a result of exposure to situations of learning and coping with the situations of individuals in relation to the conditions of the disease.[5,16,18]

In order to do so, nursing should be able to provide structured care and focused on the needs of the patient; in this context, the use of technology allows a closer approximation between the professional and the patient, since the nurse can use this to try to clarify doubts and form means of coping with some difficulty manifested.[8]

The host and the link, important technological tools for the practice of nursing care, are basic light technologies to optimize this care.[9] Such practices aid in the recovery of autonomy, when an effective dialogue and qualified listening are established, and they divert the focus to the provision of care, to the detriment of the production of procedures.[14]

Knowledge of health disciplines and the use of structured knowledge that does not require high technology are considered light-hard technologies,[9] which present a degree of freedom that offers possibilities of actions to professionals, so that the work will be permeated by subjectivities, which are conferred to those who interact with people.[8]

For this, the nurse can use the discussion of cases and training compatible with the possibilities of operationalization in the PHC unit, in addition to permanent education, which are light-hard technologies that promise continuous improvement of these professionals, motivation and coping with the devaluation of work in health.[12,13,17]

In turn, structured knowledge, the use and manipulation of instruments (hard technologies) require greater planning and knowledge, whose subjective dimension is related to light technologies,[8] that is, the technologies used are interrelated, all of which are indispensable for achieving adherence to TB treatment.

The influence of nurses' beliefs about adherence to tuberculosis treatment and general (general) health status

Social distancing, isolation, poor education and a weak link between the person and the professionals during the therapeutic process are important aspects for the life of people with TB, generating behaviors of non-adherence. These factors reflect how practitioners act and in many cases the person with TB leaves treatment because he or she has been abandoned by the service.[16]

However, nurses consider themselves to be the people most responsible for the treatment, since the patient is fragile, and often use approaches of asymmetry of power (as required by the empty medication chart), which does not contribute to the empowerment of the person with TB and adherence to treatment.[12]

Still, these professionals pointed out that family support is a positive aspect of supervised treatment, it makes the patient feel cared for and with technical, emotional and financial backing, which reflects in wanting to heal, and still avoids user isolation.[4,12,13,16]

Adherence to treatment, linked to the consequent reestablishment of health, status may allow for the maintenance and constancy of the family bond, since the disease is perceived by the family members as a threat and, when there is no adhesion, there may be remoteness. Therefore, adherence can be understood as an attempt to control the risks to their family relationships,[4] stimulating him, even if contrary to his will, to carry out the complete treatment.

In addition to the good relationship, a good organizational structure of the service unit, the availability of vehicles and drivers, as well as the presence of the pharmacist in the home visits are facilities for DOT.[21]

On the other hand, some professionals approach the issue of adherence/non-adherence to health care under their perspectives, devalue the patients', do not consider the variability and deny the legitimacy of the behaviors that differ from their prescriptions.[13,18]

Adherence is favored when health professionals give users freedom of choice and enough time (two weeks is recommended) to think about the place of treatment (home or health unit), as well as information on prevention of transmission and under which side effects should return to the unit.[26] When treatment in the unit is imposed as mandatory adherence can be compromised, especially if there is a significant distance from your residence to the PHC unit.[26]

With regard to the social representations of TB by nurses, negative representations have been perceived that bring fear

and shame to the patients; according to the nurses, a person affected by the disease will feel constrained by their condition, because it is a marked event in their individual history and for continuing to permeate their social life.[3]

Understanding patients' experiences with TB can help improve adherence to treatment. Lack of awareness or knowledge about the disease may lead the person with TB to misconceived attitudes, therefore, health education is essential to eliminate a negative attitude towards the disease.[15,24,27]

Use of health technologies and shared views of patients and nurses on adherence to TB treatment as a responsibility for preventive action (metacontext)

The DOT is considered a potential for adherence to TB, treatment because the user feels more compromised by its treatment when it participates in the definition of the place and frequency of supervision, when their needs are considered, in other words, when there is a sharing of responsibilities between professional and user.[12]

The bond, potentiality of the DOT, according to professionals and users of PHC services, is a principle that governs AB and can be understood as a good relationship between professional and person with TB, throughout the treatment, when this daily contact is possible to the professional to perceive other needs of the user, and to share problems, strengthening the coping of TB.[12,17,21]

The DOT also allows inclusion, citizenship, sharing experiences, helping to regain identity and dignity. Regardless of the specificities presented by the person with TB, it is necessary to have a dialogue, aiming at the understanding, identifying needs and being available for support. That implies the need of articulation with other sectors, mainly, with services that are dedicated to the treatment of drug addiction, besides the community and the families.[12]

Adherence to treatment is related to the performance of a complete multidisciplinary team in the Tuberculosis Control Program.[13] Considering the need for teamwork, technicians and nursing assistants also play a fundamental role in controlling and adhering patients to treatment, however, deficiencies in basic knowledge on the subject are identified, such as: case detection, symptomatology, treatment and vaccination.[24,28]

However, it is emphasized that there is no gold standard intervention for all cases, each case must be carefully evaluated so that the most appropriate interventions can be directed, an individual approach must be taken in the choice of treatment method and its interventions, since a method that is successful for one may not be for another.[7]

It is believed that the understanding of adherence to TB treatment should be reinvented and not just put the DOT as a fundamental part of this process. Adherence can be improved through the implementation of patient-centered care, empowering them through counseling and support, maintaining a rights-based approach, recognizing the responsibility of health care systems to provide comprehensive care and prioritizing critical research gaps, since DOT is often at odds with the needs and preferences of the patient.[29]

Technological resources alternative to DOT from patient-centered strategies are daily reminders from the Short Message Service (SMS) to take medications and daily phone calls to ensure adherence and monitoring of potential treatment side effects already used in Russia and Armenia, which have been successful in their use by reducing costs, saving time and increasing adhesion rates.[30,31]

DOT does not prove to be an effective strategy in some countries,[5,30-32] having a variety of symbolic meanings within the world of clinical care, being able to reinforce traditional modes of interaction in which patients accept the "role of the patient," and renounce the management of therapy, which may be dysfunctional insofar as it can to make them passive subjects of health care, only receivers, who need monitoring and control.[32]

It is considered that nurses should carry out more studies with the objective of identifying factors that can improve adherence to anti-TB treatment and design new strategies that will result in better control of TB, including in children, an even more incipient area.[7]

FINAL CONSIDERATIONS

The context analyzed shows that adherence to tuberculosis treatment in Primary Health Care is directly related to the nurse's substantial performance, which has the potential to contribute significantly to a greater articulation with the other Primary Care professionals and with planning of actions necessary to the success of the treatment, thus reducing, the weaknesses in its operationalization.

The technologies in the context of nursing action can favor praxis, especially in the incentive to join, and may subsidize, in the medium term, new strategies complementary and/or substitutive to direct observation, more appropriate to the reality of services.

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