REUFSM
REVISTA DE ENFERMAGEM DA UFSM

UFSM
J Nurs. UFSM - REUFSM
Santa Maria, RS, v. 11, e61, p. 1-15, 2021
DOI: 10.5902/2179769262654
ISSN 2179-7692

Original Article Submission: 05/11/2020 Acceptance: 05/07/2021 Publication: 08/12/2021

Vulnerability and strategies for adherence to tuberculosis treatment: primary care nurses' discourse

Vulnerabilidade e estratégias de adesão ao tratamento da tuberculose: discurso dos enfermeiros da atenção primária

Vulnerabilidad y estrategias de adhesión al tratamiento de la tuberculosis discurso de los enfermeros de la atención primaria

Jonh Jorge Costa Barros[I], Aliéren Honório Oliveira[II], Jeane Lima Cavalcante[III], Tacyla Geyce Freire Muniz Januário[IV], Maria Lúcia Duarte Pereira[V], Edilma Gomes Rocha Cavalcante[VI]

Abstract: Objective: to identify nurses' strategies to enhance adherence of patients on tuberculosis treatment in the face of their vulnerabilities to dropout. **Method:** a descriptive study of qualitative approach, carried out with 13 nurses from Primary Health Care in a municipality of Ceará, Brazil. Semi-structured interviews were used and submitted to the Collective Subject Discourse technique. **Result:** the vulnerabilities to dropout were: health conditions; behavioral aspects; lack of housing, money, and family support; and lack of encouragement from health professionals. The strategies to enhance adherence were: health education; welcoming and co-responsibility; search for absentees, monitoring of tests and treatment adherence, and interdisciplinarity and intersectoriality. **Conclusion:** the nurses used strategies to enhance treatment adherence focusing on the care and educational dimensions in face of the patients' vulnerabilities. Need to expand the strategy of directly observed treatment to reduce dropout.

Descriptors: Tuberculosis; Medication adherence; Community health nursing; Primary health care; Nursing care

Resumo: Objetivo: identificar as estratégias dos enfermeiros para potencializar a adesão de pacientes em tratamento de tuberculose diante de suas vulnerabilidades ao abandono. **Método:** estudo descritivo de abordagem qualitativa, realizado com 13 enfermeiros da Atenção Primária à Saúde de um município do Ceará, Brasil. Utilizou-

[I] Nurse, Specialist in Family Health, Regional University of Cariri, Crato, CE, Brazil. jonhne.10@hotmail.com, Orcid: https://orcid.org/0000-0002-7484-157X

II Nurse. Master's in nursing. Nurse at the Municipal Health Secretariat of Farias Brito, CE, Brazil. alierenoliveira@hotmail.com, Orcid: http://orcid.org/0000-0003-4702-3691

III Nurse. Master's in nursing. jeanecavalcante2009@hotmail.com, Orcid: https://orcid.org/0000-0001-9074-8263

IV Nursing student at the Regional University of Cariri, Crato, CE, Brazil. tacyla_@hotmail.com, Orcid: https://orcid.org/0000-0002-4946-9382.

V Nurse. PhD in Nursing. Professor of the Nursing Department of the State University of Ceará, Fortaleza, CE, Brazil. luciad029@gmail.com, Orcid: http://orcid.org/0000-0002-7685-6169.

VI Nurse. Doctor of Science. Professor, Nursing Department, Regional University of Cariri, Postgraduate Program in Nursing, Crato, CE, Brazil. edilma.rocha@yahoo.com.br, Orcid: http://orcid.org/0000-0002-6861-2383

se entrevista semiestrutura que foram submetidas à técnica do Discurso do Sujeito Coletivo. **Resultado:** as vulnerabilidades ao abandono foram: condições de saúde; aspectos comportamentais; falta de moradia, dinheiro e apoio familiar e falta de incentivo dos profissionais de saúde. As estratégias para potencializar a adesão forma: educação em saúde; acolhimento e corresponsabilidade; busca de faltosos, monitoramento de exames e da adesão ao tratamento e, interdisciplinaridade e intersetorialidade. **Conclusão:** os enfermeiros utilizaram estratégias para potencializar a adesão ao tratamento com foco nas dimensões assistências e educacionais diante às vulnerabilidades dos pacientes. Necessitando ampliar a estratégia do tratamento diretamente observado para redução do abandono.
Descritores: Tuberculose; Adesão à medicação; Enfermagem em saúde comunitária; Atenção primária à saúde; Cuidados de enfermagem

Resumen: **Objetivo:** identificar estrategias de enfermeros para potencializar la adhesión de pacientes en tratamiento de tuberculosis delante de sus vulnerabilidades al abandono. **Método:** estudio descriptivo de abordaje cualitativo, realizado con 13 enfermeros de la Atención Primaria de Salud de un municipio Cearense, Brasil. Utilizado entrevista semiestructurada que fueron sometidas a técnica del Discurso del Sujeto Colectivo. **Resultado:** las vulnerabilidades al abandono fueron: condiciones de salud; aspectos comportamentales; falta de vivienda, dinero y apoyo familiar y falta de incentivo de profesionales de salud. Las estrategias para potencializar la adhesión forma: educación en salud; hospitalidad y corresponsabilidad; búsqueda de faltosos, monitoreo de exámenes y adhesión al tratamiento y, interdisciplinariedad e intersectorialidad. **Conclusión:** los enfermeros utilizaron estrategias para potencializar la adhesión al tratamiento con enfoque en las dimensiones asistenciales y educacionales delante a las vulnerabilidades de los pacientes. Necesitando ampliar la estrategia del tratamiento directamente observado para reducción del abandono.
Descriptores: Tuberculosis; Cumplimiento de la Medicación; Enfermería en Salud Comunitaria; Atención Primaria de Salud; Atención de Enfermería

Introduction

In Brazil, tuberculosis (TB) is a disease that needs control, being recommended by the World Health Organization, in 2015, that established cure should be greater than or equal to 85% and abandonment to be less than 5%, however their percentages have not yet been reached.[1] The latter is influenced by several factors such as the patient's and family's lack of information about the disease; the use of alcohol and other drugs; low education; social, economic, demographic and cultural barriers; as well as problems inherent to the medication, such as adverse reactions.[2]

The National Plan to End TB presents ways to enhance the adherence process, among them: the Directly Observed Treatment (DOT) aimed at strengthening the care for people with

the disease and the dissemination of innovative and successful strategies developed in the country.[3]

In the scientific literature, several actions to promote adherence to TB treatment are identified, such as: monitoring by the nursing team through the DOT; a link with the health team; adherence support offered by a multidisciplinary team; education and counseling; reminder systems, written or verbal agreements; encouragement to continue treatment, incentives and social subsidies to the patient, and social support offered to family members.[1-4]

These can respond to the aspects of vulnerability to abandonment that people affected by TB experience. The concept of vulnerability is divided into three dimensions: the individual - includes biological, behavioral and affective aspects, anchored in intersubjective relationships; the social - includes cultural, social and economic issues linked to gender, ethnic/racial, religious beliefs, social exclusion, which can influence the opportunities for access to goods and services; and, the programmatic - analyzes how policies, programs, services and actions influence situations of vulnerability.[5-6]

These dimensions enable health care providers to identify limitations and take targeted action to address the problem and promote adherence to TB treatment.[7] Thus, considering these aspects of care provided by primary health care nurses, the study aimed to identify nurses' strategies to enhance adherence of patients on TB treatment in the face of their vulnerabilities to dropout.

Method

This is a descriptive study with a qualitative approach. It was carried out in a specialty center and health units of two municipalities in the southern region of Ceará, Brazil, which follow patients with TB.

The study participants were 13 nurses from the Family Health Strategy and Specialty

Center located in Crato, in the southern region of Ceará. The municipality had 25 Basic Health Units (BHU) and 66 nursing professionals in primary care. As for the referral service, people affected by TB and leprosy received assistance from physicians, nurses and technicians, among other health professionals.

The inclusion of participants met the following inclusion criteria: being a nurse, monitoring patients undergoing TB treatment and working in the area for at least three months. Exclusion criteria were: absence of the participant from work activities during the data collection period, due to vacation, maternity leave and/or health treatment, or not being present at the unit after three attempts of contact by the researcher. There was no exclusion or refusal of eligible participants during the research.

Data collection took place through semi-structured interviews, carried out at the nurses' workplace, where they were approached face to face. At the time, the objective of the research was explained and, after that, they signed the free and informed consent form. The interview was conducted by two nursing students, lasted an average of 15 minutes, and included questions about the vulnerabilities of abandonment understood by nurses and the strategies they used to enhance adherence to TB treatment. The audio was recorded and transcribed in full in the *Microsoft office Word* 2013® *Software.* The collection took place between December 2014 to March 2015, with all nurses who monitored people with TB.

The Discourse of the Collective Subject (DSC) was used to analyze the speeches, which is understood as a technique for processing statements that directly expresses the social representation of a given collective subject, through unique speeches written in the first person singular. The clippings of significant speeches identify the central ideas (CIs), the key expressions (KEs), and the anchoring, which are made up of words or linguistic expressions and reveal, in a precise and synthetic way, the meaning present in the statements. Thus, to build the DSC, the CIs are identified and, based on the KEs, those that present the same, equivalent or

complementary meaning are sought.[8]

Subsequently, we performed a vulnerability concept analysis,[5-6] for this we took the elements that were close to the individual, social and programmatic dimensions, which were apprehended by the DSC CIs presented in the charts.

The research met the standards of Resolution 466/2012, which guides research with human beings and had approval from the Ethics and Research Committee of the Regional University of Cariri, obtaining a favorable opinion on December 9, 2014, with no 904.559. Ethics Submission Certificate no 20689113.5.0000.5055.

Results

The sociodemographic profile of the nurses showed a predominance of females, aged between 20 and 60 years, and working time of 1 to 10 years. The CIs formed the meanings of the KEs and were grouped into two categories, presented below with their DSCs.

Conception of vulnerabilities to abandonment of tuberculosis treatment

Chart 1 shows the nurses' conception of vulnerability to treatment abandonment in people with TB. Regarding the health conditions and behavioral aspects of the patient, they pointed out elements of individual vulnerability such as age, education, having chronic conditions (diabetes and alcoholism); limited knowledge about the transmission of the disease and the treatment that affect adherence and self-care.

The need for housing, money, and family support were related to the elements of social vulnerability. Thus, they highlighted the socioeconomic aspects and environments that interfere with the patient's self-esteem. Regarding the lack of incentive from health professionals, the nurses pointed out aspects of programmatic vulnerability when they recognized the need to encourage patients; the difficulties in performing supervision and the failure to return patients

to the health service that can compromise treatment adherence.

Chart 1- Understanding and central idea of vulnerabilities to abandonment of tuberculosis treatment according to nurses, Juazeiro do Norte, Crato, Ceará, Brazil 2015.

Question 1: how do you understand the vulnerability of patients to abandoning TB treatment?	
Main idea	**DSC**
Patient's health conditions and behavioral aspects	Being vulnerable to treatment is the patient who lives alone, lower education level; other diseases such as: hypertension, diabetes, alcoholism, and advanced age. When you check, (they) are not taking the medicine correctly. They are alcoholics, use drugs or are younger, with inadequate nutrition. Lack of awareness about treatment and self-care makes the patient vulnerable. They can't understand the seriousness of the transmission or they have already lost the will to live, have psychological problems. They don't accept that they have the disease. (DSC1)
Need for housing, money, and family support	The socioeconomic condition, having low income, lack of financial stability, work and extreme poverty. The living condition, the community, the unhealthy conditions, and the lack of family support. When he doesn't have a propitious environment to carry out the treatment, he becomes vulnerable to abandonment. The walker who has no fixed abode and the person who lives alone and does not receive a food basket are difficult to adhere to treatment, because their self-esteem is very low. (DSC2)
Lack of incentive from health professionals	Lack of incentive by the health professionals themselves, you have to stay on top of it or else they abandon, they don't want to come to the health unit. Agent has no way to supervise, so he relies on the family member. (DSC3)

Strategies used by nurses to enhance treatment adherence

The strategies reported by nurses to enhance adherence to TB treatment focused on health education through lectures with explanations about the disease, transmission and adherence to treatment. As for the welcoming and co-responsibility in the treatment, the nurses sought to establish trust by strengthening the bond with the patient and involving the family by supervising the therapy.

Regarding interdisciplinarity and intersectoriality, the nurses sought to respond to the socioeconomic and health conditions of TB patients, especially those related to food issues and their psychological conditions. Thus, they involve the Family Health Support Center - FHSC, the social worker, and a professional specialist.

As for the search for absentees, the nurses reported that it occurs through home visits,

telephone contact, and summons letters. Besides articulating with the family in the search for support and monitoring of treatment adherence. They had a structure to maintain the patients' accessibility, ensured the request of exams and monthly weight verification. They provided verbal incentives as to compliance in returning to the consultations and adherence to treatment and follow-up through the DOT.

Chart 2 - Strategies used by nurses to enhance adherence to treatment according to the participants, Juazeiro do Norte, Crato, Ceará, Brazil, 2015.

Question 2: what strategies do you use to enhance adherence to TB treatment in vulnerable patients?	
Main idea	**DSC**
Education in health	In the health unit, we always try to give lectures, explaining what is TB, how it is transmitted, the importance of the treatment and the consequences if the treatment is not done. I make clear all the information possible, that the disease is curable; the drugs need to be taken. (DSC4)
Welcoming and co-responsibilities	I look for the strategy of enlightenment and trust with the patient. I explain the whole process (of the disease) and I put the responsibility of the treatment also in the hands of him and his family. That I will be with him until the end of the treatment. Our biggest strategy is to interact with the family, with the patient in locus. To know all the problems in which he is inserted in order to treat them; to look for ways to solve that situation and give support, if necessary. (DSC5)
Search for absentees	If someone is missing, we have to call. When it is close (to the BHU) I send one of the employees with a letter calling. If the patient doesn't come, then I make a home visit. We have to insist to know why he or she didn't show up. Our abandonment rate is zero. I take the doctor; I ask sometimes even to admit the person to do the exam in the hospital. I ask the health agent to go there every day (Monday to Friday). I talk to the patient, with the family members, I ask the family members to support. (DSC7)
Monitoring of tests and treatment adherence	I don't leave them waiting outside for a long time, I always encourage and congratulate them when they come to the BHU on time, take their medication. I request laboratory tests to follow the treatment and the evolution of the patient, I monitor the weight. We do the DOT and the health agent goes every day to the patient's home to check if he is taking the medication, registers it, and looks at how many pills he has. Sometimes I use the argument of the family welfare, charging her to take the medication. (DSC8)
Interdisciplinarity and Intersectoriality	When the patient is low income and has no income to feed himself and his family, we even go in search of a social worker to see about the basic food basket. Depending on the patient, we work with the nurse, the doctor, and FHSC. We count on the support of the social worker, as well as the intervention of the psychologist who helps us to improve this patient

	compliance. I ask for help from the doctor and the reference service that we work in partnership. (DSC6)

Discussion

The identification of nurses' strategies to improve adherence of patients under TB treatment initially identified their conception of vulnerability to dropout, which reported elements of individual, social, and programmatic dimensions. Thus, they point to ways to reiterate practices that corroborate with adherence through interventions and better quality of care.

The nurses talked about the individual dimension of vulnerability, in which they pointed out the reality of the patients' living conditions; age; education; comorbidities; alcohol/drug use and lack of access to information about the disease (cognitive ability). It is verified that there are elements that are concatenated with the need for access to resources that allow behavioral change (social vulnerability) of people with TB.

A study conducted in São Paulo, Brazil, points out that the focus on individual dimensions (living conditions) and social dimensions (work) of vulnerability affects the process of adherence of patients to TB treatment.[7] These conditions of socioeconomic and educational inequalities that demand strategies to face them, commitment from professionals and the development of health policies that modify the contexts experienced by these patients.

As for the aspects of social vulnerability, in this study, the nurses associated the life situation of the sick person facing their conditions of extreme poverty, need for housing, money, and family support that interfere with the illness and adherence to treatment. In fact, the complexity of care in the search for social support demands mobilization of social actors and health professionals to support care and autonomy.[9]

The nurses were emphatic about the aspects of programmatic vulnerability, as they included the work process itself, which requires greater performance of the health team

regarding the approach to adherence; scheduling the patient's return; incorporation of DOT in the teams' daily routine and the need to make food baskets available. In fact, interventions that meet the health needs of people with TB should ensure the confrontation of social inequalities and seek the protection of human rights.[10]

The elements related to programmatic vulnerability portray the deficiencies in health systems, since the rights to universality and equity in health care for people with TB are not yet possible in the Unified Health System due to the deficiencies of the health sector and the lack of social protection.[11] In this sense, nurses should minimize programmatic vulnerability through a proposal based on integral and humanized care that meets the demands of people with TB, from the perspective of accompanying them according to the expression of their social inequalities.

Regarding nursing strategies to enhance adherence to TB treatment, professionals used health education to ensure access to information about the disease and treatment, through lectures or individual approach in consultations. Studies indicate that the practices of health education in the units are still incipient, since misinformation about the concept of the disease persists, with inequalities regarding access to the means of information that interfere in the individual/society dynamics.[12]

In the practice of the health team, access to information should be encouraged through a dialogical approach, to provide space that facilitates understanding about the disease and treatment. This awareness corroborates the co-responsibility of care and, consequently, the incorporation of self-care practices to be performed by the patient and family, enhanced in the nursing consultation through a good relationship, trust, and attention to health throughout the treatment.[13]

Regarding the welcoming and co-responsibility, the nurses listed that they sought to ensure the bond, trust and integration with the patient-family regarding the responsibility of supported care during the treatment process. A study conducted in Ribeirão Preto, São Paulo,

Brazil, indicates that co-responsibility and humanized welcoming favor adherence to TB treatment and strengthens the bond with the health team, which in turn corroborates so that the patient can be the protagonist of his treatment.[14]

Other strategies used by the nurses were the search for absenteeism; the monitoring of tests and treatment adherence carried out mainly through home visits. The teams that used the DOT resorted to the participation of community health agents to follow up the patient, besides often counting on the support of family members to support the patients' treatment.

Concerning the modality of DOT, it is a strategy that cannot be executed only by the family health team, but can be built by matrix support involving specialized professionals and health surveillance.[15] The effectiveness of this monitoring in health facilities needs organizational support and transportation of the teams, conditions that still indicate low coverage of this indicator when it comes to active search and surveillance of household contact of new TB cases.[16] Given the above, it can be seen that nurses have used strategies for active search of absentees, but need to involve patients/family members in follow-up consultations and incorporate DOT as management support in the daily activities of primary health care.

As for the DOT, the nurses sought to strengthen the adherence to treatment by patients receiving the benefit of the Bolsa Família program. Regarding the monitoring of tests and treatment adherence, the nurses reported encouraging patients to return to the unit and correctly follow the medication intake. On this occasion they requested routine exams, weighed the patient.

Given the above, it is identified that the substantial work of nurses through actions that favor patient adherence to TB treatment is necessary to learn the contexts of vulnerability. Once these people have, in their majority, basic needs of food and housing.[13] These health needs can be perceived even during the therapeutic itinerary, which require a bond and support from health professionals to ensure continuity of care.[17] In this sense, the context technologies can

favor the praxis and encourage adherence through strategies that are appropriate to the reality of the available services.[18]

The interdisciplinary and intersectoral actions were strategies pointed out by the nurses of this study as a need to meet the demands required during patient/family care. In this sense, they sought to articulate with other professionals of the team, the FHSC, the social assistance service, and the referral and counter-referral service, in which psychologists were included. This perception of nurses corroborates what was found in the municipality of Porto Alegre, Rio Grande do Sul, where the responsibility for adherence to TB treatment demands intersectoral actions, from the perspective of building a care network to meet the social demands and protect people from the disease.[19]

A study in a capital city of the Brazilian Northeast points out that the peculiarities of care for people with TB go through ethical-professional, institutional-political and social aspects. Based on this commitment, health service professionals must ensure access and quality of care to these patients.[20] In practice, these professionals need to be sensitive and committed to ensure patients' access and meet their demands as a possibility to decrease the abandonment of TB treatment.

As a limitation of the study, one can consider the fact that it was carried out only with primary health care nurses, so it cannot be generalized. We emphasize the need for new studies in other realities, as well as the inclusion of people with TB.

Regarding practice, it is pointed out that nurses can enhance adherence to treatment when they recognize the vulnerabilities of people affected by TB and incorporate strategies that enable health education, provided that they also include interdisciplinary action.

Conclusion

It was identified that nurses used strategies to enhance adherence with a focus on the

care and educational contexts in face of the vulnerabilities to treatment abandonment by patients. These demands were perceived from the dimensions of patient vulnerability, which included their health conditions and behavioral aspects; housing, money, and family support needs, as well as the lack of incentive from health professionals.

In view of these elements of vulnerabilities, the strategies were imbricated in health education practices; welcoming and co-responsibilities in the quest to establish the link with the patient and family and ensure adherence to the medication. They included the search for absentees through home visits; ensured access to monitoring tests and treatment adherence through monthly consultations and incorporation of the DOT, although it was not routine in all health teams. They also sought to develop interdisciplinary and intersectoral actions.

It is noteworthy that the strategies used by nurses seem consistent with the care and educational contexts to minimize treatment abandonment, especially when they considered the living and working conditions of the population in their assigned area, reiterating the programmatic actions so that they could respond to the health needs of patients. However, the incorporation of DOT in the work process of health teams is still weakened by the lack of transportation or incentive for the community health agent to start this monitoring process in practice in their territory.

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Chief Scientific Editor: Cristiane Cardoso de Paula
Associate Editor: Maria Denise Schimith

Funding: Institutional Scientific Initiation Scholarship Program of the Regional University of Cariri (PIBIC- URCA)

Corresponding author
Edilma Gomes Rocha Cavalcante
Email: edilma.rocha@yahoo.com.br
Address: Rua Pedro Bantin Neto, 525 Crato-CE CEP:6310-115

Authorship Contributions

1 – Jonh Jorge Costa Barro
Conception or design of the study/research, analysis and/or interpretation of data, final review with critical and intellectual participation in the manuscript.

2 – Aliéren Honório Oliveira
Conception or design of the study/research, analysis and/or interpretation of data, final review with critical and

intellectual participation in the manuscript.

3 – Jeane Lima Cavalcante
Analysis and/or interpretation of data, final review with critical and intellectual participation in the manuscript.

4 –Tacyla Geyce Freire Muniz Januário
Analysis and/or interpretation of data, final review with critical and intellectual participation in the manuscript.

5 – Maria Lúcia Duarte Pereira
Analysis and/or interpretation of data, final review with critical and intellectual participation in the manuscript.

6 – Edilma Gomes Rocha Cavalcante
Conception or design of the study/research, analysis and/or interpretation of data, final review with critical and intellectual participation in the manuscript.

How to cite this article

Barros JJC, Oliveira AH, Cavalcante JL, Januário TGFM, Pereira MLD, Cavalcante EGR. Vulnerability and strategies for adherence to tuberculosis treatment: primary care nurses' discourse. J Nurs. UFSM. 2021 [Accessed on: Year Month Day]; vol.11 e: 1-15. DOI: https://doi.org/10.5902/2179769262654